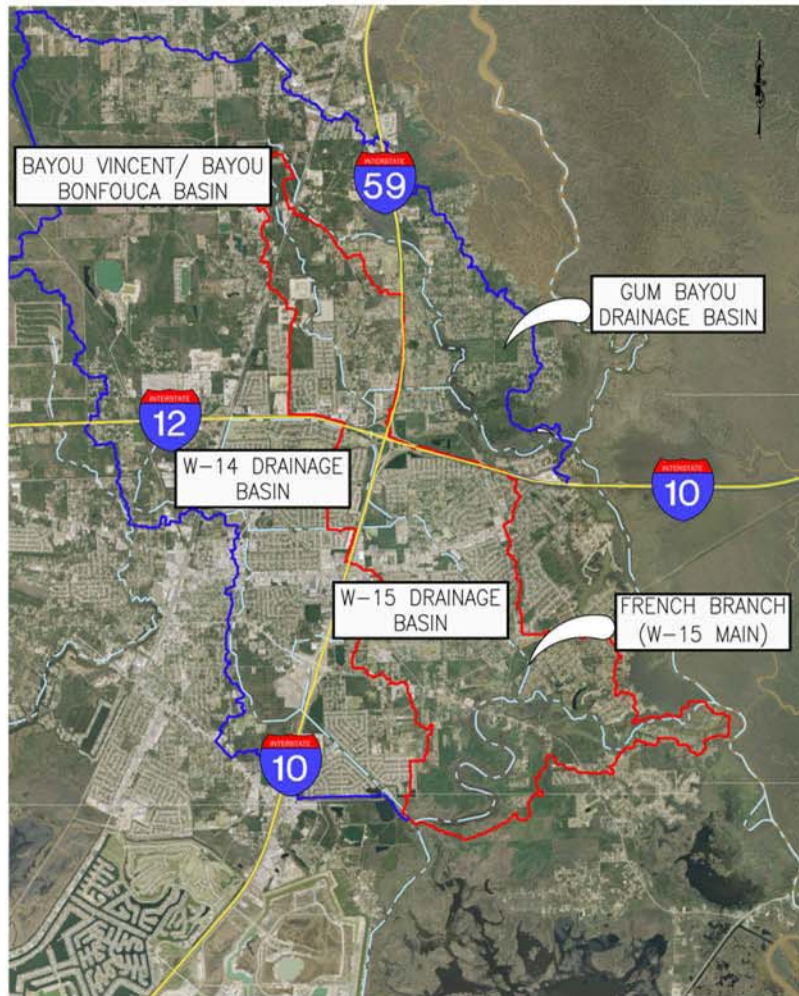


# FRENCH BRANCH (W-15) AND DOUBLOON BAYOU DRAINAGE STUDY

FOR:



Issued: February 21, 2011

Revised: March 18 2013

PREPARED BY:



# TABLE OF CONTENTS

<b>Introduction.....</b>	<b>2</b>
<b>Study Area Description.....</b>	<b>2</b>
<b>History of Flooding in French Branch Basin.....</b>	<b>3</b>
<b>Previous Reports .....</b>	<b>4</b>
<b>General Scope of Drainage Study.....</b>	<b>5</b>
<b>Survey/Field Reconnaissance.....</b>	<b>5</b>
<b>Analysis of Existing Conditions.....</b>	<b>6</b>
<u>Goal.....</u>	6
<u>Hydrologic Model.....</u>	6
<u>Hydraulic Model.....</u>	12
<u>Results.....</u>	16
<b>Analysis of Proposed Conditions.....</b>	<b>17</b>
<u>Goal.....</u>	17
<u>Hydrologic Model.....</u>	17
<u>Hydraulic Model.....</u>	17
<u>Recommended Proposed Condition Scenario.....</u>	18
<u>Future Improvements.....</u>	23
<b>Conclusion.....</b>	<b>24</b>
<b>Appendix .....</b>	<b>25</b>

## **INTRODUCTION**

Due to the increase in land development and insufficient stormwater conveyance systems, there are drainage problems in the French Branch Basin resulting in significant street and home flooding during severe rain events. The objective of the French Branch (W-15) and Doubloon Bayou Drainage Study by Duplantis Design Group and Owen and White Inc., issued on March 2, 2011(Original Report) was to develop feasible drainage improvements in the Lower portion of the French Branch Basin. This report expands on the Original Report with an objective to model the entire French Branch Basin as well as the adjacent basins and to provide recommendations for improvements to reduce flooding caused by rain events. Due to the interconnectivity of the French Branch (W-15 Main), W-14 Canal, Reine Canal, Poor Boy Canal, and Gum Bayou it is important to understand the effects these drainage features have on one another. In order to do so, a Three Basin Model was developed consisting of the W-14 Basin, Gum Bayou Basin, and the W-15 (French Branch) Basin. Modeling these basins together improved the accuracy of the results and validated assumptions made in the Original Report. The focus area for the drainage improvements included areas experiencing the worst home flooding in the French Branch Basin. This modeling scope produced recommendations for feasible drainage improvements which would reduce flooding of homes and businesses in the French Branch Basin once constructed.

## **STUDY AREA DESCRIPTION**

### **French Branch Basin**

The French Branch Basin is comprised of approximately 7,300 acres of land in St. Tammany Parish, LA with a portion of the basin falling within the City limits of Slidell. The northern part of the French Branch Basin is bound to the west by the Bayou Vincent / Bayou Bonfouca Basin and to the east by the Gum Bayou Basin. The southern part of the French Branch Basin is bound to the west by the W-14 Canal Basin and to the east by the West Pearl River Basin. Please reference the French Branch Study Area Exhibit (Appendix A; EX-1).

The W-15 Main is a natural stream which flows generally in a southeasterly direction and discharges into Doubloon Bayou. Flows are split at the W-15 Main/ Doubloon Bayou confluence in two separate outfalls under normal conditions. This confluence is in a cypress swamp that flows both east towards the West Pearl River and west towards the Frichie Marsh. The direction and magnitude of flow in the Doubloon Bayou varies primarily due to the tailwater conditions of the West Pearl River and Frichie Marsh.

The W-15 Main is connected to the W-14 Canal by the Reine Canal which is bi-directional. The W-15 Main is also connected to Gum Bayou by the Poor Boy Canal which transfers a substantial

amount of stormwater from the W-15 Basin to Gum Bayou Basin and ultimately to the W. Pearl River.

### **The W-14 Basin**

The W-14 Basin is comprised of approximately 4,600 acres of land in St. Tammany Parish, LA with the majority of the basin falling within the City limits of Slidell. The Basin is bound to the west by the Bayou Vincent / Bayou Bonfouca Basin and to the east by the French Branch Basin.

The W-14 Canal was constructed in the 1940's and flows generally in a southeasterly direction and discharges into Lake Pontchartrain. The W-14 Canal is connected to the W-15 Main by the Reine Canal which is bi-directional. The W-14 Canal is also connected to Bayou Bonfouca and Bayou Vincent by the West Diversion Canal. Some discharge from the W-14 Canal flows into the West Diversion detention pond which has an outlet to the West Diversion Canal which has an outfall on Bayou Vincent. During major storm events the water surface elevation on the W-14 Canal exceeds the bank elevations and stormwater flows overland into the Bayou Vincent / Bayou Bonfouca Basin.

### **Gum Bayou Basin**

The Gum Bayou Basin is comprised of approximately 3,600 acres of land in St. Tammany Parish, LA. The Basin is bound to the west by the French Branch Basin and to the east by the West Pearl River Basin.

Gum Bayou is a natural stream which flows generally in a southeasterly direction and discharges into West Pearl River. Gum Bayou is also connected to the W-15 Main by the Poor Boy Canal.

## **HISTORY OF FLOODING IN THE FRENCH BRANCH BASIN**

The basin is relatively flat which creates a challenge for stormwater conveyance. The majority of the basin is developed with commercial and residential uses with the exception of a few interior undeveloped tracts of land, and undeveloped land in the northernmost and southernmost portions of the basin. According to the French Branch Basin Flood Stats Exhibit provided by St. Tammany Parish, the majority of the structure flooding occurs within a few residential subdivisions. Please reference the French Branch Basin Flood Stats Exhibit (Appendix A; EX-2).

The lower portion of the French Branch Basin has two groups of subdivisions located adjacent to the W-15 Main with a history of flooding problems. The first area is The Lower French Branch Area which is located on both sides of the W-15 Main to the northwest of the crossing at Military Road. The second area is the Lake Village Area which is located east of the W-15 Main confluence with the Reine Canal.



The Lower French Branch Area can be more specifically defined as the following subdivisions: French Branch Estates, Holiday Acres, Frenchmen's Estates, Meadow Lake, and Abney Country Air. The Lower French Branch Drainage Study by Duplantis Design Group and Owen and White was issued in July 2011 and includes recommendations to improve stormwater conveyance systems within the subdivisions.

The Lake Village Area can be more specifically defined as the Lake Village subdivision and Pearl Acres Road. Information gathered shows that the existing subsurface drainage system was originally designed for a 2 year storm event, therefore the internal conveyance system needs to be further explored. This study explores lowering the water surface elevation at the confluence of the Lake Village outfall ditch and the W-15 Main. The study of the internal conveyance system is beyond the current scope of this study, but will be addressed in a subsequent report.

According to records provided by St. Tammany Parish, insurance claims in this area for repetitive loss and severe repetitive loss properties total approximately \$9,099,000. This total does not include cost associated with single claim properties or properties that are uninsured. Please reference the Flood Stats Exhibit for the Lower Portion of French Branch Basin (Appendix A; EX-2.1).

The upper portion of the French Branch Basin has a group of subdivisions located adjacent to the W-15 Main with a history of flooding problems. This area has been identified as the following subdivisions: Wisperwood and Northwood Village. This area is located northwest of the W-15 Main confluence with the Poor Boy Canal. The major outfall for this area is Eddins Canal which discharges into the W-15 Main. A detailed analysis of the internal conveyance systems of this area is beyond the current scope of this study, but this study explores lowering the water surface elevation at the confluence of the W-15 and Eddins Canal.

Currently, the W-15 Main flows out of its banks at numerous locations during these events. This flow enters directly into some developed areas and causes significant flooding problems. The scenario of the W-15 Main flowing directly into these developed areas rather than accepting the stormwater discharge from the outfall ditches was confirmed with modeling of the existing conditions.

## **PREVIOUS REPORTS**

Previously issued reports were reviewed and consideration was given to the recommendations found in these reports. The reports reviewed as part of this study include:

- Master Drainage Plan, St. Tammany Parish, Louisiana by Burk & Associates, Inc., New Orleans, Louisiana, March 1983.
- Hydraulic Report for French Branch Ph. 11, St. Tammany Parish, by J.V. Burkes & Associates, Slidell, Louisiana, February 1993.

- St. Tammany Parish, Louisiana, Reconnaissance Study, by U.S. Army Corps of Engineers, New Orleans District, July 1996.
- St. Tammany Parish French Branch Drainage Evaluation Phase 1, by Consoer Townsend Envirodyne Engineers, Inc., New Orleans, Louisiana, Aug. 2004.
- Lower French Branch Drainage Study, by Kyle Associates, LLC, Mandeville, Louisiana, January 23, 2008.
- Slidell W-14 Canal Improvements, Southeast Louisiana (SELA) Urban Flood Control Project, St. Tammany Parish, Louisiana, March 2010.

While the modeling performed for some of these reports did analyze various conditions in the Study Area, none provided sufficient detailed and localized pre-project and post-project systems analysis. This report reflects these shortcomings by preparing a Pre-and Post-conditions model for the three basins.

### **GENERAL SCOPE OF DRAINAGE STUDY**

The scope of this study is to analyze flooding due to high water stages in the W-15 Main and to recommend improvements which lower the water surface elevations on the W-15 Main in the lower portion of the basin. To achieve this, two models are developed: Existing Conditions Model and Proposed Conditions Model. Each of these models consists of a hydrologic and hydraulic model. The hydrologic model (HEC-HMS) includes the entire W-14 Basin, Gum Bayou Basin, and the French Branch Basin and the upper portion of Bayou Vincent / Bayou Bonfouca Basin. The hydraulic model (HEC-RAS) includes the W-15 Main, Doubloon Bayou, Gum Bayou, the Poor Boy Canal, the Reine Canal, the West Diversion Canal and the W-14 Canal from the origin to the confluence with Doubloon Bayou. This analysis was done using tailwater elevations at normal conditions.

### **SURVEY/FIELD RECONNAISSANCE**

Topographic survey data was collected for this study throughout the study area by Randall W. Brown & Associates and Acadia Land Surveying during the spring - summer of 2011. The Datum used was NAVD88, based on NGS supplied Geoid 09 model, and all surveys tied into the state plane coordinate system. This surveying scope included numerous cross sections across the W-15 Main, West Diversion, W-14, Reine, Gum, Poor Boy and Doubloon Bayou.

During the data acquisition process the team made multiple visits to the critical locations throughout the study area to observe existing conditions. These visits proved to be vital in gaining a true understanding of the existing conditions.

## **ANALYSIS OF EXISTING CONDITIONS**

### **Goal**

It is the goal of this analysis to develop an existing conditions model that depicts the conditions of the French Branch, Gum Bayou, and W-14 basins. The existing conditions model consists of two models: a hydrologic model and a hydraulic model. The goal of the hydrologic model is to develop discharge hydrographs for several storm events for the watershed based upon existing topography and land use. The hydraulic model routes these discharge hydrographs through the existing conveyance system to calculate water surface elevation along the major streams: W-15 Main, Doubloon Bayou, W-14 Canal, Bayou Vincent, Gum Bayou, Poor Boy Canal, Reine Canal, and the West Diversion.

### **Hydrologic Model**

For existing conditions, a hydrologic model is developed using parameters based on LiDAR topography and subdivision maps provided by St. Tammany Parish. These parameters include drainage area, hydraulic length, basin slope, and percent impervious. With the aid of WMS computer software, natural ridgelines define twenty four subbasins in the study area's watersheds. A subbasin boundary map is presented in Appendix A Exhibit 3 – French Branch Sub-basin Exhibit. To better understand how each subbasin relates to one another, refer to Appendix A Exhibit 4 – HMS Model Exhibit for a drainage schematic.

The Clark Method is selected to perform the discharge calculations for the watershed. The Espey Huston Fort Bend County equations (below) are used to calculate the Clark coefficients which define the unit hydrographs for each subbasin.

$$T_c + R = 128 \frac{\left(\frac{L}{\sqrt{S}}\right)^{0.57} \times n^{0.8}}{S_o^{0.11} \times 10^I}$$

$$T_c = 0.38 \times \log S_o \times (T_c + R)$$

- Where:
- $T_c$  = Clark's time of concentration (hours)
  - $R$  = Clark's storage coefficient (hours)
  - $L$  = Length of longest watercourse in subarea (miles)
  - $S$  = Slope of longest watercourse in middle 75% of length (feet/mile)
  - $n$  = Manning's roughness coefficient along longest watercourse
  - $S_o$  = Average slope of land draining into longest watercourse (feet/mile)
  - $I$  = Effective impervious rate (ratio)

The existing conditions subbasin parameters for the Clark coefficients are as follows:

<b>Basin ID</b>	<b>Area (mi<sup>2</sup>)</b>	<b>Length (mi)</b>	<b>Slope (ft/mi)</b>	<b>'n' value</b>	<b>Side Slope (ft/mi)</b>	<b>Impervious (ratio)</b>
BV-1	8.463	6.52	4.22	0.045	16.90	0.09
BV-2	1.413	4.37	5.28	0.049	10.56	0.03
BV-3	0.050	0.57	17.42	0.067	46.99	0.13
WD-1	0.451	1.90	6.86	0.063	19.54	0.17
GB-1	2.716	5.63	4.75	0.057	13.20	0.11
GB-2	1.203	2.29	4.75	0.066	30.10	0.18
GB-3	1.832	3.60	1.58	0.066	17.42	0.10
W14-1	1.142	3.14	6.34	0.067	12.14	0.55
W14-2	0.430	2.01	5.81	0.086	14.78	0.49
W14-3	4.689	5.58	3.17	0.052	7.39	0.31
FB-1	1.850	3.30	4.30	0.048	11.09	0.14
FB-2	0.658	1.77	3.12	0.052	21.65	0.18
FB-3	3.152	3.15	2.95	0.055	12.14	0.29
PB-1	0.698	1.91	4.17	0.066	6.44	0.09
RC-1	0.252	1.15	5.00	0.063	14.79	0.26
RC-2	0.678	2.06	6.86	0.079	8.45	0.30
DB-1	1.841	3.83	1.93	0.046	12.67	0.01
DB-2	0.442	1.59	7.39	0.070	19.01	0.03
DB-3	0.059	0.38	14.10	0.060	31.68	0.00
DB-4	0.632	2.48	5.33	0.062	10.56	0.18
DB-5	0.198	0.86	0.26	0.040	20.06	0.00
DB-6	0.212	0.88	9.17	0.073	22.70	0.09
DB-7	0.460	1.10	5.90	0.083	17.42	0.07
DB-8	0.937	2.33	1.36	0.045	33.26	0.05

After performing the calculations, the following are the resulting times of concentrations and storage coefficients for each subbasin:

<b>Basin ID</b>	<b>Tc (hours)</b>	<b>R (hours)</b>
BV-1	5.75	6.57
BV-2	4.63	7.28
BV-3	1.46	0.84
WD-1	2.79	2.90
GB-1	5.53	7.46
GB-2	3.82	2.98
GB-3	7.25	8.12
W14-1	1.47	2.10
W14-2	1.73	2.17
W14-3	2.99	6.07
FB-1	3.24	4.93
FB-2	2.88	2.79
FB-3	2.85	4.07
PB-1	2.85	6.42
RC-1	1.74	2.18
RC-2	2.05	3.76
DB-1	6.02	8.34
DB-2	3.69	3.90
DB-3	1.42	1.07
DB-4	2.86	4.49
DB-5	4.67	4.77
DB-6	2.32	2.18
DB-7	3.26	3.65
DB-8	5.57	4.06



Infiltration losses are calculated with the initial/constant loss method. The initial loss specifies the amount of incoming precipitation that will be infiltrated before surface runoff begins. The constant loss determines the rate of infiltration that will occur after the initial loss has occurred. These losses are based upon soils data provided by the Natural Resources Conservation Services (NRCS) Web Soil Survey. The following table illustrates the infiltration losses for each subbasin:

<b>Basin ID</b>	<b>Initial Loss (in)</b>	<b>Constant Loss (in/hr)</b>
BV-1	0.81	0.10
BV-2	0.82	0.10
BV-3	0.70	0.08
WD-1	0.89	0.12
GB-1	0.88	0.12
GB-2	0.82	0.10
GB-3	0.82	0.10
W14-1	0.69	0.08
W14-2	0.77	0.09
W14-3	0.67	0.08
FB-1	0.81	0.10
FB-2	0.70	0.08
FB-3	0.78	0.10
PB-1	0.86	0.11
RC-1	0.72	0.08
RC-2	0.67	0.08
DB-1	0.75	0.09
DB-2	0.63	0.07
DB-3	0.76	0.10
DB-4	0.71	0.08
DB-5	0.83	0.11
DB-6	0.90	0.12
DB-7	0.85	0.11
DB-8	0.69	0.09

Rainfall data is added to the model based on isopluvial maps taken from the National Weather Service's Hydro 35 and the U.S. Department of Commerce's Technical Paper No. 40 for the 10%, 4%, 2% and 1% annual chance event with a 24 hour storm duration. The resulting rainfall values are as follows:

<b>Duration</b>	<b>10%</b>	<b>4%</b>	<b>2%</b>	<b>1%</b>
15 minutes	1.5 inches	1.7 inches	1.9 inches	2.0 inches
1 hour	3.3 inches	3.8 inches	4.2 inches	4.7 inches
2 hours	4.2 inches	4.8 inches	5.2 inches	5.7 inches
3 hours	4.7 inches	5.5 inches	6.0 inches	6.5 inches
6 hours	6.0 inches	6.9 inches	7.5 inches	8.5 inches
12 hours	7.3 inches	8.5 inches	9.4 inches	10.2 inches
24 hours	8.8 inches	10.0 inches	11.0 inches	12.5 inches

To aid in the computations, the U.S. Army Corps. of Engineers' HEC-HMS v3.5 computer software is utilized. The results of peak discharges at the outlet for each subbasin are as follows:

<b>Basin ID</b>	<b>10% Q (cfs)</b>	<b>4% Q (cfs)</b>	<b>2% Q (cfs)</b>	<b>1% Q (cfs)</b>	<b>Time of Peak (hrs)</b>
BV-1	2791	3290	3647	4102	17.50
BV-2	446	526	583	657	16.50
BV-3	59	69	75	83	13.25
WD-1	266	312	344	382	14.75
GB-1	813	962	1069	1204	17.50
GB-2	669	784	862	962	15.50
GB-3	508	601	668	751	19.00
W14-1	928	1074	1176	1299	13.50
W14-2	334	388	425	469	13.75
W14-3	1864	2176	2395	2674	15.25
FB-1	799	938	1035	1158	15.25
FB-2	408	477	523	581	14.75
FB-3	1584	1853	1039	2268	14.75
PB-1	250	295	326	365	15.00
RC-1	193	225	246	272	13.75
RC-2	276	438	481	533	14.25
DB-1	519	313	680	766	18.00
DB-2	220	257	283	316	15.50
DB-3	63	73	80	89	13.25
DB-4	301	352	387	431	15.00
DB-5	80	94	104	117	16.50
DB-6	148	174	191	212	14.25
DB-7	232	273	301	336	15.25
DB-8	407	478	528	592	17.00

The HEC-HMS Analysis is presented in Appendix B.

### Hydraulic Model

The hydraulic model is a compilation of eight stream reaches: Bayou Vincent, Doubloon Bayou, Gum Bayou, Poor Boy Canal, Reine Canal, W-14 Canal, W-15 Main, and West Diversion.

- The Bayou Vincent reach begins at an existing storage pond and terminates approximately 6,100 feet downstream at the confluence with Bayou Bonfouca.
- The Doubloon Bayou reach begins at the confluence with the West Pearl River and terminates at the confluence with the W-14 Canal.

- The Gum Bayou reach begins approximately 6,000 feet upstream of the confluence with the Poor Boy Canal and terminates at the confluence with the West Pearl River.
- The Poor Boy Canal reach begins at the confluence with the W-15 Main and terminates at the confluence with Gum Bayou.
- The Reine Canal reach begins at the confluence with the W-15 Main and terminates at the confluence with the W-14 Canal.
- The W-14 Canal reach begins at its upstream origin approximately 2,400 feet north of I-12 and terminates at the confluence with Doubloon Bayou.
- The W-15 Main reach begins at its upstream origin approximately 6,700 feet north of Hwy. 11 and terminates at the confluence with Doubloon Bayou.
- The West Diversion reach begins at the confluence with the W-14 Canal and terminates at the confluence with Bayou Vincent.

Refer to the HEC-RAS Model Exhibit in Appendix A Exhibit 5.

The hydraulic model is created using the U.S. Army Corps. of Engineers' HEC-RAS v4.1.0 computer software. HEC-RAS is designed to perform one-dimensional calculations for a network of natural or constructed channels. It has the capability of performing two types of hydraulic analysis: steady flow simulations and unsteady flow simulations. The steady flow simulation calculates water surface profiles for steady gradually varied flow. The computational procedure is based on the solution of the energy equation at only one instance in time.

An unsteady state model is based on solving not only the energy equation but also the St. Venant equations which are comprised of the conservation of mass equation and the conservation of momentum equation. Unsteady flow can simulate attenuation and storage in a basin as well as changes in boundary conditions such as tides, gates, inflow or stage hydrographs, etc. Unsteady flow simulations are appropriate when timing of flows or stages are important since unsteady flow models produce water surface profiles at numerous instances in time.

It was decided that the best modeling approach would be the unsteady state simulation since attenuation of the discharge due to the storage potential of the lowland areas near the Fritchie Marsh, the complexity of interconnectivity and multiple outlets, and the timing of discharges are critical.

River cross-sections were taken from several sources:

- A. Southeast Louisiana (SELA) Model
- B. Acadia Land Surveying and Randall W. Brown & Associates
- C. LiDAR Digital Elevations

The SELA model is used for cross-sections that were deemed adequate by survey verification. At locations in which SELA model cross-sections could not be verified, cross-sections were taken from survey data provided by Acadia Land Surveying and Randall W. Brown &

Associates. LiDAR Digital Elevations are used to supplement the channel sections to incorporate overbank elevations for each river section.

Each stream within the study area contains numerous river cross-sections with the majority of spacing no greater than 500 feet to depict existing topography. The locations of each river cross-section are presented in Appendix A Exhibit 5 – HEC-RAS Model Exhibit.

Friction losses for each river reach are defined by using appropriate Manning’s ‘n’ values. The ‘n’ value is dependent on surface roughness and vegetation of the channel and overbank. Below is a table illustrating the ‘n’ values and descriptions of their uses:

<b>‘n’ Value</b>	<b>Description</b>
0.050	Winding channel with some weeds and pools
0.060	Overbank with light brush and trees
0.100	Overbank with dense brush or other large obstructions such as residential areas containing houses and fences

Boundary conditions at all entrance and exit points in the system are required for the unsteady state analysis model. The downstream boundary condition of the “Doubloon to Marsh” reach at RS 1273 is representative of the elevations in the Fritchie Marsh. An average stage in the Fritchie Marsh is quantified to be 2.00 feet NAVD 88. For this boundary condition, a constant value of 2.00 feet is used since the marsh elevations are independent of the discharges from Doubloon Bayou.

The downstream boundary condition at the confluence with the West Pearl River on the “Doubloon to Pearl” reach at RS 100 is representative of the water surface elevation on the West Pearl River. For this boundary condition gage data at two locations on the West Pearl River are analyzed: a downstream monitoring location on the US Highway 190 bridge crossing approximately 14,100 feet south of the confluence with Doubloon Bayou and an upstream monitoring location on the Interstate 10 bridge crossing approximately 14,900 feet north of the confluence with Doubloon Bayou and the W-15 Main. An average stage on the West Pearl River is determined from each monitoring locations’ period of record of about one year. At the US Highway 190 location, an average stage of 2.4 feet is determined, while at the Interstate 10 location, an average stage of 5.5 feet is determined. The average stage at the confluence with Doubloon Bayou is calculated by a linear interpolation resulting in an average stage value of 3.91 feet.

The downstream boundary condition for Bayou Vincent occurs at the confluence with Bayou Bonfouca at RS 0. This boundary condition is based upon the Flood Insurance Study for the City of Slidell dated July 1999. Based upon this report, the water surface elevation at this location is 10.2 feet which is used as a constant stage hydrograph for the boundary condition.

The downstream boundary condition for Gum Bayou is based upon a linear extrapolation of the gage data that was used to determine the Doubloon Bayou boundary condition. By using the US Highway 190 bridge gage and the I-10 bridge gage, a stage elevation of 5.80 feet is used.

Internal boundary conditions are entered at every river section location that contains a subbasin outfall. These boundary conditions are in the form of flow hydrographs taken directly from the HEC-HMS output.



## Results

Based upon the data, an existing conditions model is developed. Below is a table illustrating the calculated water surface elevations for the existing conditions model at key locations along each stream for the four storm events at a time of maximum water surface:

			<b>10%</b>	<b>4%</b>	<b>2%</b>	<b>1%</b>
<b>Stream</b>	<b>RS</b>	<b>Notes</b>	<b>Event</b>	<b>Event</b>	<b>Event</b>	<b>Event</b>
W-15 Main	31779	DS Haas Road Pond	22.27	22.46	22.62	22.79
W-15 Main	29000	3,500 ft US Eddins Canal	21.19	21.39	21.49	21.63
W-15 Main	25098	Confluence Eddins Canal	19.78	20.13	20.35	20.62
W-15 Main	22961	Confluence Poor Boy	19.18	19.58	19.84	20.14
W-15 Main	17456	US I-10	15.37	15.65	15.83	16.02
W-15 Main	14915	Confluence Reine Canal	13.76	14.01	14.11	14.24
W-15 Main	14570	Confluence Lake Village	13.64	13.89	13.97	14.08
W-15 Main	13878	US Pearl St	13.10	13.27	13.57	13.64
W-15 Main	11604	US Amber St	10.98	11.31	11.49	11.67
W-15 Main	11212	US Gause Blvd	10.90	11.22	11.39	11.56
W-15 Main	7321	LFBA US Confluence	9.98	10.35	10.59	10.85
W-15 Main	4952	LFBA DS Confluence	9.34	9.73	9.98	10.26
W-15 Main	3499	US Military Rd	8.70	9.11	9.38	9.65
W-15 Main	2092	US Old River Rd	8.11	8.50	8.73	8.97
W-15 Main	50	Confluence Doubloon	6.66	6.99	7.24	7.48
Doubloon to Pearl	15291	Confluence W-15 Main	6.66	6.99	7.24	7.48
Doubloon to Pearl	100	Confluence West Pearl	3.91	3.91	3.91	3.91
Doubloon to Marsh	19396	Confluence W-15 Main	6.66	6.99	7.24	7.48
Doubloon to Marsh	18926	US Military Rd	6.42	6.76	7.02	7.26
Doubloon to Marsh	18906	DS Military Rd	5.23	5.43	5.56	5.70
Doubloon to Marsh	17225	US Hwy 190	4.97	5.15	5.28	5.41
Doubloon to Marsh	17188	DS Hwy 190	4.87	5.02	5.13	5.23
Doubloon to Marsh	1273	Confluence Fritchie Marsh	2.00	2.00	2.00	2.00
W-14 Canal	43246	DS Confluence Reine Canal	11.81	12.28	12.60	12.91

The Existing Conditions HEC-RAS Analysis is presented in Appendix C.

## **ANALYSIS OF PROPOSED CONDITIONS**

### **Goal**

The goal of the proposed conditions model is to alter the existing conditions model by improving the conveyance within the W-15 basin with the objective of lowering water surface elevations on the lower portion of the French Branch basin and not allowing any adverse effects to occur as a result of the improvements. For this analysis, the target areas are defined as the lower portion of the French Branch basin. Of the four storms considered, 10%, 4%, 2% and 1% annual chance event, a 4% annual chance event is chosen as a basis for design. The other storm events will be modeled to understand their effects.

### **Hydrologic Model**

The hydrologic model that was created for the existing conditions model will be utilized for the proposed conditions model. None of the parameters that contribute to the development of the hydrologic model are to be altered by the proposed conditions model, thus no changes to the existing conditions hydrologic model are needed.

### **Hydraulic Model**

The hydraulic model for the proposed conditions improves the existing conditions model by adding conveyance and storage improvements along the W-15 Main. Conveyance improvements, such as channel widening, allow the drainage system to perform more efficiently, and storage improvements provide additional attenuation of peak discharges.

The proposed conditions model considered over twenty types and combinations of improvements. Major improvements considered that are not recommended for the proposed improvements are as follows:

-Locations within the basin in which vacant tracts of land exists (other than the Tenet Property) were investigated as candidates for converting them into storage ponds. This alternative is not recommended at this time since not enough benefit could be provided by the storage ponds to justify the cost of the improvements.

-The improvement of the existing crossing at Military Road on Doubloon Bayou is proposed to reduce the head loss through the existing culverts. Providing additional culverts or constructing a bridge at this location benefits the water surface elevation at the upstream face of Military Road; however, due to the increased conveyance, an increase in the water surface elevation is created downstream of Military Road producing an adverse effect. After discussions with St. Tammany Parish, it was determined that the benefit of this improvement is insufficient to justify the adverse impact. Thus, improving the crossing at Military Road is not a viable alternative.

-The concept of constructing a weir structure immediately downstream of the confluence with the Poor Boy Canal and W-15 Main is proposed to allow additional discharge from the W-15 Main to be diverted through the Poor Boy Canal and ultimately discharging into Gum Bayou in hopes of benefiting the target area. In order to divert the amount of discharge needed to produce a noticeable decrease in water surface elevation on the W-15 Main, the weir structure adversely increases the water surface elevation upstream of this location by several feet. It is because of this substantial increase in water surface elevation that this improvement is not a viable alternative.

### **Recommended Proposed Condition Scenario**

The recommended proposed condition scenario consists of four independent improvements combined to form one alternative scenario. The combination of the four improvements provides substantial benefits with no adverse downstream impacts. Below is a list of the improvements that are recommended as the proposed improvements:

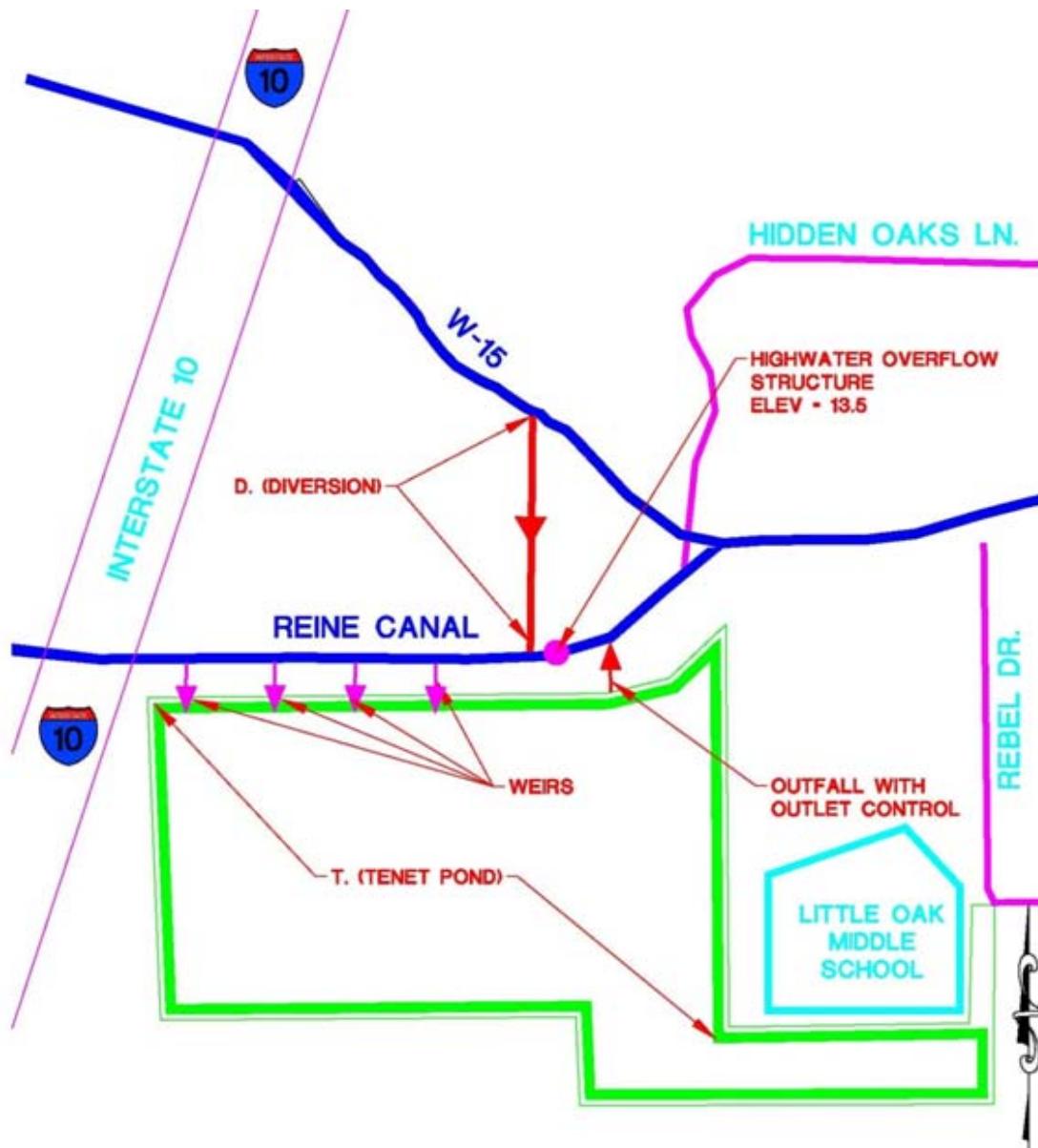
- A. Widen W-15 Main from Military Road bridge through the Lower French Branch Area
- B. Widen W-15 Main from the confluence with Doubloon Bayou to Military Road bridge
- D. Construct a diversion channel connecting W-15 Main to the Reine Canal
- T. Create a 54 acre storage pond on the Tenet property

- A. The first improvement is to widen the W-15 Main to a ten foot bottom width earthen channel with 3:1 [horizontal:vertical] side slopes on both sides beginning at the southern boundary of the Breckenridge Estates subdivision and terminating at the upstream face of the Military Road bridge (approximately 3,825 feet).

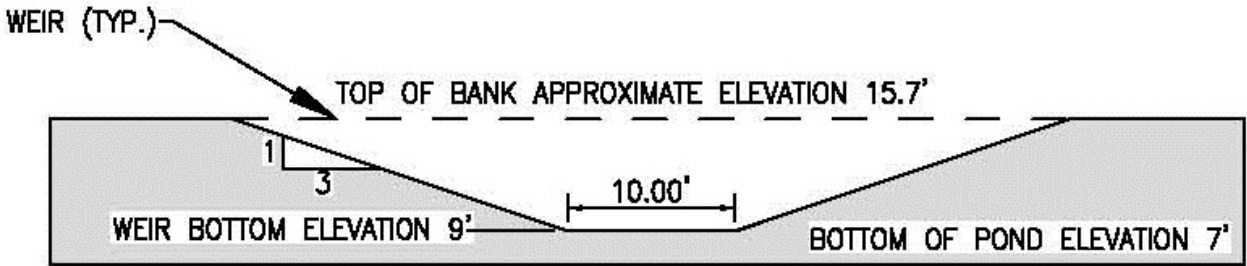
The second improvement widens the W-15 Main with a sixty foot bottom width earthen channel with 3:1 [horizontal:vertical] side slopes. It begins at the downstream face of Military Road and terminates at the confluence with Doubloon Bayou (approximately 3,450 feet). The east bank of the W-15 Main in this area is to be undisturbed since an existing development is located along this bank. The west bank of the W-15 Main in this area contains undeveloped land with no existing structures located along its banks making it an ideal location for the improvement.

- D. The third improvement is to construct a diversion channel across vacant land (Pollard property) to improve conveyance to the proposed Tenet Pond. The purpose of this improvement is to divert discharge from the W-15 Main to the Tenet pond where it can be stored and gradually released by the Tenet pond control outlet structure (see schematic layout below). This diversion channel is to run north/south with a 20 foot bottom width and 3:1 side

slopes. The invert of the diversion channel should match the inverts of the Reine Canal at the southern most end and the W-15 Main at the northern most end. A high water overflow structure should be placed on the Reine Canal immediately east of the confluence with the Reine Canal and the new diversion canal to control the original connection with the Reine Canal and the W-15 Main. Controlling this connection allows for more discharge to be stored in the Tenet pond resulting in more favorable water surface elevation reductions on the Reine Canal, W-15 Main, and W-14 Canal. This high water overflow structure should have a weir set at elevation 13.5 feet to allow storm events greater than the 4% annual chance event to bypass this structure.



T. The fourth improvement is to construct a 54 acre storage pond on the Tenet property which was recently acquired by the Parish. The pond is to be excavated to elevation 7.0 feet which is just above the ground water table and is to contain four weir openings along the bank of the Reine Canal. These weir openings should be set with an invert elevation of 9.0 feet and be 10 feet in bottom width having 3:1 side slopes (see schematic below). The weir openings allow stormwater to enter the storage pond and are sized to control the rate in which this stormwater can enter. The pond is to be sloped toward the eastern end where it is to discharge into the Reine Canal via a gravity outfall culvert. This outfall culvert will regulate the amount of discharge leaving the pond and should be approximately 15' wide and 4' high with an invert of elevation 6.



Refer to Appendix A -Exhibits 6 and 6.1 for a detailed map illustrating the recommended improvements. For information on the properties affected in the vicinity of the proposed improvements A and B, please refer to Property Exhibit (Appendix A; EX-8).

Below is a table illustrating the calculated water surface elevations for the proposed conditions model at key locations along each stream for the four storm events at a time of maximum water surface:

			<b>10%</b>	<b>4%</b>	<b>2%</b>	<b>1%</b>
<b>Stream</b>	<b>RS</b>	<b>Notes</b>	<b>Event</b>	<b>Event</b>	<b>Event</b>	<b>Event</b>
W-15 Main	31779	DS Haas Road Pond	22.27	22.46	22.62	22.79
W-15 Main	29000	3,500 ft US Eddins Canal	21.19	21.39	21.49	21.62
W-15 Main	25098	Confluence Eddins Canal	19.76	20.11	20.34	20.61
W-15 Main	22961	Confluence Poor Boy	19.16	19.56	19.82	20.12
W-15 Main	17456	US I-10	14.83	15.14	15.31	15.61
W-15 Main	14915	Confluence Reine Canal	12.21	12.80	13.17	13.50
W-15 Main	14570	Confluence Lake Village	12.00	12.60	13.00	13.35
W-15 Main	13878	US Pearl St	11.20	11.69	12.12	12.58
W-15 Main	11604	US Amber St	9.73	10.12	10.34	10.63
W-15 Main	11212	US Gause Blvd	9.65	10.04	10.26	10.55
W-15 Main	7321	LFBA US Confluence	8.08	8.49	8.74	9.05
W-15 Main	4952	LFBA DS Confluence	7.57	8.00	8.26	8.57
W-15 Main	3499	US Military Rd	7.04	7.48	7.76	8.07
W-15 Main	2092	US Old River Rd	6.86	7.29	7.56	7.85
W-15 Main	50	Confluence Doubloon	6.62	7.02	7.28	7.56
Doubloon to Pearl	15291	Confluence W-15 Main	6.62	7.02	7.28	7.56
Doubloon to Pearl	100	Confluence West Pearl	3.91	3.91	3.91	3.91
Doubloon to Marsh	19396	Confluence W-15 Main	6.62	7.02	7.28	7.56
Doubloon to Marsh	18926	US Military Rd	6.37	6.79	7.06	7.36
Doubloon to Marsh	18906	DS Military Rd	5.23	5.46	5.60	5.76
Doubloon to Marsh	17225	US Hwy 190	4.97	5.18	5.31	5.46
Doubloon to Marsh	17188	DS Hwy 190	4.87	5.04	5.15	5.26
Doubloon to Marsh	1273	Confluence Fritchie Marsh	2.00	2.00	2.00	2.00
W-14 Canal	43246	DS Confluence Reine Canal	11.44	11.96	12.32	12.74



Below is a table comparing the calculated water surface elevations for the proposed conditions model with the existing conditions model at key locations along each stream for the 4% annual chance event at a time of maximum water surface:

			<b>4% Event</b>	<b>4% Event</b>	
<b>Stream</b>	<b>RS</b>	<b>Notes</b>	<b>Existing (ft)</b>	<b>Proposed (ft)</b>	<b>Benefit</b>
W-15 Main	31779	DS Haas Road Pond	22.46	22.46	0.00
W-15 Main	29000	3,500 ft US Eddins Canal	21.39	21.39	0.00
W-15 Main	25098	Confluence Eddins Canal	20.13	20.11	0.02
W-15 Main	22961	Confluence Poor Boy	19.58	19.56	0.02
W-15 Main	17456	US I-10	15.65	15.14	0.51
W-15 Main	14915	Confluence Reine Canal	14.01	12.80	1.21
W-15 Main	14570	Confluence Lake Village	13.89	12.60	1.29
W-15 Main	13878	US Pearl St	13.27	11.69	1.58
W-15 Main	11604	US Amber St	11.31	10.12	1.19
W-15 Main	11212	US Gause Blvd	11.22	10.04	1.18
W-15 Main	7321	LFBA US Confluence	10.35	8.49	1.86
W-15 Main	4952	LFBA DS Confluence	9.73	8.00	1.73
W-15 Main	3499	US Military Rd	9.11	7.48	1.63
W-15 Main	2092	US Old River Rd	8.50	7.29	1.21
W-15 Main	50	Confluence Doubloon	6.99	7.02	-0.03
Doubloon to Pearl	15291	Confluence W-15 Main	6.99	7.02	-0.03
Doubloon to Pearl	100	Confluence West Pearl	3.91	3.91	0.00
Doubloon to Marsh	19396	Confluence W-15 Main	6.99	7.02	-0.03
Doubloon to Marsh	18926	US Military Rd	6.76	6.79	0.00
Doubloon to Marsh	18906	DS Military Rd	5.43	5.46	-0.03
Doubloon to Marsh	17225	US Hwy 190	5.15	5.18	-0.03
Doubloon to Marsh	17188	DS Hwy 190	5.02	5.04	-0.02
Doubloon to Marsh	1273	Confluence Fritchie Marsh	2.00	2.00	0.00
W-14 Canal	43246	DS Confluence Reine Canal	12.28	11.96	0.32

Based upon the results of the 4% annual chance event, water surface elevations on the W-15 Main area are reduced almost two feet in some locations. These recommended improvements effect water surface elevations just upstream of the confluence with Doubloon Bayou and continue up to I-10.

As a result of the recommended improvements, water surface benefits occur outside of the W-15 basin. Water surface elevations on the W-14 Canal immediately downstream of the confluence with the Reine Canal are reduced by 0.32 feet. This reduction can be noticed as far upstream as Highway 1091 and as far downstream as Voters Road. The Reine Canal also benefits from these improvements. Water surface reductions of over one foot can be noticed in the eastern portion of the Reine Canal. The Proposed Conditions HEC-RAS Analysis is presented in Appendix D.

The viability and feasibility of the recommend improvements has been analyzed as part of this study. For the estimated construction cost and soft cost for the recommended improvements please refer to Appendix E – Engineer’s Opinion of Probable Cost for Proposed Improvements. Estimated construction cost for the recommend improvements are:

- **A:** Widen the W-15 Main from Military Road Bridge through the Lower French Branch Area - \$856,971
- **B:** Widen the W-15 Main from Doubloon Bayou to the Military Road Bridge - \$1,153,946
- **D:** Construct a diversion channel connecting the W-15 Main to the Riene Canal - \$521,152
- **T:** Construct the Tenet Pond - \$3,231,804

The estimated soft cost for these improvements is \$4,305,286 which includes land acquisition, wetlands mitigation, design and surveying, etc. The total cost including the construction cost and soft cost is \$10,069,162.

### **Future Improvements**

At some future time when funding is available, consideration should be given to Increase Conveyance Under Hwy 190 (Shortcut Hwy) by connecting the W-15 Main with Doubloon Bayou. This would be done by constructing a diversion channel from the confluence of the W-15 Main and Doubloon Bayou under Hwy 190 and terminating in Doubloon Bayou at River Station 13892 of the reach Doubloon to Marsh. The diversion channel will consist of an 80’ wide bottom earthen channel with 3:1 [horizontal : vertical] side slopes on either side. The additional crossing under US Hwy 190 would be created by placing three (3) 20’ span by 7’ high (or equivalent) box culverts. The benefit of this diversion ditch is an additional 1.5 feet as compared to the recommended improvements at the confluence with W-15 Main and Doubloon Bayou. Furthermore, within the Lower French Branch Area water surface reductions as a result of this

diversion ditch amount to 0.5 feet as compared to the recommended improvements. These improvements increase the water surface elevations on Doubloon Bayou from Military Road to the confluence with the Fritchie Marsh. This general area contains several existing residences built in low lying areas with finished floors well below the Base Flood Elevation. These residences should take advantage of the available home elevation grants to raise their homes. Addressing these residences should be done prior to the proposed improvements. The estimated construction cost for this improvement is \$3,359,000. See Future Improvements Exhibit (Appendix A; EX-9).

Raising sections of McManus Road also was identified as a future project because the road is currently at a very low elevation and experiences flooding problems. Two sections were identified and should be elevated to alleviate the flooding of this road and allow access for emergency vehicles. This project is warranted with or without the construction of the previously mentioned diversion.

The Southeast Louisiana Project (SELA) -W-14 Canal Improvements project is planned with improvements designed for additional flood protection in the W-14 Canal basin. The improvements which have been constructed have been included in the existing conditions model. The proposed improvements were also modeled and had no affect on the results for the French Branch or Doubloon Bayou Basins. These proposed improvements are not included in the existing or proposed conditions models.

## **CONCLUSION**

The French Branch (W-15) and Doubloon Bayou Drainage Study includes sufficient analysis to provide recommendations for improvements to alleviate flooding in the areas experiencing the most severe home flooding in the study area. The results of the existing conditions model confirmed that the W-15 Main causes significant flooding problems in the areas adjacent to the stream when it flows outside of its banks. Modeling showed that the out of bank flooding expanded into the Lower French Branch Area, the Lake Village area, and the Eddins Canal Area as the major drainage outfalls were backed up due to high stages in the W-15 Main. Results from modeling the recommended improvements show reductions in the water surface elevations on the W-15 Main in the lower portion of the basin by almost 2' feet. These reductions should allow for the outfall ditches from these areas to discharge into the W-15 Main as intended. Conveyance improvements will be needed in some localized areas to realize the full benefit of the W-15 Main improvements. The most urgent need for localized improvements is the Lake Village Estates, Whisperwood, Northwood Village and Lower French Branch Area. These improvements should be analyzed under separate drainage studies. The recommended improvements have been determined to be economical solutions to alleviate severe flooding problems in the French Branch Basin and should be constructed as soon as funding becomes available.

# Appendix

## **Appendix A -Exhibits**

(EX-1)French Branch Study Area Exhibit

(EX-2) French Branch Basin Flood Stats Exhibit

(EX-2.1) Flood Stats Exhibit for the Lower Portion of French Branch Basin

(EX-3)French Branch Sub-basin Exhibit

(EX-4) HEC-HMS Model Exhibit

(EX-5) HEC-RAS Model Exhibit

(EX-6) Recommended Improvements

(EX-6.1) Recommended Improvements Detail

(EX-7) HEC-RAS Model Results Exhibit

(EX-8) Property Owners Exhibit

(EX-9) Future Improvements Exhibit

## **Appendix B – HEC-HMS Analysis**

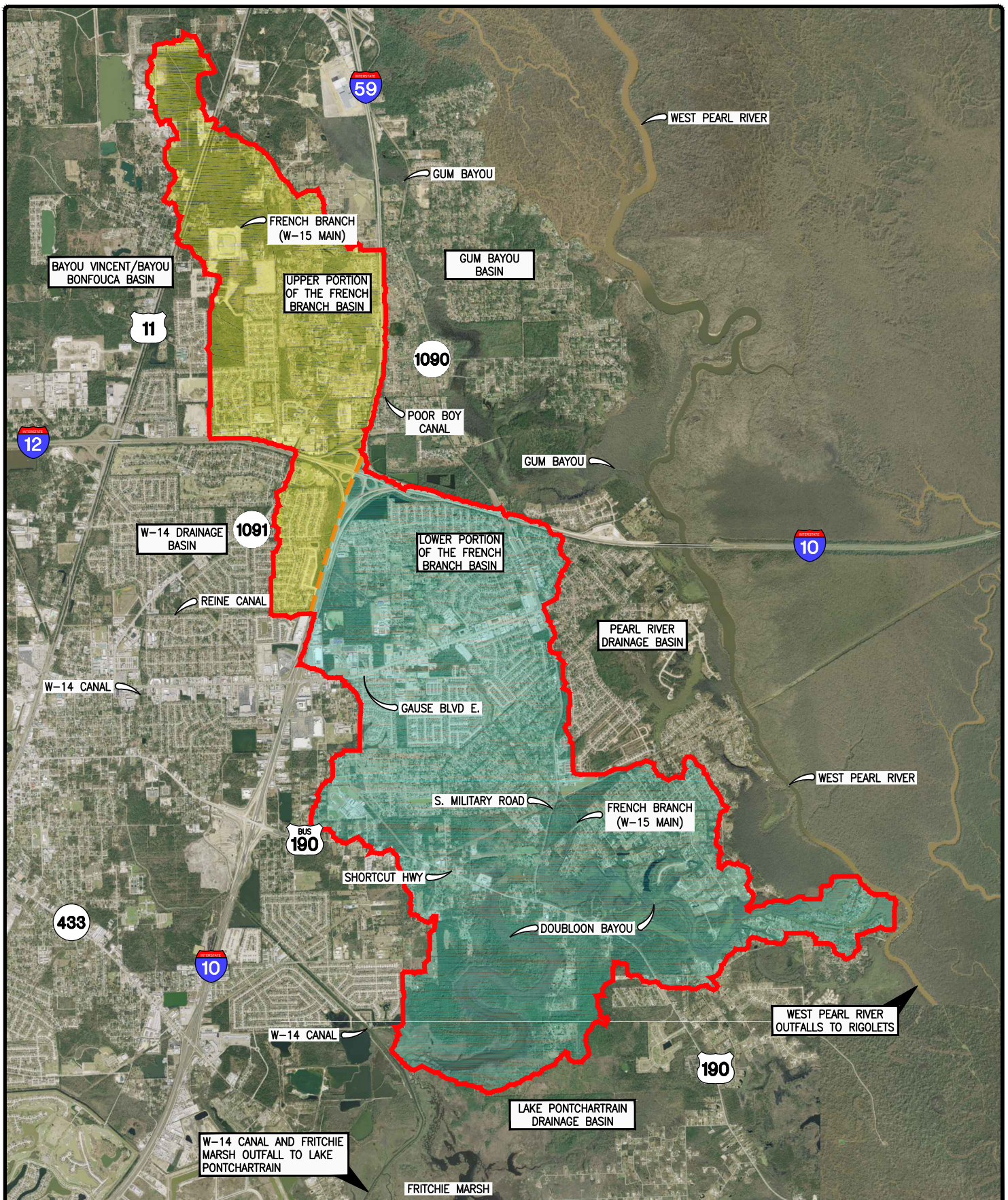
## **Appendix C – Existing Conditions HEC-RAS Analysis**

## **Appendix D – Proposed Conditions HEC-RAS Analysis**

## **Appendix E – Engineer’s Opinion of Probable Cost for Proposed Improvements**

# Appendix A





# DDG DUPLANTIS DESIGN GROUP, PC

34 Louis Prima Drive  
Covington, Louisiana 70433

Phone: 985.626.9547  
Fax : 985.626.0269

## FRENCH BRANCH STUDY AREA EXHIBIT ST. TAMMANY PARISH, LA

### LEGEND -

- MAJOR DRAINAGE FEATURES
- LIMITS OF FRENCH BRANCH DRAINAGE BASIN
- SUB-BASIN



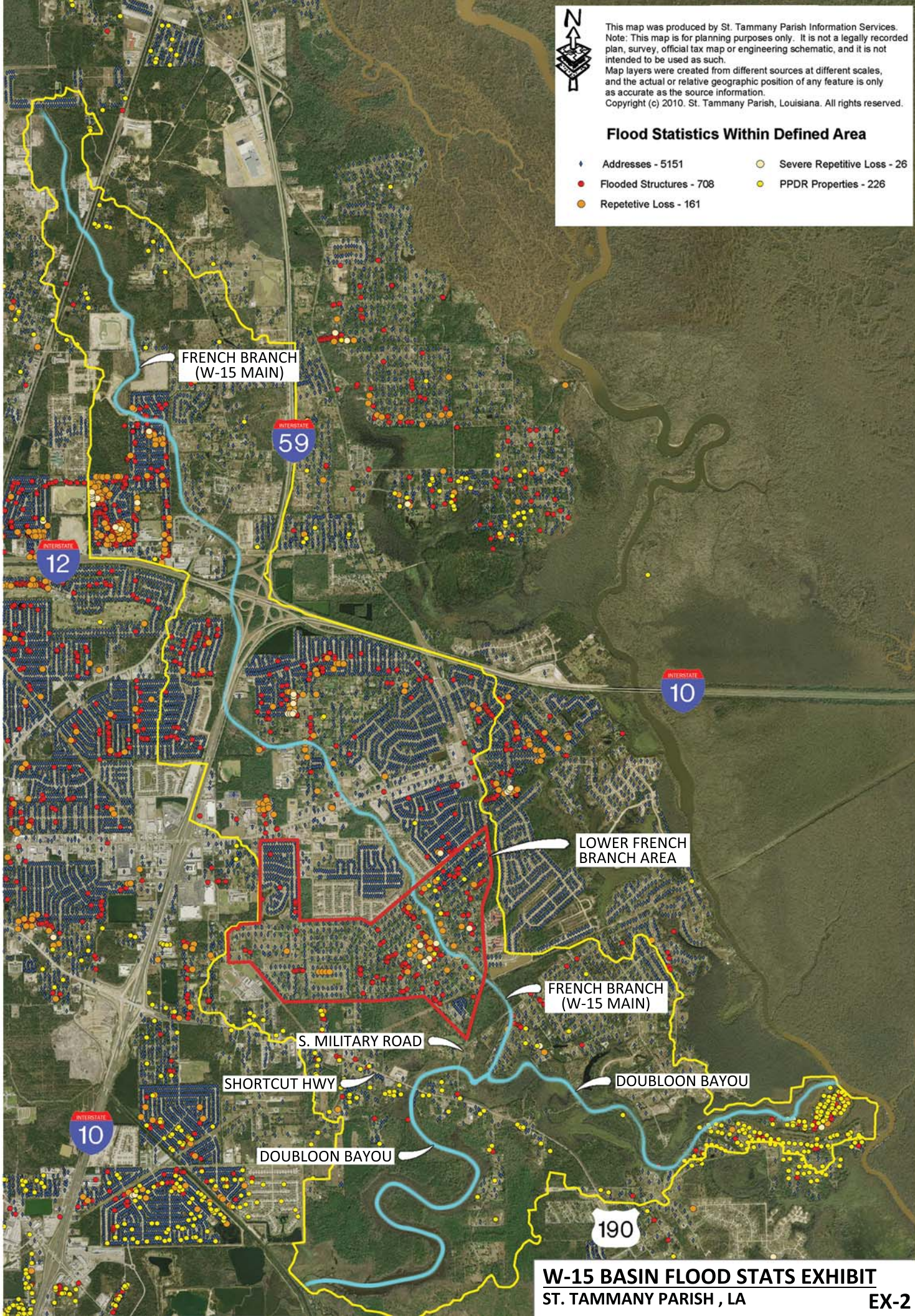




This map was produced by St. Tammany Parish Information Services. Note: This map is for planning purposes only. It is not a legally recorded plan, survey, official tax map or engineering schematic, and it is not intended to be used as such. Map layers were created from different sources at different scales, and the actual or relative geographic position of any feature is only as accurate as the source information. Copyright (c) 2010. St. Tammany Parish, Louisiana. All rights reserved.

### Flood Statistics Within Defined Area

- ◆ Addresses - 5151
- Severe Repetitive Loss - 26
- Flooded Structures - 708
- PPDR Properties - 226
- Repetitive Loss - 161



FRENCH BRANCH  
(W-15 MAIN)

59

12

10

LOWER FRENCH  
BRANCH AREA

FRENCH BRANCH  
(W-15 MAIN)

S. MILITARY ROAD

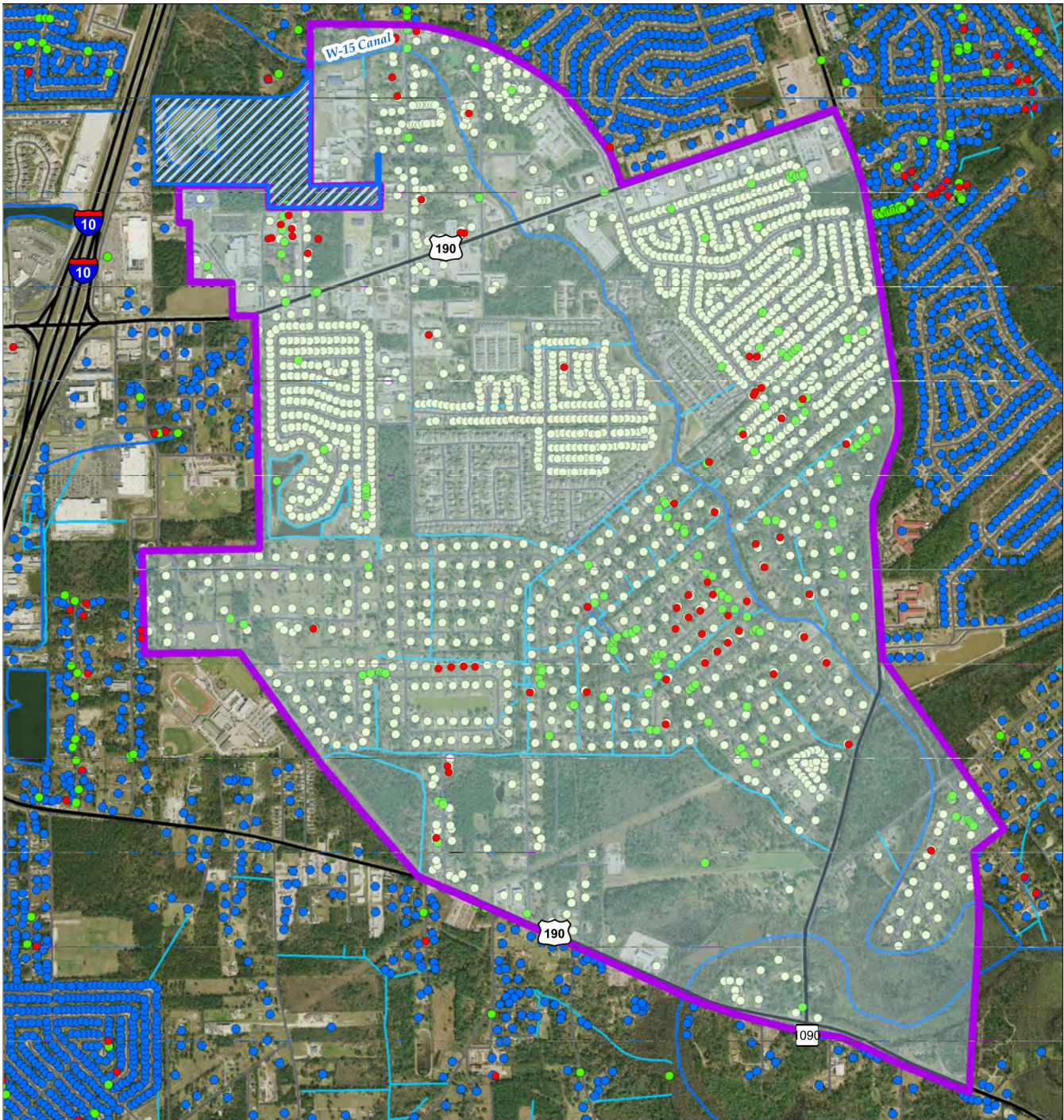
SHORTCUT HWY

DOUBLOON BAYOU

DOUBLOON BAYOU

190





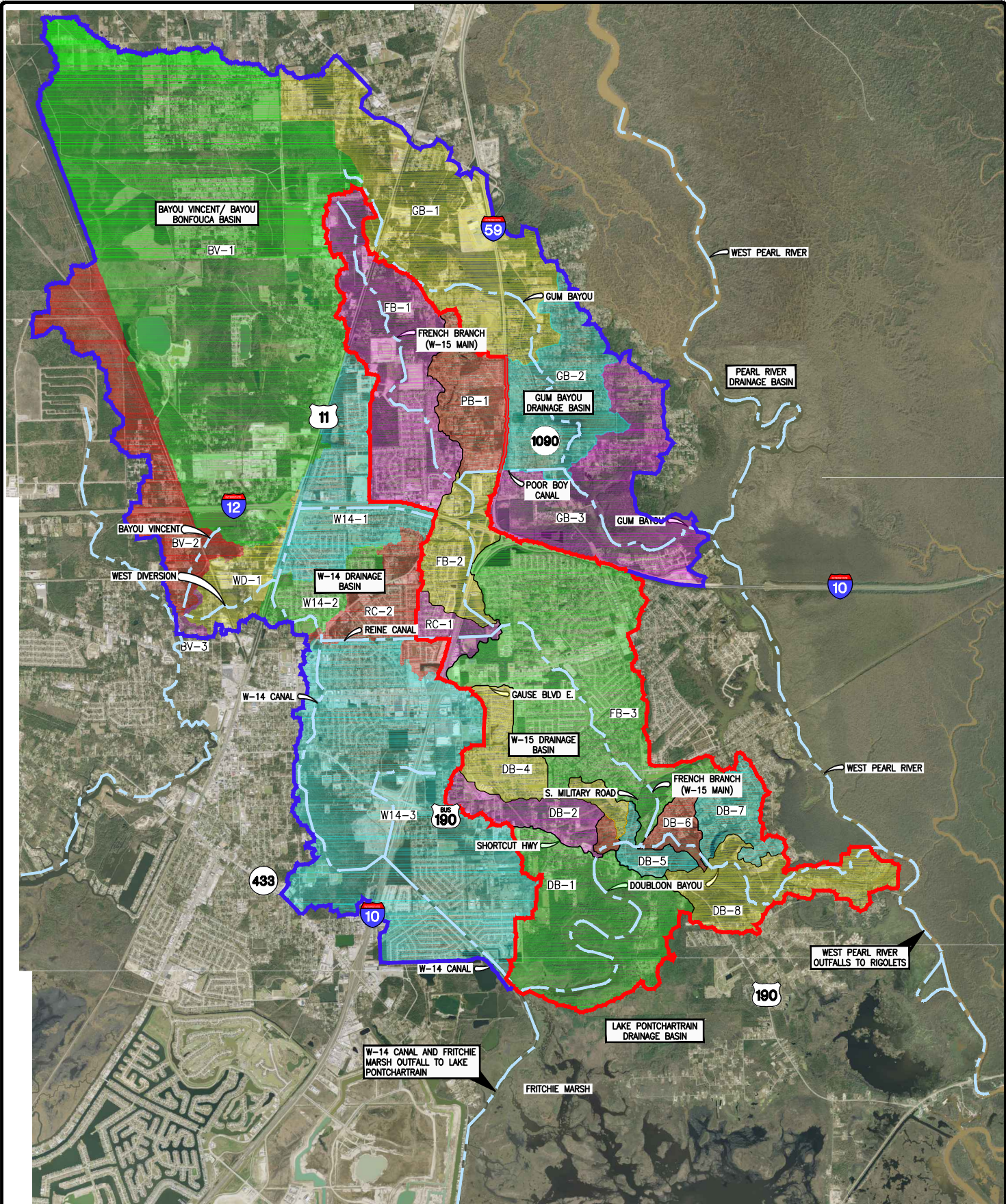
**Legend**

- Repetitively Flooded Properties - 67
  - Flooded Structures - 399
  - Addresses Within the Benefit Area - 1741
  - Addresses Outside the Benefit Area
  - Tenet Pond
  - Benefit Area
- Parish Laterals
  - Streams
  - Streets
  - Major Roads

**FLOOD STATS EXHIBIT FOR LOWER PORTION OF THE FRENCH BRANCH BASIN**



R:\DWG\10-000\10-166\Expanded Scope\Exhibits For Expanded Scope\003 10-166 Expanded Scope - SubBasin Exhibit.dwg



# DDG DUPLANTIS DESIGN GROUP, PC

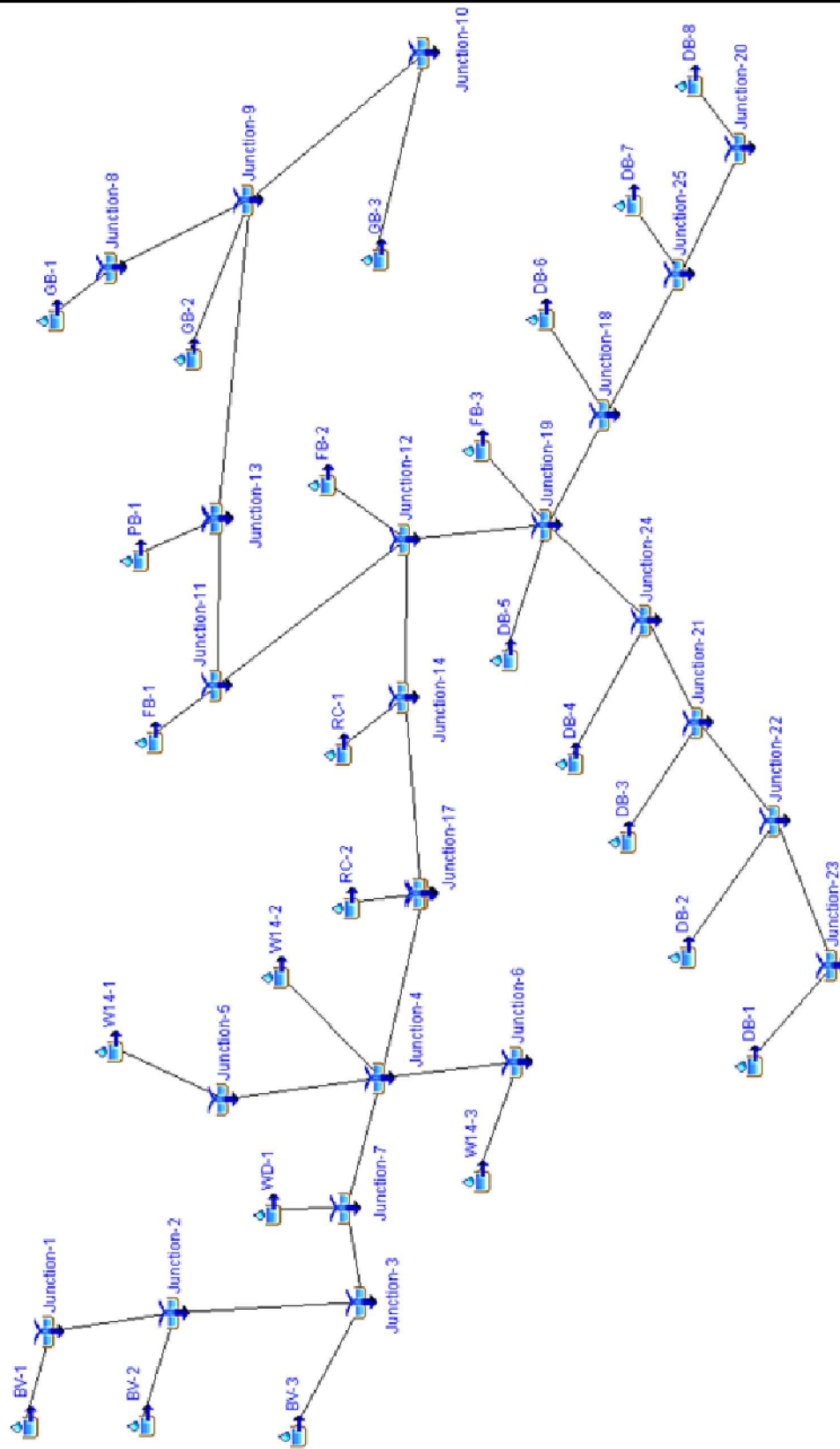
34 Louis Prima Drive  
Covington, Louisiana 70433

Phone: 985.626.9547  
Fax : 985.626.0269

## FRENCH BRANCH SUB-BASIN EXHIBIT ST. TAMMANY PARISH, LA

**LEGEND -**  
 MAJOR DRAINAGE FEATURES ---  
 LIMITS OF FRENCH BRANCH DRAINAGE BASIN ---





**DUPLANTIS DESIGN GROUP, PC**  
 CIVIL ENGINEERING • ARCHITECTURE

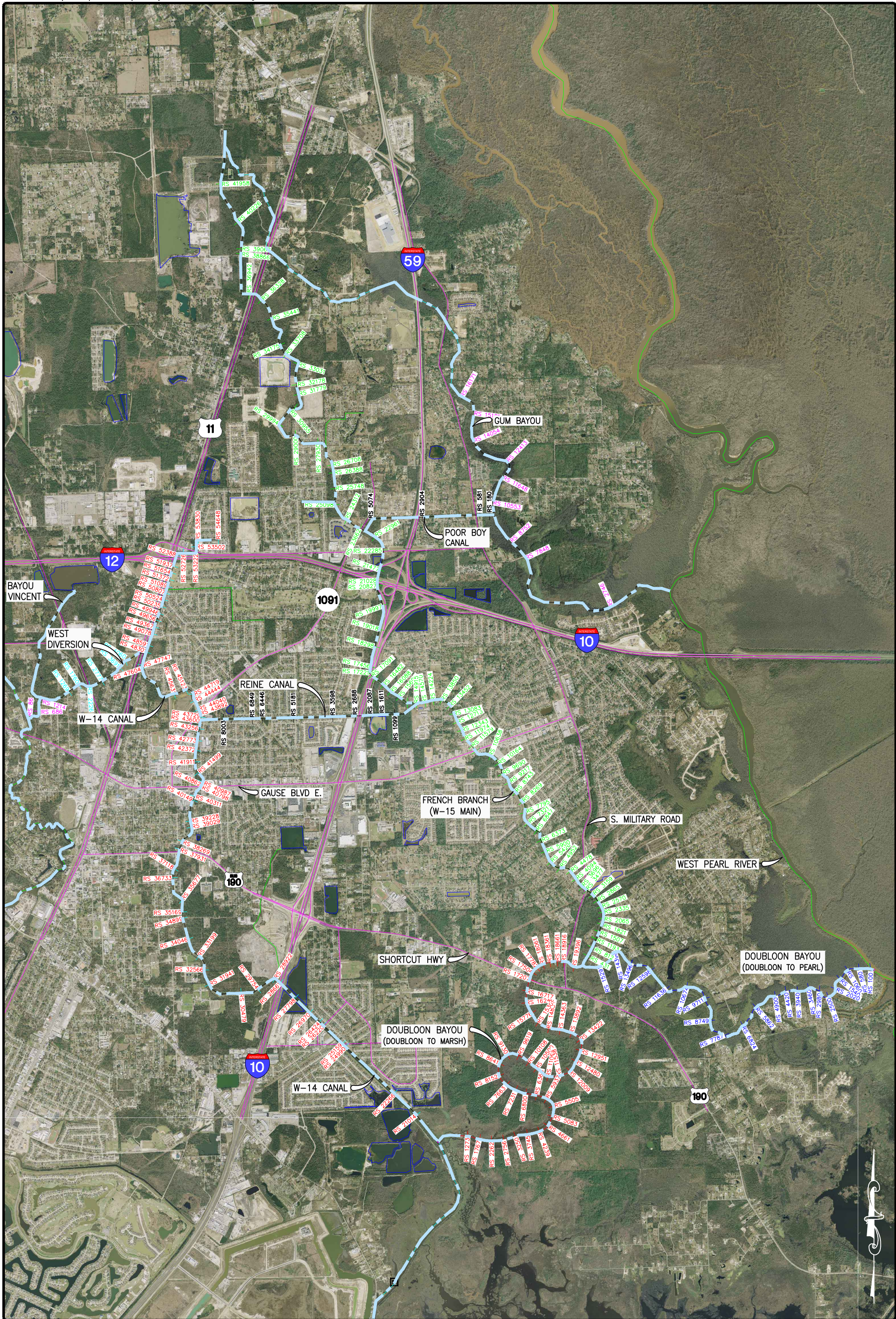
34 LOUIS PRIMA DRIVE COVINGTON, LA 70433  
 PHONE: 985.626.9547 \\ FAX: 985.626.0269

THIBODAUX \ COVINGTON \ HOUSTON \ BATON ROUGE \ HOUMA

**HMS EXHIBIT**  
**ST. TAMMANY PARISH, LA**

**EX-4**





<b>EX-5</b>	DRAWN
	CHECKED
	DATE
	REVISION
	PROJECT NO.

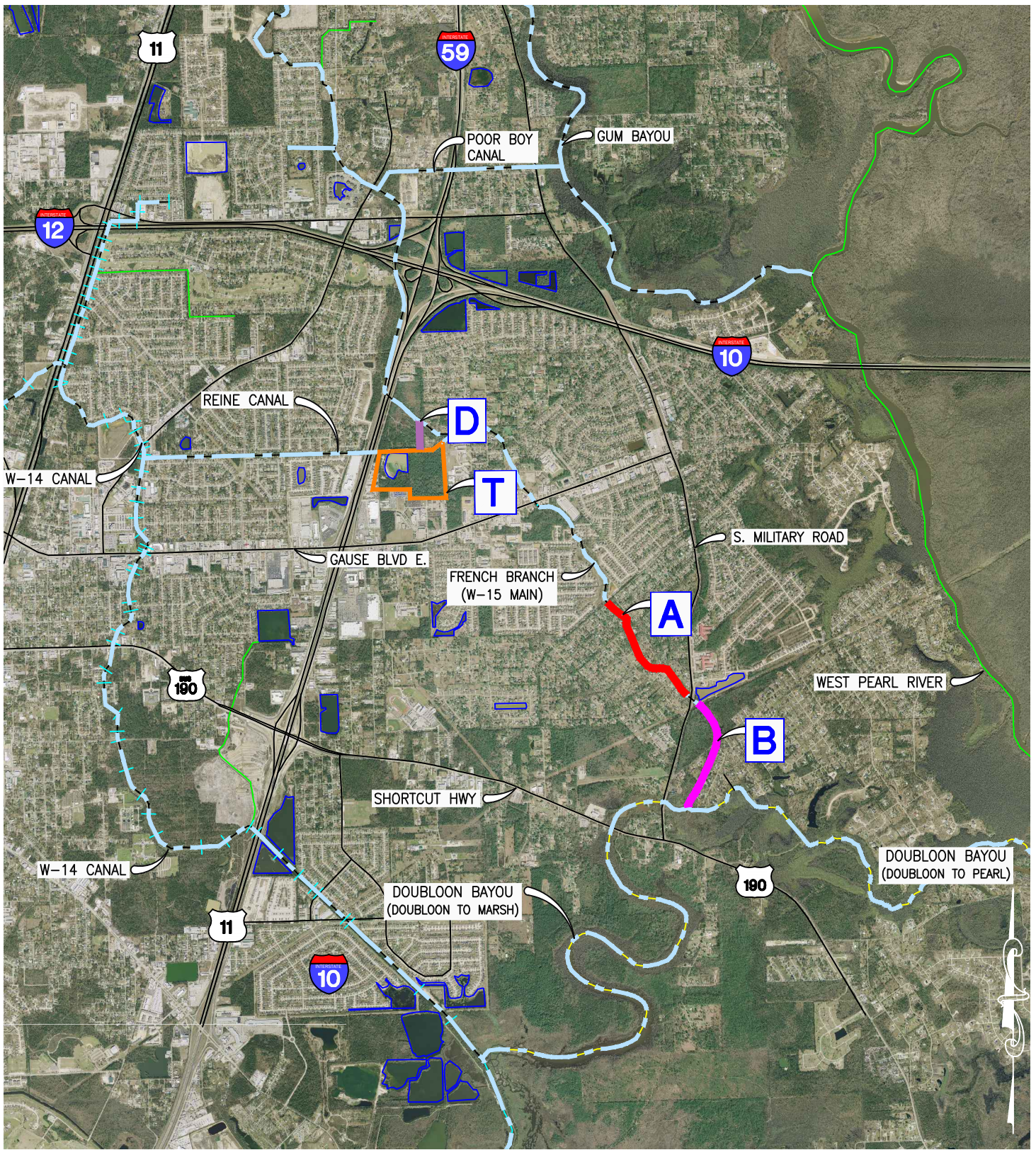
**HEC-RAS MODEL EXHIBIT**  
**ST. TAMMANY PARISH, LA**

--	--	--	--	--	--

**DDG** DUPLANTIS DESIGN GROUP, PC  
 CIVIL ENGINEERING • ARCHITECTURE  
 34 LOUIE PRIMA DRIVE COVINGTON, LA 70433  
 WWW.DDGPC.COM PHONE: 985.686.9547 FAX: 985.686.0069  
 THIBODAUX \ COVINGTON \ HOUSTON \ BATON ROUGE \ HOUMA

REVISION	BY



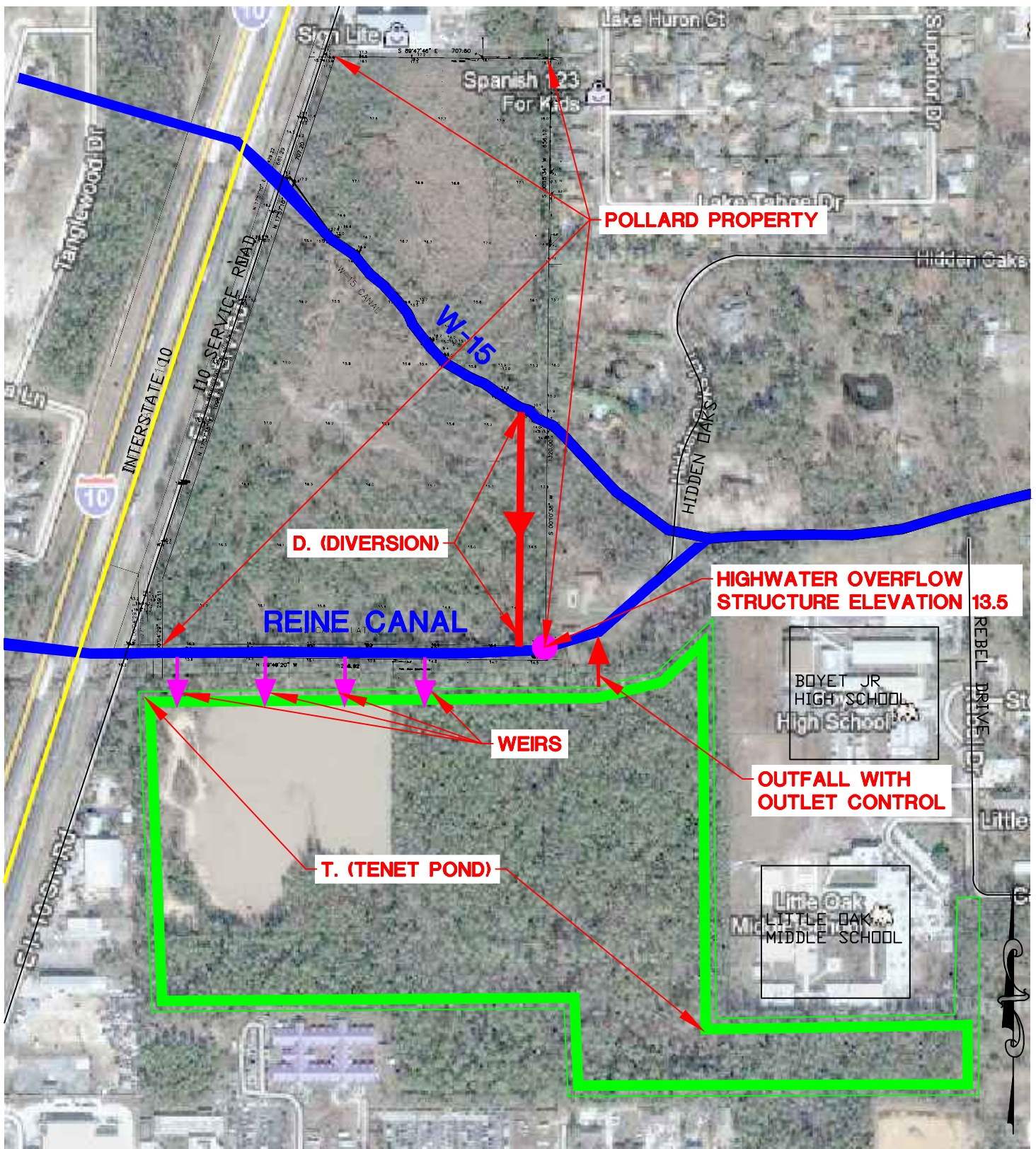


**DDG** **DUPLANTIS DESIGN GROUP, PC**  
 CIVIL ENGINEERING • ARCHITECTURE  
 34 LOUIS PRIMA DRIVE COVINGTON, LA 70433  
 WWW.DDGPC.COM PHONE: 985.249.6180 \\ FAX: 985.249.6190  
 THIBODAUX \ COVINGTON \ HOUSTON \ BATON ROUGE \ HOUMA

**RECOMMENDED IMPROVEMENTS**  
**ST. TAMMANY PARISH, LA**  
**ABTD**

**EX-6**





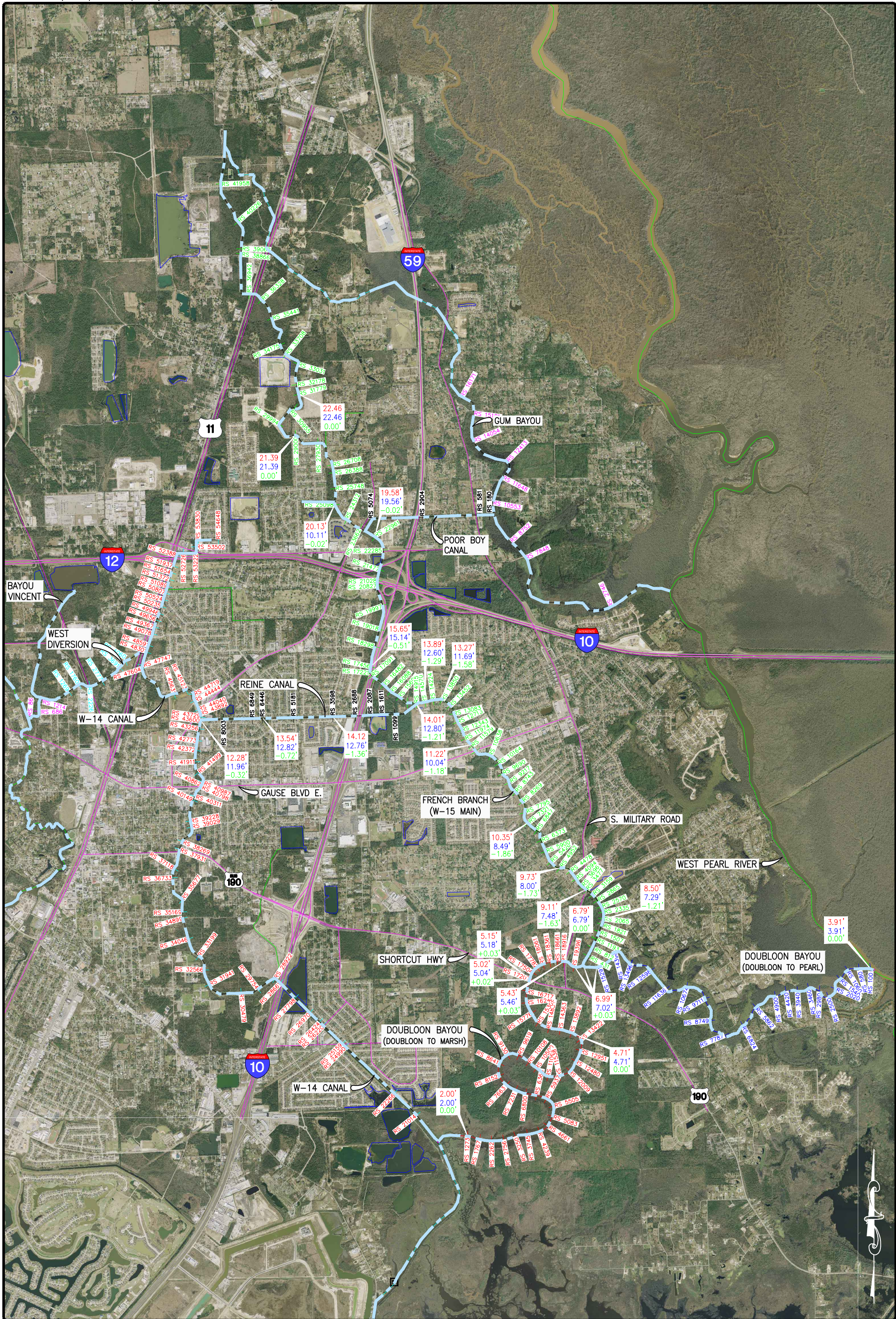
**DUPLANTIS DESIGN GROUP, PC**  
 CIVIL ENGINEERING • ARCHITECTURE

34 LOUIS PRIMA DRIVE COVINGTON, LA 70433  
 PHONE: 985.626.9547 \\ FAX: 985.626.0269

THIBODAUX \ COVINGTON \ HOUSTON \ BATON ROUGE \ HOUMA

**RECOMMENDED IMPROVEMENTS DETAIL**  
**ST. TAMMANY PARISH, LA**  
**D AND T**  
**EX-6.1**





<b>EX-7</b>	DATE	BY
	REVISION	BY
	PROJECT NO.	
	FILE NO.	
	SHEET NO.	

**HEC-RAS MODEL RESULTS**  
**ST. TAMMANY PARISH, LA**  
**ABTD**

LEGEND - WATER SURFACE ELEVATIONS (25 YEAR)	
10.55'	EXISTING CONDITIONS
8.97'	IMPROVED CONDITIONS (ABTDV)
-1.58'	COMPARISON

**DDG**  
 CIVIL ENGINEERING • ARCHITECTURE  
 34 LOUISE PRIMA DRIVE COVINGTON, LA 70433  
 WWW.DDGPC.COM PHONE: 985.668.9547 FAX: 985.668.0869  
 THIBODAUX \ COVINGTON \ HOUSTON \ BATON ROUGE \ HOUMA

REVISION	BY





WIDEN W-16 ON BOTH SIDES FROM MILITARY ROAD BRIDGE THROUGH THE BOTTOM WIDTH CHANNEL. 54' BOTTOM CHANNEL BANK AT COMPLETION.

WIDEN W-16 ON THE WEST SIDE FROM THE COMPLETION WITH DOUBLON BAYOU TO MILITARY ROAD BRIDGE WITH A 60' BOTTOM CHANNEL. GENTLE DIVERSION THROUGH SLOPE BANK AT COMPLETION.

WIDEN W-16 ON THE WEST SIDE FROM THE COMPLETION WITH DOUBLON BAYOU TO MILITARY ROAD BRIDGE WITH A 60' BOTTOM CHANNEL. GENTLE DIVERSION THROUGH SLOPE BANK AT COMPLETION.

LOT #	OWNER NAME	MAILING ADDRESS	SITE ADDRESS
1	TRICHARD, MICHAEL E.	141 KELLY DR., SLIDELL, LA 70461	100 RUE ACOUIN, SLIDELL, LA 70461
2	BREXWAL, LOUIS ROBERT ETUX	108 RUE ACOUIN, SLIDELL, LA 70461	112 RUE ACOUIN, SLIDELL, LA 70461
3	MURPHY MANAGEMENT / US BANK	405 N. 151ST ST. SUITE 100, OMAHA, NE 68134	116 RUE ACOUIN, SLIDELL, LA 70461
4	DOUILL, DAVID J. ETUX	120 RUE ACOUIN, SLIDELL, LA 70461	118 RUE ACOUIN, SLIDELL, LA 70461
5	ST. TAMMANY PARISH	1401 E. SHERIFF ROAD, SUITE 10, LAS VEGAS, NV 89120	124 RUE ACOUIN, SLIDELL, LA 70461
6	WISNER HOLDING GROUP INC.	4408 SHAW ST. WENGER, LA 70001	128 RUE ACOUIN, SLIDELL, LA 70461
7	ROOM 4124A BPO	UNDEVELOPED	
8	ST. TAMMANY PARISH	UNDEVELOPED	
9	ST. TAMMANY PARISH	UNDEVELOPED	

PHASE SERVICE BY FROM CENTERLINE OF FRENCH BRANCH W/ 70' W.

LOT #	OWNER NAME	MAILING ADDRESS	SITE ADDRESS
21	DUKE, WALTER C. ETUX	134 RUE DE LA PAIX, SLIDELL, LA 70461	
22	JAMES, DON MICHAEL ETUX	140 RUE ACOUIN, SLIDELL, LA 70461	
23	BIRDSON, KERRY R. ETUX	144 RUE ACOUIN, SLIDELL, LA 70461	
24	MORRIS, SCARLETT B.	148 RUE ACOUIN, SLIDELL, LA 70461	
25	TRICHARD, ALL KELLY	154 RUE ACOUIN, SLIDELL, LA 70461	

PHASE SERVICE BY FROM CENTERLINE OF FRENCH BRANCH W/ 70' W.

LOT #	OWNER NAME	MAILING ADDRESS	SITE ADDRESS
152	PARVIZ, DOUGLAS A. ETUX	134 RUE DE LA PAIX, SLIDELL, LA 70461	
153	HALL, JANE MOORE	138 RUE DE LA PAIX, SLIDELL, LA 70461	
154	ODUM, KIM M.	138 RUE DE LA PAIX, SLIDELL, LA 70461	
155	BROWN, ANDREW L. ETUX	138 RUE DE LA PAIX, SLIDELL, LA 70461	
156	HEWINGS, STUART L. ETUX	152 RUE CHEVIGNON, SLIDELL, LA 70461	
157	COOPER, RICHARD JAMES ETUX	154 RUE CHEVIGNON, SLIDELL, LA 70461	
158	COOPER, DONALD D. ETUX	156 RUE CHEVIGNON, SLIDELL, LA 70461	
159	FRANCOISE, JAMES C. ETUX	158 RUE CHEVIGNON, SLIDELL, LA 70461	

PHASE SERVICE BY FROM CENTERLINE OF FRENCH BRANCH

LOT #	OWNER NAME	MAILING ADDRESS	SITE ADDRESS
1	ROSE, JOSE E.	191 S. WILSON DR., SLIDELL, LA 70461	
2	SPEYER, FRANK FRANK	101 BELLE CHERIE DR., SLIDELL, LA 70461	
3	COOPER, HARRY COLMAN III	103 BELLE CHERIE DR., SLIDELL, LA 70461	
4	NEWMAN, CAROLINE ETUX	105 BELLE CHERIE DR., SLIDELL, LA 70461	
5	BALLARD, BRUCE L. ETUX	103 DEVEREAUX DR., SLIDELL, LA 70461	
6	BERT, ANTHONY S. ETUX	107 DEVEREAUX DR., SLIDELL, LA 70461	
7	BARONNA, MICHEL C. JR. ETUX	107 DEVEREAUX DR., SLIDELL, LA 70461	
14	LOT AC. SMITH, WALTER L. JR.	111 BELLE CHERIE DR., SLIDELL, LA 70461	

PHASE SERVICE BY FROM CENTERLINE OF FRENCH BRANCH

LOT #	OWNER NAME	MAILING ADDRESS	SITE ADDRESS
15	SEC. RESOURCES LLC.	P.O. BOX 113027, WARRIOR, LA 70011	111 DEVEREAUX DR., SLIDELL, LA 70461
16	ASTORIA, ROBERT D. ETUX	115 DEVEREAUX DR., SLIDELL, LA 70461	
17	ASTORIA, ROBERT D. ETUX	115 DEVEREAUX DR., SLIDELL, LA 70461	
18	ASTORIA, ROBERT D. ETUX	115 DEVEREAUX DR., SLIDELL, LA 70461	
19	ASTORIA, ROBERT D. ETUX	115 DEVEREAUX DR., SLIDELL, LA 70461	

NOTE: INFORMATION SHOWN ON THIS SHEET IS FOR PLANNING PURPOSES ONLY. THE LOT OWNERS AND PROPERTY LINES WERE OBTAINED FROM THE FINAL RESUBDIVISION PLATS AND LOT OWNER INFORMATION OBTAINED FROM THE PARISH COURTHOUSE. THIS INFORMATION IS FOR CONCEPTUAL PURPOSES ONLY AND SHOULD BE USED AS SUCH.

# PROPERTY OWNERS EXHIBIT

DRAWN: [ ]  
 CHECKED: [ ]  
 ISSUED DATE: 10-18-10  
 ISSUED FOR: [ ]  
 PROJECT NO: 09-811  
 FILE: PROPERTY OWNERS EX-1  
 SHEET: [ ]  
**EX-8**

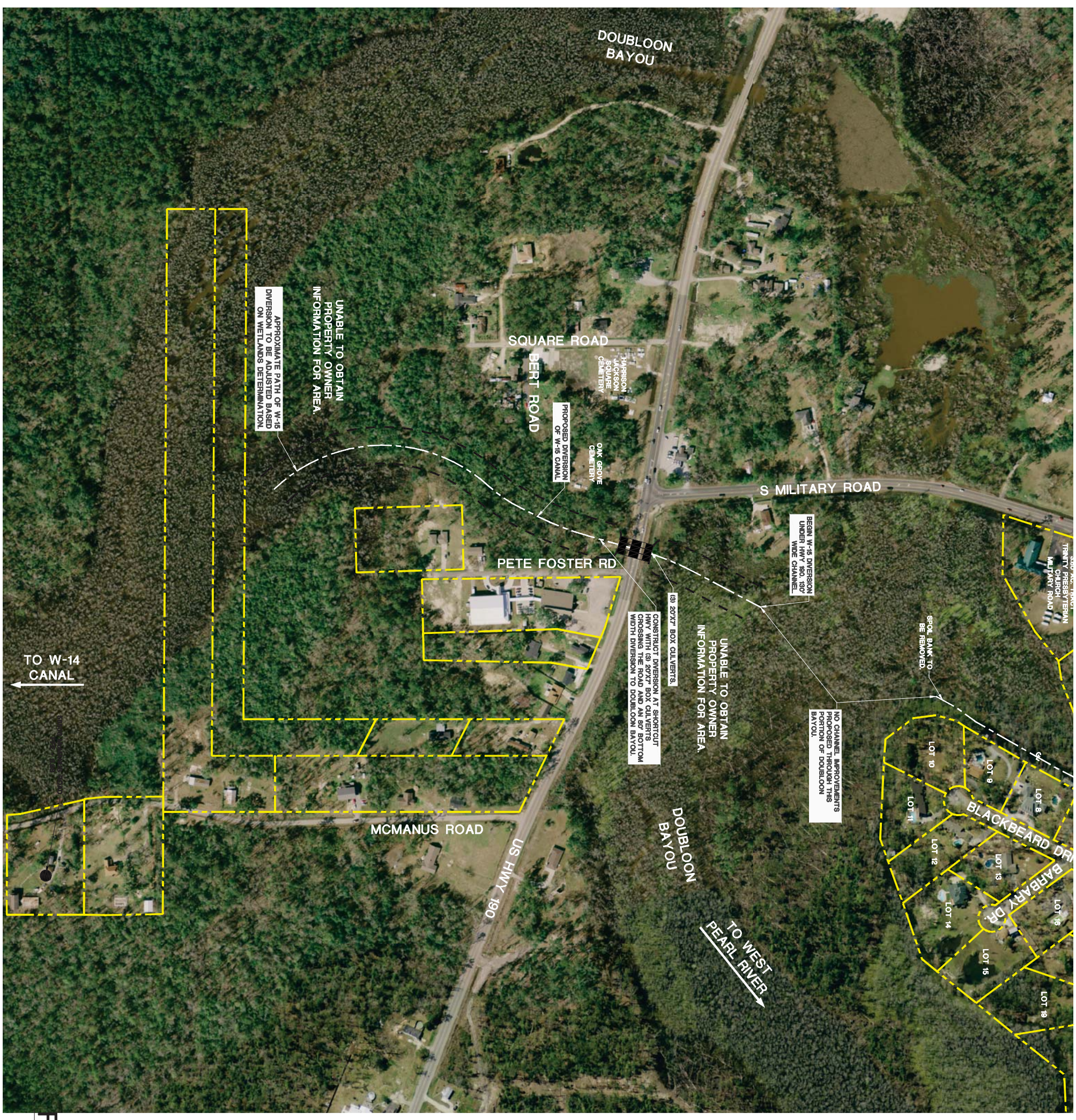
**FRENCH BRANCH IMPROVEMENTS**  
**SLIDELL, LOUISIANA**  
**BY ST. TAMMANY PARISH**  
**ST. TAMMANY PARISH, LOUISIANA**

SIGNATURE: \_\_\_\_\_  
 DATE: \_\_\_\_\_

**DDG DUPLANTIS DESIGN GROUP, PC**  
*Respect • Integrity • Client Satisfaction • Excellence*  
 Thibodaux // Covington // Houston // Baton Rouge  
 Civil Engineering & Site Development // Public Works // Architecture  
 34 Louis Prima Drive  
 Phone: 985.626.9547  
 Fax: 985.626.0269

REVISION	BY





NOTE: INFORMATION SHOWN ON THIS SHEET IS FOR PLANNING PURPOSES ONLY. THE LOT OWNERS AND PROPERTY LINES WERE OBTAINED FROM THE FINAL RESUBDIVISION PLATS AND LOT OWNER INFORMATION OBTAINED FROM THE PARISH COURTHOUSE. THIS INFORMATION IS FOR CONCEPTUAL PURPOSES ONLY AND SHOULD BE USED AS SUCH.

**FUTURE IMPROVEMENTS EXHIBIT**



PROJECT NO.	09-571
DATE	09-2011
ISSUED FOR	FILE
ISSUED DATE	09-2011
DESIGNED	THB
DRAWN	THB
CHECKED	THB
DATE	09-2011
PROJECT NO.	09-571
DATE	09-2011
ISSUED FOR	FILE
ISSUED DATE	09-2011
DESIGNED	THB
DRAWN	THB
CHECKED	THB
DATE	09-2011

**FRENCH BRANCH IMPROVEMENTS  
SLIDELL, LOUISIANA  
BY ST. TAMMANY PARISH  
ST. TAMMANY PARISH, LOUISIANA**

STAMP

SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_

**DDG DUPLANTIS DESIGN GROUP, PC**  
*Respect • Integrity • Client Satisfaction • Excellence*  
 Thibodaux // Covington // Houston // Baton Rouge  
 Civil Engineering • Site Development • Land Planning • Public Works • Architecture  
 34 Louis Prima Drive  
 Covington, Louisiana 70433  
 Phone: 985.626.9547  
 Fax: 985.626.0269

REVISION	BY



# Appendix B

Hydrologic Element	Drainage Area (MI <sup>2</sup> )	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BV-1	8.463	2791.1	01Jan2011, 17:30	6.13
BV-2	1.413	445.7	01Jan2011, 16:30	5.97
BV-3	0.050	59.4	01Jan2011, 13:15	6.59
WD-1	0.451	265.9	01Jan2011, 14:45	6.03
GB-1	2.716	813.2	01Jan2011, 17:15	5.86
GB-2	1.203	669.3	01Jan2011, 15:30	6.36
GB-3	1.832	508.3	01Jan2011, 18:45	6.15
W14-1	1.142	927.8	01Jan2011, 13:30	7.51
W14-2	0.430	334.4	01Jan2011, 13:45	7.26
W14-3	4.689	1864.2	01Jan2011, 15:15	6.99
FB-1	1.850	799.1	01Jan2011, 15:15	6.26
FB-2	0.658	408.3	01Jan2011, 14:45	6.70
FB-3	3.152	1583.9	01Jan2011, 14:45	6.65
PB-1	0.698	250.1	01Jan2011, 15:00	5.95
RC-1	0.252	193.2	01Jan2011, 13:45	6.87
RC-2	0.678	375.7	01Jan2011, 14:15	6.97
DB-1	1.841	518.9	01Jan2011, 17:45	6.13
DB-2	0.442	219.9	01Jan2011, 15:30	6.59
DB-3	0.059	63.0	01Jan2011, 13:15	5.92
DB-4	0.632	300.6	01Jan2011, 15:00	6.69
DB-5	0.198	79.5	01Jan2011, 16:30	5.71
DB-6	0.212	148.3	01Jan2011, 14:15	5.79
DB-7	0.460	231.9	01Jan2011, 15:15	5.90
DB-8	0.937	407.0	01Jan2011, 17:00	6.25
Eddins	0.214	212.9	01Jan2011, 12:45	6.88

Hydrologic Element	Drainage Area (MI <sup>2</sup> )	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BV-1	8.463	3290.0	01Jan2011, 17:30	7.28
BV-2	1.413	525.8	01Jan2011, 16:30	7.12
BV-3	0.050	68.6	01Jan2011, 13:15	7.74
WD-1	0.451	312.1	01Jan2011, 14:45	7.17
GB-1	2.716	961.8	01Jan2011, 17:30	7.00
GB-2	1.203	783.7	01Jan2011, 15:30	7.51
GB-3	1.832	600.6	01Jan2011, 19:00	7.30
W14-1	1.142	1073.7	01Jan2011, 13:30	8.66
W14-2	0.430	388.0	01Jan2011, 13:45	8.42
W14-3	4.689	2176.2	01Jan2011, 15:15	8.15
FB-1	1.850	938.2	01Jan2011, 15:15	7.41
FB-2	0.658	476.7	01Jan2011, 14:45	7.85
FB-3	3.152	1852.8	01Jan2011, 14:45	7.81
PB-1	0.698	294.7	01Jan2011, 15:00	7.09
RC-1	0.252	224.6	01Jan2011, 13:45	8.02
RC-2	0.678	438.1	01Jan2011, 14:15	8.12
DB-1	1.841	612.6	01Jan2011, 18:00	7.28
DB-2	0.442	257.2	01Jan2011, 15:30	7.74
DB-3	0.059	73.1	01Jan2011, 13:15	7.07
DB-4	0.632	351.5	01Jan2011, 15:00	7.85
DB-5	0.198	93.9	01Jan2011, 16:30	6.86
DB-6	0.212	173.8	01Jan2011, 14:15	6.93
DB-7	0.460	272.7	01Jan2011, 15:15	7.04
DB-8	0.937	478.1	01Jan2011, 17:00	7.40
Eddins	0.214	246.5	01Jan2011, 12:45	8.03

Hydrologic Element	Drainage Area (MI <sup>2</sup> )	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BV-1	8.463	3647.1	01Jan2011, 17:30	8.22
BV-2	1.413	583.0	01Jan2011, 16:30	8.05
BV-3	0.050	75.3	01Jan2011, 13:15	8.69
WD-1	0.451	343.6	01Jan2011, 14:45	8.10
GB-1	2.716	1068.7	01Jan2011, 17:30	7.92
GB-2	1.203	862.1	01Jan2011, 15:30	8.45
GB-3	1.832	668.2	01Jan2011, 19:00	8.24
W14-1	1.142	1176.1	01Jan2011, 13:30	9.61
W14-2	0.430	425.2	01Jan2011, 13:45	9.37
W14-3	4.689	2395.1	01Jan2011, 15:15	9.09
FB-1	1.850	1035.4	01Jan2011, 15:15	8.35
FB-2	0.658	523.4	01Jan2011, 14:45	8.80
FB-3	3.152	2039.4	01Jan2011, 14:45	8.75
PB-1	0.698	326.3	01Jan2011, 15:00	8.03
RC-1	0.252	246.3	01Jan2011, 13:45	8.97
RC-2	0.678	481.3	01Jan2011, 14:15	9.07
DB-1	1.841	680.2	01Jan2011, 18:00	8.22
DB-2	0.442	282.9	01Jan2011, 15:30	8.69
DB-3	0.059	80.3	01Jan2011, 13:15	8.00
DB-4	0.632	386.9	01Jan2011, 15:00	8.79
DB-5	0.198	104.0	01Jan2011, 16:30	7.79
DB-6	0.212	191.2	01Jan2011, 14:15	7.85
DB-7	0.460	300.9	01Jan2011, 15:00	7.98
DB-8	0.937	527.7	01Jan2011, 17:00	8.34
Eddins	0.214	271.4	01Jan2011, 12:45	8.98

Hydrologic Element	Drainage Area (MI <sup>2</sup> )	Peak Discharge (CFS)	Time of Peak	Volume (IN)
BV-1	8.463	4102.0	01Jan2011, 17:30	9.53
BV-2	1.413	656.8	01Jan2011, 16:45	9.36
BV-3	0.050	83.3	01Jan2011, 13:15	10.04
WD-1	0.451	382.2	01Jan2011, 14:45	9.40
GB-1	2.716	1204.3	01Jan2011, 17:30	9.21
GB-2	1.203	962.4	01Jan2011, 15:30	9.78
GB-3	1.832	750.6	01Jan2011, 18:45	9.55
W14-1	1.142	1299.3	01Jan2011, 13:30	11.01
W14-2	0.430	469.3	01Jan2011, 13:45	10.75
W14-3	4.689	2674.2	01Jan2011, 15:15	10.47
FB-1	1.850	1157.7	01Jan2011, 15:15	9.67
FB-2	0.658	580.7	01Jan2011, 14:45	10.16
FB-3	3.152	2268.3	01Jan2011, 14:45	10.10
PB-1	0.698	365.4	01Jan2011, 15:00	9.33
RC-1	0.252	272.2	01Jan2011, 13:45	10.33
RC-2	0.678	533.0	01Jan2011, 14:15	10.45
DB-1	1.841	765.8	01Jan2011, 18:00	9.54
DB-2	0.442	315.9	01Jan2011, 15:30	10.05
DB-3	0.059	89.1	01Jan2011, 13:15	9.31
DB-4	0.632	431.0	01Jan2011, 15:00	10.15
DB-5	0.198	117.0	01Jan2011, 16:30	9.08
DB-6	0.212	212.0	01Jan2011, 14:15	9.14
DB-7	0.460	336.3	01Jan2011, 15:15	9.28
DB-8	0.937	591.8	01Jan2011, 17:00	9.67
Eddins	0.214	301.0	01Jan2011, 12:45	10.33

# Appendix C



ExpandedLocal.rep

HEC-RAS Version 4.1.0 Jan 2010  
U.S. Army Corps of Engineers  
Hydrologic Engineering Center  
609 Second Street  
Davis, California

```
X      X  XXXXXX   XXXX      XXXX      XX      XXXX
X      X  X       X   X      X   X      X   X      X
X      X  X       X       X   X      X   X      X
XXXXXXXX XXXX     X       XXX  XXXX     XXXXXX     XXXX
X      X  X       X       X   X      X   X          X
X      X  X       X   X      X   X      X   X          X
X      X  XXXXXX   XXXX      X   X      X   X      XXXXX
```

\*\*\*\*\*

PROJECT DATA

Project Title: ExpandedLocal  
Project File : ExpandedLocal.prj  
Run Date and Time: 1/2/2013 9:42:56 AM

Project in English units

Project Description:

Unsteady Flow Analysis Legend:

25ECM112011 - 25 Year Existing Conditions

Model

ECMnoHaas - Existing Conditions without Hass Rd Pond functioning  
25 yr

PCM 112011 - 2010 Recommended Improvements in this model

25yr AB PCM 1111 -

2010 Recommended Improvements with only AB Improvements

ABT - Alternative AB

plus Tenant Pond option

ABTH - Alt ABT plus Hass Pond upgrades

ABTHO - ABTH

plus Old River Road Pond option

ABD - AB plus increase culverts under Military  
Road on Doubloon

ABDE - ABD plus new bridge under 190 on W-15

ABD1E - ABE

plus a bigger Military Road culvert compared to ABD

ABT1 - similar to ABT

(obsolete option)

ABTHP - ABTH plus Pollard Pond option

ExpandedLocal.rep

ABTHPollard - same as  
ABTHP (outdated)  
ABTHG - ABTH plus Gause Pond  
AB45TH - ABH with a 45 acre  
tenant pond (more updated than other ABTH options)  
AB54TH - ABH with a 54 acre  
tenant pond (more updated than other ABTH options)  
ABTHV - AB54TH plus David  
Vey Pond option  
AB54TVg - AB54T plus David Vey Pond under gravity  
drainage  
ABTV - 54 Acre Tenant Pond plus David Vey under gravity  
ABTVPump -  
Tenant pond plus David Vey Pumped pond  
ABCTV - AB with 172508's C improvement  
with Tenant and Vey gravity ponds  
ABTb2V - ABT with a bypass channel to  
connect to Reine with a modified tenant outfall  
ABTb3V - ABT with a bypass  
channel to connect to Reine without tenant outfall  
ABTb4V - ABT with a bypass  
channel to connect to Reine with an unmodified Tenant outfall  
ABTb4V is the  
selected recommendation as of July 2012  
ABTb4v with SELA - ABTb4v improvements  
with the recommended SELA improvements  
ABTb4v w/out Vey-Haas - ABTb4V  
recommended improvements without the Vey Pond and Hass pond improvements

\*\*\*\*\*

PLAN DATA

Plan Title: 25 Yr Existing 03/2012  
Plan File : C:\Users\tfruge\Desktop\W15 Expanded RAS\ExpandedLocal.p13

Geometry Title: Existing Conditions 03/2012  
Geometry File : C:\Users\tfruge\Desktop\W15 Expanded  
RAS\ExpandedLocal.g28

Flow Title :  
Flow File :

Plan Description:  
Existing Conditions which include Haas Rd pond and all working W14 improvements  
as of Nov 2011.

ExpandedLocal.rep

Plan Summary Information:

Number of: Cross Sections = 405      Multiple Openings = 0  
          Culverts        = 21      Inline Structures = 0  
          Bridges         = 29      Lateral Structures = 4

Computational Information

Water surface calculation tolerance = 0.01  
Critical depth calculation tolerance = 0.01  
Maximum number of iterations        = 20  
Maximum difference tolerance        = 0.3  
Flow tolerance factor                = 0.001

Computation Options

Critical depth computed only where necessary  
Conveyance Calculation Method: At breaks in n values only  
Friction Slope Method:            Average Conveyance  
Computational Flow Regime:        Subcritical Flow

\*\*\*\*\*

GEOMETRY DATA

Geometry Title: Existing Conditions 03/2012  
Geometry File : C:\Users\tfruge\Desktop\W15 Expanded RAS\ExpandedLocal.g28

Reach Connection Table

\*\*\*\*\*

* River	Reach	* Upstream Boundary	* Downstream Boundary	*
* Bayou Vincent	Upper	*	* J5	*
* Bayou Vincent	Lower	* J5	*	*
* Doubloon	to Marsh	* J1	*	*
* Doubloon	to Pearl	* J1	*	*
* Gum Bayou	Upper	*	* J7	*
* Gum Bayou	Lower	* J7	*	*
* Poor Boy Canal	Main	* J6	* J7	*
* Reine Canal	Main	* J2	* J3	*
* W-15 Main	Upper	*	* J6	*
* W-15 Main	Mid	* J6	* J3	*
* W-15 Main	South	* J3	* J1	*
* W14 Main	Upper	*	* J4	*
* W14 Main	Mid	* J4	* J2	*
* W14 Main	Lower	* J2	*	*
* West Diversion	Main	* J4	* J5	*

\*\*\*\*\*

## JUNCTION INFORMATION

Name: J1

Description:

Momentum computation Method  
 Add Friction  
 Do Not Add Weight

Length across Junction		Tributary		Length	Angle
River	Reach	River	Reach		
W-15 Main	South	to Doubloon	to Marsh	110	78
W-15 Main	South	to Doubloon	to Pearl	310	45

Name: J2

Description:

Momentum computation Method  
 Add Friction  
 Do Not Add Weight

Length across Junction		Tributary		Length	Angle
River	Reach	River	Reach		
W14 Main	Mid	to W14 Main	Lower	250	0
W14 Main	Mid	to Reine Canal	Main	1076	90

Name: J3

Description:

Momentum computation Method  
 Add Friction  
 Do Not Add Weight

Length across Junction		Tributary		Length	Angle
River	Reach	River	Reach		
Reine Canal	Main	to W-15 Main	South	220	36
W-15 Main	Mid	to W-15 Main	South	346	0

Name: J4

Description:

Momentum computation Method  
 Add Friction  
 Do Not Add Weight

Length across Junction		Tributary		Length	Angle
River	Reach	River	Reach		
W14 Main	Upper	to W14 Main	Mid	63	0
W14 Main	Upper	to West Diversion	Main	219	90

Name: J5

Description:

ExpandedLocal.rep

Momentum computation Method  
 Add Friction  
 Do Not Add Weight

Length across Junction		Tributary		Reach	Length	Angle
River	Reach	River	Reach			
West Diversion	Main	to Bayou Vincent	Lower		130	90
Bayou Vincent	Upper	to Bayou Vincent	Lower		500	0

Name: J6  
 Description:  
 Momentum computation Method  
 Add Friction  
 Do Not Add Weight

Length across Junction		Tributary		Reach	Length	Angle
River	Reach	River	Reach			
W-15 Main	Upper	to W-15 Main	Mid		451	0
W-15 Main	Upper	to Poor Boy Canal	Main		50	89

Name: J7  
 Description:  
 Momentum computation Method  
 Add Friction  
 Do Not Add Weight

Length across Junction		Tributary		Reach	Length	Angle
River	Reach	River	Reach			
Poor Boy Canal	Main	to Gum Bayou	Lower		5	83
Gum Bayou	Upper	to Gum Bayou	Lower		136	8

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Upper RS: 6072

INPUT

Description: Data from COEtoSTP River Sta 1.15

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	17.5	20	17.49	37.5	13.41	50.5	10.26	63.4	6.33
71	5.31	78.5	5.51	88.7	6.97	102.5	11.46	119.5	12.7
170	17.49	190	17.5						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

ExpandedLocal.rep

\*\*\*\*\*  
0 .1 37.5 .05 102.5 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
37.5 102.5 563 563 563 .1 .3

CROSS SECTION

RIVER: Bayou Vincent  
REACH: Upper RS: 5509

INPUT  
Description: Data from Model COEtoSTP 1.04333\*

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	15.83	20	15.82	37.5	11.74	50.5	8.59	63.4	4.66
71	3.64	78.5	3.84	88.7	5.3	102.5	9.79	119.5	11.03
170	15.82	190	15.83						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	37.5	.05	102.5	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
37.5 102.5 282 282 282 .1 .3

CROSS SECTION

RIVER: Bayou Vincent  
REACH: Upper RS: 5227

INPUT  
Description: Data from COEtoSTP River Sta 0.99

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	15	20	14.99	37.5	10.91	50.5	7.76	63.4	3.83
71	2.81	78.5	3.01	88.7	4.47	102.5	8.96	119.5	10.2
170	14.99	190	15						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	37.5	.05	102.5	.1

ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 37.5 102.5 53 53 53 .1 .3

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Upper RS: 5174

INPUT

Description: Data from COEtoSTP River Sta 0.98

Station Elevation Data num= 46

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	14	1.1	14	13.6	12.8	13.61	12.8	14.7	12.8
14.71	12.8	27.2	12	27.21	12	28.3	12	28.31	12
40.8	10.9	40.81	10.9	41.9	10.9	41.91	10.9	54.4	7.8
54.41	7.8	55.5	7.8	55.51	7.8	68	3.83	68.1	3.83
69.1	3.83	69.11	3.83	71	3.83	81.6	3	81.61	3
82.7	3	82.71	3	95.2	4.47	95.21	4.47	96.3	4.47
96.31	4.47	108.8	9	108.81	9	109.9	9	109.91	9
122.4	10.2	122.41	10.2	123.5	10.2	123.51	10.2	136	12
136.1	12	137.1	12	137.11	12	150	14	150.1	14
170	14.99								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	0	.05	150	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 0 150 16 16 16 .1 .3

Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 150.65 170 16.65 F

BRIDGE

RIVER: Bayou Vincent  
 REACH: Upper RS: 5166

INPUT

Description: Data from Army Corps Model  
 Distance from Upstream XS = 1  
 Deck/Roadway Width = 14  
 Weir Coefficient = 2.6

ExpandedLocal.rep

Upstream Deck/Roadway Coordinates

num= 2

Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

\*\*\*\*\*  
 0 16.65 13.95 170 16.65 13.95

Upstream Bridge Cross Section Data

Station Elevation Data num= 46

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*  
 0 14 1.1 14 13.6 12.8 13.61 12.8 14.7 12.8  
 14.71 12.8 27.2 12 27.21 12 28.3 12 28.31 12  
 40.8 10.9 40.81 10.9 41.9 10.9 41.91 10.9 54.4 7.8  
 54.41 7.8 55.5 7.8 55.51 7.8 68 3.83 68.1 3.83  
 69.1 3.83 69.11 3.83 71 3.83 81.6 3 81.61 3  
 82.7 3 82.71 3 95.2 4.47 95.21 4.47 96.3 4.47  
 96.31 4.47 108.8 9 108.81 9 109.9 9 109.91 9  
 122.4 10.2 122.41 10.2 123.5 10.2 123.51 10.2 136 12  
 136.1 12 137.1 12 137.11 12 150 14 150.1 14  
 170 14.99

Manning's n Values

num= 3

Sta n Val Sta n Val Sta n Val

\*\*\*\*\*  
 0 .1 0 .05 150 .1

Bank Sta: Left Right Coeff Contr. Expan.

0 150 .1 .3

Ineffective Flow num= 1

Sta L Sta R Elev Permanent

150.65 170 16.65 F

Downstream Deck/Roadway Coordinates

num= 2

Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

\*\*\*\*\*  
 0 16.65 13.95 170 16.65 13.95

Downstream Bridge Cross Section Data

Station Elevation Data num= 46

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*  
 0 14 1.1 14 13.6 12.8 13.61 12.8 14.7 12.8  
 14.71 12.8 27.2 12 27.21 12 28.3 12 28.31 12  
 40.8 10.9 40.81 10.9 41.9 10.9 41.91 10.9 54.4 7.8  
 54.41 7.8 55.5 7.8 55.51 7.8 68 3.83 68.1 3.83  
 69.1 3.83 69.11 3.83 71 3.83 81.6 3 81.61 3  
 82.7 3 82.71 3 95.2 4.47 95.21 4.47 96.3 4.47



ExpandedLocal.rep

96.31	4.47	108.8	9	108.81	9	109.9	9	109.91	9
122.4	10.2	122.41	10.2	123.5	10.2	123.51	10.2	136	12
136.1	12	137.1	12	137.11	12	150	14	150.1	14
170	14.99								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	0	.05	150	.1

\*\*\*\*\*

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	0	150		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
150	170	16.65	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 10

Pier Data

Pier Station	Upstream=	14.16	Downstream=	14.16
Upstream	num=	2		
Width	Elev	Width	Elev	
*****				
1.1	12	1.1	14.99	
Downstream	num=	2		
Width	Elev	Width	Elev	
*****				
1.1	12	1.1	14.99	

Pier Data

Pier Station	Upstream=	27.75	Downstream=	27.75
Upstream	num=	2		
Width	Elev	Width	Elev	
*****				
1.1	12	1.1	14.99	
Downstream	num=	2		
Width	Elev	Width	Elev	
*****				
1.1	12	1.1	14.99	

ExpandedLocal.rep

Pier Data

Pier Station Upstream= 41.35 Downstream= 41.35  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.1 12 1.1 14.99  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.1 12 1.1 14.99

Pier Data

Pier Station Upstream= 54.5 Downstream= 54.5  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.1 12 1.1 14.99  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.1 12 1.1 14.99

Pier Data

Pier Station Upstream= 68.55 Downstream= 68.55  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.1 12 1.1 14.99  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.1 12 1.1 14.99

Pier Data

Pier Station Upstream= 82.15 Downstream= 82.15  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.1 12 1.1 14.99  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.1 12 1.1 14.99

Pier Data

Pier Station Upstream= 95.75 Downstream= 95.75  
Upstream num= 2  
Width Elev Width Elev

```

*****
      1.1      12      1.1  14.99
Downstream    num=      2
      Width  Elev    Width  Elev
*****
      1.1      12      1.1  14.99

```

Pier Data

Pier Station Upstream= 109.35 Downstream= 109.35

```

Upstream    num=      2
      Width  Elev    Width  Elev
*****
      1.1      12      1.1  14.99
Downstream    num=      2
      Width  Elev    Width  Elev
*****
      1.1      12      1.1  14.99

```

Pier Data

Pier Station Upstream= 122.95 Downstream= 122.95

```

Upstream    num=      2
      Width  Elev    Width  Elev
*****
      1.1      12      1.1  14.99
Downstream    num=      2
      Width  Elev    Width  Elev
*****
      1.1      12      1.1  14.99

```

Pier Data

Pier Station Upstream= 136.55 Downstream= 136.55

```

Upstream    num=      2
      Width  Elev    Width  Elev
*****
      1.1      12      1.1  14.99
Downstream    num=      2
      Width  Elev    Width  Elev
*****
      1.1      12      1.1  14.99

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

ExpandedLocal.rep

Additional Bridge Parameters

Add Friction component to Momentum  
 Do not add Weight component to Momentum  
 Class B flow critical depth computations use critical depth  
 inside the bridge at the upstream end  
 Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Upper RS: 5158

INPUT

Description: Data from COEtoSTP River Sta 0.95

Station Elevation Data num= 46

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	14	1.1	14	13.6	12.8	13.61	12.8	14.7	12.8
14.71	12.8	27.2	12	27.21	12	28.3	12	28.31	12
40.8	10.9	40.81	10.9	41.9	10.9	41.91	10.9	54.4	7.8
54.41	7.8	55.5	7.8	55.51	7.8	68	3.83	68.1	3.83
69.1	3.83	69.11	3.83	71	3.83	81.6	3	81.61	3
82.7	3	82.71	3	95.2	4.47	95.21	4.47	96.3	4.47
96.31	4.47	108.8	9	108.81	9	109.9	9	109.91	9
122.4	10.2	122.41	10.2	123.5	10.2	123.51	10.2	136	12
136.1	12	137.1	12	137.11	12	150	14	150.1	14
170	14.99								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	0	.05	150	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 0 150 50 50 50 .1 .3

Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 150 170 16.65 F

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Upper RS: 4963

INPUT

ExpandedLocal.rep

Description: Data from COEtoSTP River Sta 0.94

Station Elevation Data num= 46

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	14	1.1	14	13.6	12.8	13.61	12.8	14.7	12.8
14.71	12.8	27.2	12	27.21	12	28.3	12	28.31	12
40.8	10.9	40.81	10.9	41.9	10.9	41.91	10.9	54.4	7.8
54.41	7.8	55.5	7.8	55.51	7.8	68	3.83	68.1	3.83
69.1	3.83	69.11	3.83	71	3.83	81.6	3	81.61	3
82.7	3	82.71	3	95.2	4.47	95.21	4.47	96.3	4.47
96.31	4.47	108.8	9	108.81	9	109.9	9	109.91	9
122.4	10.2	122.41	10.2	123.5	10.2	123.51	10.2	136	12
136.1	12	137.1	12	137.11	12	150	14	150.1	14
170	14.99								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	0	.05	150	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	0	150		880	880	.1	.3

CROSS SECTION

RIVER: Bayou Vincent

REACH: Upper

RS: 4083

INPUT

Description: Data from COEtoSTP River Sta 0.773333\*

Station Elevation Data num= 47

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
473.71	16.67	707.04	16	940.37	16.67	993.71	16.67	1000	16.14
1001.36	16	1016.82	14.02	1016.83	14.02	1018.18	13.89	1018.19	13.88
1023.73	13.22	1033.64	12.88	1033.65	12.88	1035	12.86	1035.01	12.86
1050.45	12.23	1050.47	12.23	1051.81	12.2	1051.83	12.2	1067.27	10.91
1067.28	10.91	1068.63	10.88	1068.64	10.88	1074.99	10.23	1084.09	7.17
1084.21	7.13	1085.45	6.82	1085.46	6.82	1087.8	6.23	1095.2	4.22
1100.91	3.52	1101.27	3.52	1108.41	4.52	1109.04	4.57	1110.03	4.85
1116.18	6.91	1116.81	6.99	1123.95	8.28	1124.58	8.36	1131.72	9.85
1131.78	9.86	1132.35	9.93	1139.72	11.51	1140.01	11.56	1171.41	16.5
1190.27	16.31	1197.04	17						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

ExpandedLocal.rep

473.71 .1 1000 .05 1139.72 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
1000 1139.72 440 440 440 .1 .3

CROSS SECTION

RIVER: Bayou Vincent
REACH: Upper RS: 3643

INPUT

Description: Data from COEtoSTP River Sta 0.69

Station Elevation Data num= 14

Table with 10 columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains 3 rows of data points.

Manning's n Values num= 3

Table with 6 columns: Sta, n Val, Sta, n Val, Sta, n Val. Contains 1 row of data points.

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
1500 1634.58 53 53 53 .1 .3

CROSS SECTION

RIVER: Bayou Vincent
REACH: Upper RS: 3590

INPUT

Description: Data from COEtoSTP River Sta 0.68

Station Elevation Data num= 56

Table with 10 columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains 11 rows of data points.

ExpandedLocal.rep

1646.01	8.2	1647	8.2	1647.01	8.2	1662	9.7	1662.01	9.7
1663	9.7	1663.01	9.7	1676.57	14.1	1676.58	14.1	1701.58	14.03
1710.56	15								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
710.56	.1	1500	.05	1676.58	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1500	1676.58		16	16		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
710.56	1524.61	15	F
1677.57	1710.56	15	F

BRIDGE

RIVER: Bayou Vincent  
 REACH: Upper RS: 3582

INPUT

Description: Data from Army Corp of Engineers Model  
 Distance from Upstream XS = 1  
 Deck/Roadway Width = 14  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num=	7							
Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord
*****	*****	*****	*****	*****	*****	*****	*****	*****
1410.56	15		1526	18.72	10.58	1526	18.72	16.18
1676.58	18.72	16.18	1676.58	18.72	14.1	1701.58	18.72	
1710.56	18.72							

Upstream Bridge Cross Section Data

Station	Elevation	Data	num=	56					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
710.56	15	1060.56	14	1410.56	15	1490.56	15	1500	14.21
1526	10.58	1526.01	10.58	1538	10.4	1538.01	10.4	1539	10.4
1539.01	10.4	1551	10	1551.01	10	1552	10	1552.01	10
1565	9.6	1565.01	9.6	1566	9.6	1566.01	9.6	1578	9.3
1578.01	9.3	1579	9.3	1579.01	9.3	1582.16	9.26	1592	6.6
1592.01	6.6	1593	6.6	1593.01	6.6	1604.31	4.3	1606	4.3
1606.01	4.3	1607	4.3	1607.01	4.3	1610.56	4.3	1616.03	4.3
1619	4.3	1619.01	4.3	1620	4.3	1620.01	4.3	1633	6.3
1633.01	6.3	1634	6.3	1634.01	6.3	1634.58	7.27	1646	8.2

ExpandedLocal.rep

1646.01	8.2	1647	8.2	1647.01	8.2	1662	9.7	1662.01	9.7
1663	9.7	1663.01	9.7	1676.57	14.1	1676.58	14.1	1701.58	14.03
1710.56	15								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
710.56	.1	1500	.05	1676.58	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	1500	1676.58		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
710.56	1524.61	15	F
1677.57	1710.56	15	F

Downstream Deck/Roadway Coordinates

num= 7

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
1410.56		15			1526	18.72	10.58			1526	18.72	16.18		
1676.58	18.72	16.18	1676.58	18.72	14.1	1701.58	18.72							
1710.56	18.72													

Downstream Bridge Cross Section Data

Station Elevation Data num= 56

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
710.56	15	1060.56	14	1410.56	15	1490.56	15	1500	14.21
1526	10.58	1526.01	10.58	1538	10.4	1538.01	10.4	1539	10.4
1539.01	10.4	1551	10	1551.01	10	1552	10	1552.01	10
1565	9.6	1565.01	9.6	1566	9.6	1566.01	9.6	1578	9.3
1578.01	9.3	1579	9.3	1579.01	9.3	1582.16	9.26	1592	6.6
1592.01	6.6	1593	6.6	1593.01	6.6	1604.31	4.3	1606	4.3
1606.01	4.3	1607	4.3	1607.01	4.3	1610.56	4.3	1616.03	4.3
1619	4.3	1619.01	4.3	1620	4.3	1620.01	4.3	1633	6.3
1633.01	6.3	1634	6.3	1634.01	6.3	1634.58	7.27	1646	8.2
1646.01	8.2	1647	8.2	1647.01	8.2	1662	9.7	1662.01	9.7
1663	9.7	1663.01	9.7	1676.57	14.1	1676.58	14.1	1701.58	14.03
1710.56	15								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
710.56	.1	1500	.05	1676.58	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	1500	1676.58		.1	.3



ExpandedLocal.rep

Ineffective Flow	num=	2		
Sta L	Sta R	Elev	Permanent	
710.56	1525.11	15	F	
1677.07	1710.56	15	F	

Upstream Embankment side slope	=	0 horiz. to 1.0 vertical
Downstream Embankment side slope	=	0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow	=	.98
Elevation at which weir flow begins	=	
Energy head used in spillway design	=	
Spillway height used in design	=	
Weir crest shape	=	Broad Crested

Number of Piers = 10

Pier Data

Pier Station Upstream= 1538.5 Downstream= 1538.5

Upstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	5	1	16.18	

Downstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	5	1	16.18	

Pier Data

Pier Station Upstream= 1551.5 Downstream= 1551.5

Upstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	5	1	16.18	

Downstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	5	1	16.18	

Pier Data

Pier Station Upstream= 1565.5 Downstream= 1565.5

Upstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	5	1	16.18	

Downstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	5	1	16.18	

ExpandedLocal.rep

Pier Data

Pier Station Upstream= 1578.5 Downstream= 1578.5  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1 5 1 16.18  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1 5 1 16.18

Pier Data

Pier Station Upstream= 1592.5 Downstream= 1592.5  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1 5 1 16.18  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1 5 1 16.18

Pier Data

Pier Station Upstream= 1606.5 Downstream= 1606.5  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1 5 1 16.18  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1 5 1 16.18

Pier Data

Pier Station Upstream= 1619.5 Downstream= 1619.5  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1 5 1 16.18  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1 5 1 16.18

Pier Data

Pier Station Upstream= 1633.5 Downstream= 1633.5  
Upstream num= 2  
Width Elev Width Elev

```

*****
      1      5      1  16.18
Downstream  num=      2
      Width  Elev   Width  Elev
*****
      1      5      1  16.18

```

```

Pier Data
Pier Station      Upstream= 1646.5      Downstream= 1646.5
Upstream          num=      2
      Width  Elev   Width  Elev
*****
      1      5      1  16.18
Downstream        num=      2
      Width  Elev   Width  Elev
*****
      1      5      1  16.18

```

```

Pier Data
Pier Station      Upstream= 1662.5      Downstream= 1662.5
Upstream          num=      2
      Width  Elev   Width  Elev
*****
      1      5      1  16.18
Downstream        num=      2
      Width  Elev   Width  Elev
*****
      1      5      1  16.18

```

Number of Bridge Coefficient Sets = 1

```

Low Flow Methods and Data
      Energy
Selected Low Flow Methods = Highest Energy Answer

```

```

High Flow Method
      Energy Only

```

```

Additional Bridge Parameters
      Add Friction component to Momentum
      Do not add Weight component to Momentum
      Class B flow critical depth computations use critical depth
      inside the bridge at the upstream end
      Criteria to check for pressure flow = Upstream energy grade line

```

CROSS SECTION

ExpandedLocal.rep

RIVER: Bayou Vincent  
 REACH: Upper RS: 3574

INPUT

Description: Data from COEtoSTP River Sta 0.65

Station Elevation Data num= 56

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
710.56	15	1060.56	14	1410.56	15	1490.56	15	1500	14.21
1526	10.58	1526.01	10.58	1538	10.4	1538.01	10.4	1539	10.4
1539.01	10.4	1551	10	1551.01	10	1552	10	1552.01	10
1565	9.6	1565.01	9.6	1566	9.6	1566.01	9.6	1578	9.3
1578.01	9.3	1579	9.3	1579.01	9.3	1582.16	9.26	1592	6.6
1592.01	6.6	1593	6.6	1593.01	6.6	1604.31	4.3	1606	4.3
1606.01	4.3	1607	4.3	1607.01	4.3	1610.56	4.3	1616.03	4.3
1619	4.3	1619.01	4.3	1620	4.3	1620.01	4.3	1633	6.3
1633.01	6.3	1634	6.3	1634.01	6.3	1634.58	7.27	1646	8.2
1646.01	8.2	1647	8.2	1647.01	8.2	1662	9.7	1662.01	9.7
1663	9.7	1663.01	9.7	1676.57	14.1	1676.58	14.1	1701.58	14.03
1710.56	15								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
710.56	.1	1500	.05	1676.58	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1500	1676.58		53	53		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
710.56	1525.11	15	F
1677.07	1710.56	15	F

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Upper RS: 3379

INPUT

Description: Data from COEtoSTP River Sta 0.64

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
710.56	17	1060.56	16	1410.56	17	1490.56	17	1500	16.21
1526	12.58	1582.16	11.26	1604.31	3.65	1610.56	2.78	1616.03	3.72
1634.58	9.27	1676.58	16.47	1701.58	16.03	1710.56	17		

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 710.56 .1 1500 .05 1634.58 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1500 1634.58 528 528 528 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 710.56 1514.83 15 F

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Upper RS: 2851

INPUT

Description: Data from COEtoSTP River Sta 0.54\*

Station Elevation Data num= 19  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 532.92 15.38 905.26 14.23 1277.6 14.58 1347.33 14.51 1362.71 14.24  
 1368.51 13.79 1372.75 13.49 1392.78 10.4 1436.04 8.6 1453.11 2.58  
 1457.92 1.84 1462.53 2.58 1473.68 5.63 1478.18 7.87 1489.03 9.08  
 1556.81 14.67 1578.71 14.82 1603.61 14.87 1620.42 15.75

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 532.92 .1 1372.75 .05 1478.18 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1372.75 1478.18 1056 1056 1056 .1 .3

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Upper RS: 1795

INPUT

Description: Data from COEtoSTP River Sta 0.34\*

Station Elevation Data num= 19  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 177.64 12.12 594.66 10.69 1011.68 9.75 1089.78 9.53 1107 8.71  
 1113.5 8.29 1118.25 8.06 1126.34 6.03 1143.81 3.29 1150.7 .44

ExpandedLocal.rep

1152.64 -.05 1155.54 .3 1162.56 1.55 1165.4 5.06 1186.34 6.71  
1317.27 11.08 1359.57 11.94 1407.67 12.55 1440.14 13.25

Manning's n Values num= 3  
Sta n Val Sta n Val Sta n Val  
\*\*\*\*\*  
177.64 .1 1118.25 .05 1165.4 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
1118.25 1165.4 528 528 528 .1 .3

CROSS SECTION

RIVER: Bayou Vincent  
REACH: Upper RS: 1267

INPUT  
Description: Data from COEtoSTP River Sta 0.24

Station Elevation Data num= 10  
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
\*\*\*\*\*  
0 10.5 961 7.04 986 5.54 991 5.34 1000 -.99  
1007 -.49 1009 3.66 1035 5.53 1250 10.5 1350 12

Manning's n Values num= 3  
Sta n Val Sta n Val Sta n Val  
\*\*\*\*\*  
0 .1 991 .05 1009 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
991 1009 0 0 0 .1 .3

CROSS SECTION

RIVER: Bayou Vincent  
REACH: Lower RS: 1214

INPUT  
Description: Data from COEtoSTP River Sta .23

Station Elevation Data num= 10  
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
\*\*\*\*\*  
0 10.5 961 7.04 986 5.54 991 5.34 1000 -.99  
1007 -.49 1009 3.66 1035 5.53 1250 10.5 1350 12

Manning's n Values num= 3

ExpandedLocal.rep

```

Sta  n Val    Sta  n Val    Sta  n Val
*****
0      .1    991    .05    1009    .1

```

```

Bank Sta: Left   Right   Lengths: Left Channel   Right   Coeff Contr.   Expan.
          991    1009           88      88      88             .1          .3

```

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Lower RS: 1126

INPUT

Description: Data from COEtoSTP River Sta .213333\*

```

Station Elevation Data num= 10
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
*****
0 10.42 961 6.96 986 5.46 991 5.26 1000 -1.07
1007 -.57 1009 3.58 1035 5.45 1250 10.42 1350 11.92

```

```

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
*****
0 .1 991 .05 1009 .1

```

```

Bank Sta: Left   Right   Lengths: Left Channel   Right   Coeff Contr.   Expan.
          991    1009           440    440    440             .1          .3

```

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Lower RS: 686

INPUT

Description: Data from COEtoSTP River Sta 0.13

```

Station Elevation Data num= 10
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
*****
0 10 961 6.54 986 5.04 991 4.84 1000 -1.49
1007 -.99 1009 3.16 1035 5.03 1250 10 1350 11.5

```

```

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
*****
0 .1 991 .05 1009 .1

```

ExpandedLocal.rep

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	991	1009		600	600		.1	.3

CROSS SECTION

RIVER: Bayou Vincent

REACH: Lower

RS: 86

INPUT

Description: Data from COEtoSTP River Sta  
0.01625\*



ExpandedLocal.rep

ExpandedLocal.rep

```
Station Elevation Data      num=      10
  Sta   Elev   Sta   Elev   Sta   Elev   Sta   Elev   Sta   Elev
*****
    0    8.42   961    4.96   986    3.46   991    3.26   1000   -3.07
```

ExpandedLocal.rep

1007 -2.57 1009 1.58 1035 3.45 1250 8.42 1350 9.92

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .1 991 .05 1009 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 991 1009 86 86 86 .1 .3

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Lower RS: 0

INPUT  
 Description: Data from COEtoSTP River Sta 0  
 Station Elevation Data num= 10

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 08.190001 961 4.73 986 3.23 991 3.03 1000 -3.3  
 1007 -2.8 1009 1.35 1035 3.22 12508.190001 13509.690001

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .1 991 .05 1009 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 991 1009 0 0 0 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 19396

INPUT  
 Description: 108' DS Confluence with W-15  
 Station Elevation Data num= 33

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 675 5.968 679.74 5.962 693.92 5.989 716.44 6.059 748.89 6.066  
 753.15 6.064 761.71 6.048 803.85 6.046 826.56 5.806 858.82 6.275  
 863.26 6.361 872.19 6.098 899.97 5.555 913.79 5.017 954.98 3.886  
 968.76 3.563 973.38 3.496 982.67 3.462 1010.08 3.412 1023.72 3.383  
 1046.79 3.221 1078.69 3.072 1093.15 3.031 1101.49 2.81 1126.49 2.88

ExpandedLocal.rep

1128.49 2.72 1133.49 -.09 1143.49 -2.36 1163.49 -2.36 1173.49 .71  
 1180.49 2.71 1183.49 5.3 1208.49 5.9

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 675 .06 1126.49 .05 1183.49 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1126.49 1183.49 470 470 470 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 675 676 8.02 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 18926

INPUT

Description: 0.05' US Military Rd Culverts

Station Elevation Data num= 28  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 1000 6.25 1020 5.62 1040 5.62 1060 5.62 1080 5.62  
 1100 5.02 1110 3.42 1130 2.69 1143 -1.55 1162 -1.55  
 1170 3.19 1190 3.79 1210 3.69 1230 3.59 1310 3.59  
 1330 2.69 1350 1.19 1359 1.19 1370 2.29 1390 2.19  
 1410 2.19 1420 2.69 1430 5.69 1450 6.09 1470 6.39  
 1490 6.79 1510 7.19 1530 7.19

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 1000 .06 1080 .05 1430 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1080 1430 20 20 20 .1 .3  
 Ineffective Flow num= 3  
 Sta L Sta R Elev Permanent  
 1000 1144 8.02 T  
 1161 1347.45 8.02 T  
 1359.05 1530 8.02 T

CULVERT

ExpandedLocal.rep

RIVER: Doubloon  
 REACH: to Marsh RS: 18916

INPUT

Description: Military Road Culverts  
 Distance from Upstream XS = .05  
 Deck/Roadway Width = 19.9  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 3

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
1000		6.04			1450		5.92			1530		5.84		

Upstream Bridge Cross Section Data

Station Elevation Data num= 28

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1000	6.25	1020	5.62	1040	5.62	1060	5.62	1080	5.62
1100	5.02	1110	3.42	1130	2.69	1143	-1.55	1162	-1.55
1170	3.19	1190	3.79	1210	3.69	1230	3.59	1310	3.59
1330	2.69	1350	1.19	1359	1.19	1370	2.29	1390	2.19
1410	2.19	1420	2.69	1430	5.69	1450	6.09	1470	6.39
1490	6.79	1510	7.19	1530	7.19				

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
1000	.06	1080	.05	1430	.06

Bank Sta: Left Right Coeff Contr. Expan.  
 1080 1430 .1 .3

Ineffective Flow num= 3

Sta L	Sta R	Elev	Permanent
1000	1144	8.02	T
1161	1347.45	8.02	T
1359.05	1530	8.02	T

Downstream Deck/Roadway Coordinates

num= 3

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
1000		8.03			1450		8.02			1530		8.31		

Downstream Bridge Cross Section Data

Station Elevation Data num= 28

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1000	6.25	1020	5.62	1040	5.62	1060	5.62	1080	5.62
1100	5.02	1110	3.42	1130	2.69	1143	-1.55	1162	-1.55
1170	3.19	1190	3.79	1210	3.69	1230	3.59	1310	3.59
1330	2.69	1350	1.19	1359	1.19	1370	2.29	1390	2.19
1410	2.19	1420	2.69	1430	5.69	1450	6.09	1470	6.39
1490	6.79	1510	7.19	1530	7.19				

ExpandedLocal.rep

1000	6.25	1020	5.62	1040	5.62	1060	5.62	1080	5.62
1100	5.02	1110	3.42	1130	2.69	1143	-1.55	1162	-1.55
1170	3.19	1190	3.79	1210	3.69	1230	3.59	1310	3.59
1330	2.69	1350	1.19	1359	1.19	1370	2.29	1390	2.19
1410	2.19	1420	2.69	1430	5.69	1450	6.09	1470	6.39
1490	6.79	1510	7.19	1530	7.19				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
1000	.06	1080	.05	1430	.06

\*\*\*\*\*

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	1080	1430		.1	.3

Ineffective Flow num= 3

Sta L	Sta R	Elev	Permanent
1000	1144	8.02	F
1161	1347.45	8.02	F
1359.05	1530	8.02	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 4

Culvert Name	Shape	Rise	Span	Exit Loss Coef		
Culvert #1	Arch	5.7	8			
FHWA Chart # 43- Arch; Corrugated metal						
FHWA Scale # 3 - Thin wall projecting						
Solution Criteria = Highest U.S. EG						
Culvert	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef
1		.05 19.9	.024	.024	0	.9
Upstream	Elevation = -1.44					
	Centerline Station = 1148					
Downstream	Elevation = -1.4					
	Centerline Station = 1148					

Culvert Name	Shape	Rise	Span
Culvert #2	Arch	5.7	8
FHWA Chart # 43- Arch; Corrugated metal			
FHWA Scale # 3 - Thin wall projecting			

ExpandedLocal.rep

Solution Criteria = Highest U.S. EG

Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
Exit Loss Coef

.05 19.9 .024 .024 0 .9

1

Upstream Elevation = -1.31  
Centerline Station = 1157  
Downstream Elevation = -1.41  
Centerline Station = 1157

Culvert Name Shape Rise Span  
Culvert #4 Arch 2.6 5.1  
FHWA Chart # 43- Arch; Corrugated metal  
FHWA Scale # 3 - Thin wall projecting

Solution Criteria = Highest U.S. EG

Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
Exit Loss Coef

.05 19.9 .024 .024 0 .9

1

Upstream Elevation = 1.72  
Centerline Station = 1350  
Downstream Elevation = 1.22  
Centerline Station = 1350

Culvert Name Shape Rise Span  
Culvert #3 Arch 2.6 5.1  
FHWA Chart # 43- Arch; Corrugated metal  
FHWA Scale # 3 - Thin wall projecting

Solution Criteria = Highest U.S. EG

Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
Exit Loss Coef

.05 19.9 .024 .024 0 .9

1

Upstream Elevation = 1.56  
Centerline Station = 1356.5  
Downstream Elevation = 1.19  
Centerline Station = 1356.5

CROSS SECTION

RIVER: Doubloon  
REACH: to Marsh RS: 18906

INPUT

Description: 0.05' DS Military Rd Culverts

Station Elevation Data num= 28

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

ExpandedLocal.rep

```
*****
1000  6.25  1020  5.62  1040  5.62  1060  5.62  1080  5.62
1100  5.02  1110  3.42  1130  2.69  1143 -1.55  1162 -1.55
1170  3.19  1190  3.79  1210  3.69  1230  3.59  1310  3.59
1330  2.69  1350  1.19  1359  1.19  1370  2.29  1390  2.19
1410  2.19  1420  2.69  1430  5.69  1450  6.09  1470  6.39
1490  6.79  1510  7.19  1530  7.19
```

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
1000	.06	1080	.05	1430	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1080	1430		245	245		.1	.3

Ineffective Flow num= 3

Sta L	Sta R	Elev	Permanent
1000	1144	8.02	F
1161	1347.45	8.02	F
1359.05	1530	8.02	F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 18661

INPUT

Description:

Station Elevation Data num= 83

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-159	5.395	-144.92	5.423	-111.61	5.39	-62.7299	5.194	-61.53	5.191
-56.3599	5.168	-11.44	4.918	-.930053	4.7338	65002	3.953	60.87	3.575
88.73999	2.998	122.6801	2.62	138.83	2.43	149.83	2.378	188.92	2.236
207.88	2.186	239.01	2.113	246.29	2.108	288.87	2.055	308.26	-1.72
339.1801	-1.72	366.87	2.043	369.9301	2.044	389.3199	2.045	432.67	2.077
439.5	2.08	466.84	2.118	489.69	2.151	527.7	2.23	539.88	2.264
558.14	2.327	590.06	2.421	620.87	2.542	640.25	2.611	683.6	2.795
690.44	2.819	693.55	2.835	733.1	2.998	739.77	3	780.1	3.227
789.03	3.258	798.87	3.369	838.3	3.676	874.11	4.021	887.58	4.136
921.11	4.348	936.84	4.477	968.11	4.701	986.11	4.846	1004.91	4.987
1014.51	5.056	1035.57	5.208	1058.71	5.319	1085.15	5.486	1102.92	5.581
1134.72	5.684	1147.13	5.751	1184.29	6.095	1191.33	6.131	1233.87	6.386
1235.54	6.393	1249.3	6.459	1279.75	6.604	1283.44	6.623	1286.97	6.64
1322.54	6.803	1333.37	6.857	1348.79	6.951	1383.33	7.132	1407.59	7.266
1432.13	7.424	1433.3	7.432	1449.63	7.522	1483.67	7.714	1490.98	7.751
1524.57	7.919	1532.34	7.958	1534.03	7.967	1573.7	8.161	1584.4	8.215



ExpandedLocal.rep

1615.06 8.359 1634.77 8.457 1638.87 8.476

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -159 .06 288.87 .05 366.87 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 288.87 366.87 300 300 300 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -159 -1.63 8.02 T  
 456.37 1638.87 8.02 T

CROSS SECTION

RIVER: Doubloon  
REACH: to Marsh RS: 18361

INPUT

Description: Interpolated Section

Station Elevation Data num= 83  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -156.5 5.39 -142.42 5.42 -109.11 5.39-60.2299 5.19 -59.03 5.19  
 -53.8599 5.17-8.94006 4.921.569946 4.7341.15002 3.95 63.37 3.58  
 91.23999 3125.1801 2.62 141.33 2.43 152.33 2.38 191.42 2.24  
 210.38 2.19 241.51 2.11 248.79 2.11 291.37 2.06 310.76 -1.93  
 341.6801 -1.93 369.37 2.04372.4301 2.04391.8199 2.05 435.17 2.08  
 442 2.08 469.34 2.12 492.19 2.15 530.2 2.23 542.38 2.26  
 560.64 2.33 592.56 2.42 623.37 2.54 642.75 2.61 686.1 2.8  
 692.94 2.82 696.05 2.84 735.6 3 742.27 3 782.6 3.23  
 791.53 3.26 801.37 3.37 840.8 3.68 876.61 4.02 890.08 4.14  
 923.61 4.35 939.34 4.48 970.61 4.7 988.61 4.85 1007.41 4.99  
 1017.01 5.06 1038.07 5.21 1061.21 5.32 1087.65 5.49 1105.42 5.58  
 1137.22 5.68 1149.63 5.75 1186.79 6.09 1193.83 6.13 1236.37 6.39  
 1238.04 6.39 1251.8 6.46 1282.25 6.6 1285.94 6.62 1289.47 6.64  
 1325.04 6.8 1335.87 6.86 1351.29 6.95 1385.83 7.13 1410.09 7.27  
 1434.63 7.42 1435.8 7.43 1452.13 7.52 1486.17 7.71 1493.48 7.75  
 1527.07 7.92 1534.84 7.96 1536.53 7.97 1576.2 8.16 1586.9 8.22  
 1617.56 8.36 1637.27 8.46 1641.37 8.48

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -156.5 .06 291.37 .05 369.37 .06

ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 291.37 369.37 300 300 300 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 611.37 1641.37 8.02 T

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 18061

INPUT

Description:

Station Elevation Data num= 83  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -154 5.395 -139.92 5.423 -106.61 5.39-57.7299 5.194 -56.53 5.191  
 -51.3599 5.168-6.44006 4.9184.069946 4.7343.65002 3.953 65.87 3.575  
 93.73999 2.998127.6801 2.62 143.83 2.43 154.83 2.378 193.92 2.236  
 212.88 2.186 244.01 2.113 251.29 2.108 293.87 2.055 313.26 -2.14  
 344.1801 -2.14 371.87 2.043374.9301 2.044394.3199 2.045 437.67 2.077  
 444.5 2.08 471.84 2.118 494.69 2.151 532.7 2.23 544.88 2.264  
 563.14 2.327 595.06 2.421 625.87 2.542 645.25 2.611 688.6 2.795  
 695.44 2.819 698.55 2.835 738.1 2.998 744.77 3 785.1 3.227  
 794.03 3.258 803.87 3.369 843.3 3.676 879.11 4.021 892.58 4.136  
 926.11 4.348 941.84 4.477 973.11 4.701 991.11 4.846 1009.91 4.987  
 1019.51 5.056 1040.57 5.208 1063.71 5.319 1090.15 5.486 1107.92 5.581  
 1139.72 5.684 1152.13 5.751 1189.29 6.095 1196.33 6.131 1238.87 6.386  
 1240.54 6.393 1254.3 6.459 1284.75 6.604 1288.44 6.623 1291.97 6.64  
 1327.54 6.803 1338.37 6.857 1353.79 6.951 1388.33 7.132 1412.59 7.266  
 1437.13 7.424 1438.3 7.432 1454.63 7.522 1488.67 7.714 1495.98 7.751  
 1529.57 7.919 1537.34 7.958 1539.03 7.967 1578.7 8.161 1589.4 8.215  
 1620.06 8.359 1639.77 8.457 1643.87 8.476

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -154 .06 293.87 .05 371.87 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 293.87 371.87 279 279 279 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 766.37 1643.87 8.02 T

CROSS SECTION

ExpandedLocal.rep

RIVER: Doubloon  
 REACH: to Marsh

RS: 17782

INPUT

Description: Interpolated Section

Station Elevation Data num= 307

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-102.67	5.63	-97.9	5.63	-88.08	5.61	-77.93	5.63	-71.01	5.64
-55.01	5.55	-44.12	5.52	-21.94	5.62	-19.4	5.61	-17.23	5.61
3.28	5.51	9.66	5.48	11.13	5.47	36.55	5.38	44.19	5.36
63.44	5.33	66.48	5.33	68.59	5.33	77.26	5.33	77.67	5.33
87.49	5.33	90.36	5.33	111.71	5.53	117.46	5.56	137.07	5.62
143.18	5.6	144.57	5.61	156.6	5.47	165.28	5.33	171.68	5.32
175.06	5.29	181.83	5.23	198.78	5.1	216.9	4.82	225.89	4.71
244.61	4.43	251.96	4.33	252.99	4.31	256.52	4.27	280.1	4.02
283.65	3.99	297.83	3.88	307.21	3.82	322.09	3.59	332.62	3.43
334.31	3.42	357.15	3.09	361.42	3.02	375.96	2.94	386.03	2.87
388.55	2.85	392.25	2.84	392.65	2.84	415.94	2.77	420.62	2.79
429.3	2.84	439.95	2.93	443.32	2.96	467.75	2.96	470.71	2.95
478.67	2.94	493.96	2.84	498.09	2.87	508.63	2.83	515.51	2.81
525.48	2.93	534.05	2.92	536.85	2.92	541.95	2.91	553.92	2.88
556.88	2.86	563.52	2.82	582.85	2.74	596.64	2.67	596.93	2.67
609.43	2.46	611.77	2.43	628.64	2.33	640.69	2.24	650.33	2.24
669.62	2.16	684.25	1.99	695.38	-.88	706.51	-2.51	727.12	-2.51
741.73	-.6	754.25	1.81	759.42	1.92	768.81	2.13	778.71	2.13
792.2	2.18	798.45	2.2	799.23	2.2	801	2.21	828.09	2.3
829.58	2.3	850.23	2.32	857.84	2.33	865.49	2.36	866.95	2.36
877.03	2.44	887.6	2.53	904.84	2.4	917.36	2.37	923.25	2.38
932.34	2.39	947.11	2.44	959.46	2.48	961.88	2.5	976.87	2.58
997.72	2.6	1006.63	2.58	1014.08	2.61	1026.14	2.62	1036.39	2.64
1046.73	2.71	1063.1	2.81	1066.15	2.85	1077.6	2.88	1085.65	2.9
1095.91	2.69	1105.93	2.77	1120.97	2.88	1125.18	2.89	1131.56	2.88
1131.88	2.88	1154.22	2.74	1168.25	2.82	1183.25	2.82	1183.65	2.82
1207.11	2.95	1210.84	3.01	1212.28	2.97	1215.52	2.99	1216.41	2.99
1241.31	3.04	1262.8	3.21	1270.34	3.25	1282.35	3.28	1289.7	3.3
1299.37	3.33	1301.26	3.32	1306.52	3.31	1310.08	3.3	1328.41	3.3
1357.35	3.5	1357.44	3.51	1357.58	3.51	1373.38	3.58	1378.42	3.59
1384.66	3.6	1386.47	3.6	1399.37	3.65	1415.5	3.7	1420.32	3.71
1423.9	3.72	1438.63	3.75	1443.62	3.76	1445.06	3.76	1452.84	3.78
1467.93	3.8	1471.37	3.81	1484.57	3.87	1488.09	3.88	1499.12	3.9
1510.78	3.94	1526.88	3.99	1533.47	4.03	1551.23	4.06	1554.63	4.06
1556.16	4.07	1563.04	4.16	1582.38	4.4	1601.54	4.59	1610.13	4.7
1611.77	4.72	1624.23	4.82	1634.54	4.88	1637.88	4.89	1659.36	5.02
1665.63	5.06	1687.45	5.16	1691.22	5.17	1693.38	5.18	1695.08	5.19
1717.82	5.33	1721.13	5.35	1730.8	5.4	1748.88	5.49	1766.52	5.58
1770.68	5.59	1776.63	5.62	1801.11	5.75	1802.24	5.76	1804.38	5.77

ExpandedLocal.rep

1811.86	5.8	1832.13	5.9	1832.89	5.9	1849.12	5.97	1851.12	5.98
1859.88	6	1873.81	6.05	1884.73	6.04	1887.63	6.04	1896.5	6.06
1915.39	6.1	1923.84	6.13	1936.26	6.18	1943.14	6.22	1945.11	6.22
1968.54	6.32	1970.89	6.32	1987.26	6.38	1998.58	6.41	1998.64	6.41
2016.55	6.46	2026.39	6.49	2052.26	6.46	2052.34	6.46	2054.14	6.46
2060.67	6.46	2073.32	6.46	2081.89	6.47	2087.98	6.52	2109.64	6.65
2123.7	6.74	2136.15	6.81	2137.39	6.82	2148.05	6.84	2159.42	6.88
2165.14	6.9	2185.08	7.03	2192.89	7.08	2195.14	7.08	2219.96	7.1
2220.64	7.1	2222.79	7.1	2230.85	7.1	2246.05	7.11	2248.39	7.11
2266.57	7.13	2276.14	7.14	2297.53	7.16	2302.29	7.16	2303.76	7.16
2303.9	7.16	2309.49	7.17	2309.73	7.17	2331.65	7.19	2338.01	7.19
2359.4	7.21	2369.87	7.22	2373.73	7.23	2387.15	7.24	2388.17	7.24
2395.67	7.26	2414.24	7.29	2414.9	7.29	2433.9	7.32	2442.65	7.34
2445.16	7.35	2470.4	7.4	2472.63	7.4	2480.88	7.42	2498.15	7.46
2513.65	7.49	2516.6	7.49	2525.9	7.51	2552.32	7.57	2553.65	7.57
2555.13	7.58	2557.11	7.58	2558.3	7.58	2581.4	7.63	2584.72	7.63
2588.03	7.64	2609.15	7.68	2623.75	7.71	2636.9	7.74	2642.27	7.75
2654.62	7.77	2659.47	7.78	2664.65	7.79	2682.71	7.82	2692.41	7.84
2695.19	7.85	2711.41	7.88	2720.16	7.9	2724.55	7.9	2727.4	7.91
2730.91	7.91	2747.91	7.94	2766.62	8.02	2775.66	8.05	2794.47	8.13
2802.34	8.16	2803.41	8.16	2807.12	8.18	2812.56	8.21	2831.16	8.31
2838.06	8.35	2858.91	8.48	2864.39	8.53	2873.78	8.6	2886.66	8.7
2897.71	8.75	2904.64	8.79						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****					
-102.67	.06	684.25	.05	754.25	.06

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
684.25	754.25	278	278	278	.1	.3	
Ineffective Flow	num=	1					
Sta L	Sta R	Elev	Permanent				
2084	2904.64	7.36	F				

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 17504

INPUT

Description: Interpolated Section

Station Elevation Data		num=		307					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-51.33	5.87	-44.52	5.87	-30.46	5.81	-15.94	5.84	-6.04	5.85
16.86	5.69	32.44	5.65	64.17	5.84	67.81	5.84	70.91	5.84

ExpandedLocal.rep

100.26	5.67	109.39	5.63	111.49	5.61	147.87	5.49	158.8	5.48
186.34	5.46	190.69	5.46	193.71	5.47	206.12	5.48	206.71	5.48
220.75	5.53	224.85	5.54	255.4	6.01	263.64	6.07	291.7	6.25
300.44	6.23	302.43	6.26	319.64	6.02	332.05	5.82	341.21	5.88
346.06	5.85	355.74	5.8	379.99	5.74	405.92	5.38	418.78	5.26
445.56	4.91	456.09	4.78	457.57	4.76	462.6	4.7	496.35	4.43
501.43	4.41	521.72	4.35	535.14	4.34	556.43	4.06	571.49	3.87
573.92	3.84	606.6	3.33	612.71	3.23	633.51	3.15	647.91	3.07
651.53	3.05	656.82	3.06	657.4	3.06	690.71	3.08	697.42	3.14
709.83	3.27	725.07	3.48	729.9	3.55	764.85	3.59	769.08	3.58
780.48	3.57	802.35	3.41	808.27	3.47	823.35	3.43	833.18	3.4
847.45	3.65	859.71	3.65	863.72	3.66	871.01	3.63	888.15	3.58
892.37	3.56	901.89	3.48	929.53	3.35	949.27	3.22	949.69	3.22
967.58	2.82	970.92	2.75	995.06	2.57	1012.31	2.4	1026.09	2.4
1053.69	2.26	1074.62	1.92	1087.19	-1.72	1099.75	-2.88	1110.06	-2.88
1124.36	-1.3	1136.62	1.57	1143.91	1.8	1157.14	2.21	1171.08	2.22
1190.08	2.31	1198.88	2.35	1199.99	2.36	1202.47	2.37	1240.63	2.54
1242.73	2.55	1271.81	2.57	1282.53	2.59	1293.3	2.64	1295.37	2.65
1309.56	2.8	1324.45	2.96	1348.73	2.69	1366.36	2.63	1374.66	2.64
1387.46	2.65	1408.27	2.74	1425.66	2.82	1429.07	2.84	1450.19	3
1479.55	3	1492.1	2.96	1502.59	3	1519.58	3.02	1534.02	3.03
1548.58	3.15	1571.64	3.33	1575.93	3.39	1592.06	3.43	1603.39	3.46
1617.84	3.03	1631.96	3.16	1653.15	3.37	1659.08	3.37	1668.07	3.35
1668.52	3.35	1699.97	3.01	1719.74	3.14	1740.86	3.1	1741.43	3.1
1774.48	3.31	1779.73	3.43	1781.75	3.33	1786.32	3.36	1787.57	3.36
1822.64	3.41	1852.91	3.68	1863.53	3.74	1880.44	3.78	1890.8	3.81
1904.43	3.84	1907.08	3.82	1914.49	3.78	1919.5	3.75	1945.32	3.71
1986.08	4.05	1986.21	4.05	1986.4	4.05	2008.66	4.15	2015.77	4.18
2024.54	4.19	2027.1	4.2	2045.27	4.25	2067.99	4.29	2074.78	4.31
2079.82	4.31	2100.57	4.32	2107.6	4.33	2109.61	4.33	2120.57	4.33
2141.84	4.33	2146.68	4.34	2165.27	4.37	2170.23	4.37	2185.77	4.36
2202.19	4.39	2224.86	4.42	2234.15	4.46	2259.16	4.43	2263.94	4.43
2266.1	4.44	2275.79	4.57	2303.03	4.95	2330.02	5.22	2342.11	5.4
2344.42	5.42	2361.98	5.57	2376.5	5.62	2381.2	5.64	2411.46	5.81
2420.29	5.86	2451.02	5.98	2456.34	6	2459.37	6.01	2461.77	6.02
2493.79	6.18	2498.46	6.21	2512.08	6.26	2537.55	6.37	2562.39	6.47
2568.25	6.49	2576.63	6.52	2611.11	6.66	2612.7	6.66	2615.72	6.67
2626.25	6.71	2654.81	6.82	2655.88	6.82	2678.73	6.88	2681.55	6.89
2693.89	6.9	2713.51	6.94	2728.88	6.88	2732.98	6.86	2745.47	6.87
2772.06	6.9	2783.98	6.94	2801.47	7	2811.15	7.04	2813.93	7.05
2846.94	7.15	2850.24	7.15	2873.3	7.21	2889.25	7.24	2889.32	7.24
2914.55	7.31	2928.41	7.35	2964.85	7.23	2964.97	7.23	2967.5	7.22
2976.7	7.2	2994.52	7.16	3006.58	7.14	3015.16	7.2	3045.67	7.34
3065.47	7.45	3083	7.53	3084.75	7.53	3099.76	7.56	3115.78	7.58
3123.84	7.6	3151.92	7.79	3162.93	7.87	3166.09	7.86	3201.06	7.81
3202.01	7.8	3205.03	7.8	3216.4	7.79	3237.8	7.77	3241.1	7.76
3266.7	7.74	3280.19	7.73	3310.3	7.71	3317.01	7.7	3319.09	7.7
3319.27	7.7	3327.15	7.7	3327.49	7.7	3358.36	7.68	3367.32	7.67

ExpandedLocal.rep

3397.45	7.65	3412.19	7.64	3417.63	7.64	3436.53	7.63	3437.98	7.63
3448.54	7.63	3474.7	7.63	3475.62	7.63	3502.38	7.64	3514.71	7.64
3518.24	7.64	3553.79	7.67	3556.94	7.68	3568.55	7.69	3592.88	7.7
3614.71	7.71	3618.86	7.71	3631.96	7.72	3669.17	7.73	3671.05	7.73
3673.14	7.73	3675.92	7.73	3677.6	7.73	3710.14	7.74	3714.81	7.74
3719.48	7.74	3749.22	7.76	3769.78	7.77	3788.31	7.78	3795.86	7.78
3813.27	7.79	3820.09	7.79	3827.4	7.79	3852.83	7.81	3866.48	7.82
3870.4	7.82	3893.25	7.84	3905.57	7.85	3911.75	7.85	3915.77	7.85
3920.71	7.85	3944.65	7.86	3971.02	7.95	3983.74	8	4010.23	8.09
4021.33	8.14	4022.83	8.14	4028.06	8.17	4035.71	8.21	4061.91	8.34
4071.63	8.41	4101	8.62	4108.72	8.69	4121.94	8.81	4140.09	8.98
4155.65	9.05	4165.41	9.09						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-51.33	.06	1074.62	.05	1136.62	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1074.62	1136.62		279	279		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-51.33	598	7.36	F
1422	4165.41	7.36	F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 17225

INPUT

Description: 6' US Hwy 190

Station Elevation Data num= 229

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	6.105	8.866	6.098	27.161	6.011	58.929	6.067	88.723	5.827
108.993	5.766	150.285	6.07	159.056	6.06	197.245	5.842	209.12	5.779
211.847	5.761	259.184	5.606	273.41	5.593	309.247	5.585	334.972	5.637
354.018	5.724	359.353	5.747	399.1	6.478	409.817	6.586	446.323	6.888
457.699	6.865	460.281	6.91	498.829	6.318	510.744	6.435	529.656	6.38
561.208	6.384	594.934	5.941	611.672	5.807	660.211	5.228	662.136	5.2
668.692	5.137	712.6	4.837	745.608	4.826	763.064	4.863	790.767	4.528
813.527	4.273	856.045	3.571	863.991	3.441	891.061	3.366	909.8	3.277
914.503	3.252	922.139	3.28	965.486	3.388	990.366	3.696	1016.47	4.143
1061.95	4.225	1067.453	4.215	1082.283	4.213	1110.735	3.988	1118.437	4.08
1150.858	3.987	1169.42	4.364	1185.372	4.378	1190.585	4.386	1222.373	4.29
1227.872	4.254	1240.252	4.145	1276.222	3.956	1302.445	3.771	1330.07	3.067

ExpandedLocal.rep

1361.482	2.8121383.919	2.55	1401.85	2.5671437.768	2.36	1465	1.85
1479	-2.56	1493	-3.25	1507	-2.01	1519	2.3
1563.452	2.3151599.315	2.5071600.739	2.5111603.943	2.5241653.164	2.5241653.164	2.785	2.785
1655.883	2.7871693.389	2.8131707.223	2.8461723.784	2.9341761.293	2.9341761.293	3.402	3.402
1792.626	2.9811815.363	2.8861842.582	2.9161869.433	3.0411891.863	3.0411891.863	3.154	3.154
1923.503	3.412	1961.38	3.4091977.573	3.337	1991.1	3.3912031.643	3.428
2080.178	3.852085.713	3.936	2121.14	4.0152139.783	3.3642157.992	3.546	3.546
2185.329	3.8492192.978	3.855	2205.15	3.8082245.727	3.2712271.227	3.453	3.453
2298.477	3.382341.842	3.6652348.614	3.842351.227	3.7012357.124	3.7012357.124	3.737	3.737
2403.977	3.7722443.022	4.1632456.726	4.2442478.535	4.2852509.476	4.2852509.476	4.355	4.355
2528.919	4.1992562.226	4.1232614.817	4.5962614.975	4.5972615.228	4.5972615.228	4.598	4.598
2653.107	4.7712667.725	4.7942691.169	4.8512720.475	4.8892729.231	4.8892729.231	4.901	4.901
2735.733	4.9022762.502	4.893	2771.57	4.8922774.174	4.8882821.992	4.869	4.869
2852.368	4.8652872.414	4.8212893.594	4.8372922.836	4.852	2934.82	4.892	4.892
2973.258	4.7992976.046	4.8142988.547	4.989	3023.68	5.4953058.498	5.853	5.853
3074.102	6.0893099.724	6.3073124.524	6.3863163.564	6.5993174.946	6.5993174.946	6.668	6.668
3214.591	6.8013225.368	6.8353228.462	6.847	3275.79	7.065	3293.36	7.129
3326.212	7.2493358.258	7.3593376.634	7.4123423.157	7.5683427.056	7.5683427.056	7.578	7.578
3440.636	7.6173477.478	7.7353511.984	7.796	3527.9	7.804	3553.21	7.826
3578.322	7.6823594.436	7.6913628.744	7.704	3666.68	7.8223679.166	7.864	7.864
3682.75	7.8733729.587	7.985	3759.34	8.0383780.009	8.0713812.547	8.164	8.164
3830.431	8.2013877.445	7.9983880.853	7.9883892.725	7.9523931.275	7.9523931.275	7.809	7.809
3942.343	7.8883981.697	8.0394007.242	8.164032.119	8.25	4072.14	8.286	8.286
4082.541	8.314118.769	8.5594132.963	8.6594137.038	8.6474183.385	8.6474183.385	8.511	8.511
4201.937	8.474233.807	8.4134266.835	8.3564284.229	8.3294331.733	8.3294331.733	8.248	8.248
4334.651	8.2414344.814	8.2254385.073	8.1634396.632	8.1474435.495	8.1474435.495	8.088	8.088
4461.53	8.0514485.917	8.0184501.409	8.0054536.339	7.9664570.858	7.9664570.858	7.951	7.951
4586.761	7.9424591.327	7.9444637.183	7.9464656.225	7.9494687.605	7.9494687.605	7.945	7.945
4721.123	7.934738.027	7.9194786.021	7.8834788.449	7.8824796.903	7.8824796.903	7.877	7.877
4838.871	7.857	4850.92	7.8494889.293	7.8384915.818	7.8284939.715	7.82	7.82
4980.716	7.8064990.137	7.8025022.947	7.7965040.559	7.7955045.615	7.7955045.615	7.794	7.794
5090.98	7.7985110.513	7.7855141.402	7.7825175.411	7.895191.824	7.895191.824	7.94	7.94
5240.31	8.1135242.246	8.1195248.992	8.1555292.668	8.3835305.208	8.3835305.208	8.476	8.476
5343.09	8.7615370.106	9.0225393.512	9.2535426.182	9.404			

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 1465 .05 1519 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1465 1519 37 37 37 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 1459 7.36 F  
 15255426.182 7.36 F

BRIDGE

ExpandedLocal.rep

RIVER: Doubloon  
 REACH: to Marsh RS: 17207

INPUT

Description: Hwy 190 Bridge  
 Distance from Upstream XS = 6  
 Deck/Roadway Width = 25  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 6

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0	7.36	-3.25	1465	7.36	-3.25	1465	7.36	4.8						
1519	7.36	4.8	1519	7.36	-3.255426.182	7.36	-3.25							

Upstream Bridge Cross Section Data

Station Elevation Data num= 229

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	6.105	8.866	6.098	27.161	6.011	58.929	6.067	88.723	5.827
108.993	5.766	150.285	6.07	159.056	6.06	197.245	5.842	209.12	5.779
211.847	5.761	259.184	5.606	273.41	5.593	309.247	5.585	334.972	5.637
354.018	5.724	359.353	5.747	399.1	6.478	409.817	6.586	446.323	6.888
457.699	6.865	460.281	6.91	498.829	6.318	510.744	6.435	529.656	6.38
561.208	6.384	594.934	5.941	611.672	5.807	660.211	5.228	662.136	5.2
668.692	5.137	712.6	4.837	745.608	4.826	763.064	4.863	790.767	4.528
813.527	4.273	856.045	3.571	863.991	3.441	891.061	3.366	909.8	3.277
914.503	3.252	922.139	3.28	965.486	3.388	990.366	3.696	1016.47	4.143
1061.95	4.2251067.453	4.2151082.283	4.2131110.735	3.9881118.437	4.08				
1150.858	3.987	1169.42	4.3641185.372	4.3781190.585	4.3861222.373	4.29			
1227.872	4.2541240.252	4.1451276.222	3.9561302.445	3.771	1330.07	3.067			
1361.482	2.8121383.919	2.55	1401.85	2.5671437.768	2.36	1465	1.85		
1479	-2.56	1493	-3.25	1507	-2.01	1519	1.331545.466	2.3	
1563.452	2.3151599.315	2.5071600.739	2.5111603.943	2.5241653.164	2.785				
1655.883	2.7871693.389	2.8131707.223	2.8461723.784	2.9341761.293	3.402				
1792.626	2.9811815.363	2.8861842.582	2.9161869.433	3.0411891.863	3.154				
1923.503	3.412	1961.38	3.4091977.573	3.337	1991.1	3.3912031.643	3.428		
2080.178	3.852085.713	3.936	2121.14	4.0152139.783	3.3642157.992	3.546			
2185.329	3.8492192.978	3.855	2205.15	3.8082245.727	3.2712271.227	3.453			
2298.477	3.382341.842	3.6652348.614	3.842351.227	3.7012357.124	3.737				
2403.977	3.7722443.022	4.1632456.726	4.2442478.535	4.2852509.476	4.355				
2528.919	4.1992562.226	4.1232614.817	4.5962614.975	4.5972615.228	4.598				
2653.107	4.7712667.725	4.7942691.169	4.8512720.475	4.8892729.231	4.901				
2735.733	4.9022762.502	4.893	2771.57	4.8922774.174	4.8882821.992	4.869			
2852.368	4.8652872.414	4.8212893.594	4.8372922.836	4.852	2934.82	4.892			
2973.258	4.7992976.046	4.8142988.547	4.989	3023.68	5.4953058.498	5.853			



ExpandedLocal.rep

3074.102	6.0893099.724	6.3073124.524	6.3863163.564	6.5993174.946	6.668
3214.591	6.8013225.368	6.8353228.462	6.847 3275.79	7.065 3293.36	7.129
3326.212	7.2493358.258	7.3593376.634	7.4123423.157	7.5683427.056	7.578
3440.636	7.6173477.478	7.7353511.984	7.796 3527.9	7.804 3553.21	7.826
3578.322	7.6823594.436	7.6913628.744	7.704 3666.68	7.8223679.166	7.864
3682.75	7.8733729.587	7.985 3759.34	8.0383780.009	8.0713812.547	8.164
3830.431	8.2013877.445	7.9983880.853	7.9883892.725	7.9523931.275	7.809
3942.343	7.8883981.697	8.0394007.242	8.164032.119	8.25 4072.14	8.286
4082.541	8.314118.769	8.5594132.963	8.6594137.038	8.6474183.385	8.511
4201.937	8.474233.807	8.4134266.835	8.3564284.229	8.3294331.733	8.248
4334.651	8.2414344.814	8.2254385.073	8.1634396.632	8.1474435.495	8.088
4461.53	8.0514485.917	8.0184501.409	8.0054536.339	7.9664570.858	7.951
4586.761	7.9424591.327	7.9444637.183	7.9464656.225	7.9494687.605	7.945
4721.123	7.934738.027	7.9194786.021	7.8834788.449	7.8824796.903	7.877
4838.871	7.857 4850.92	7.8494889.293	7.8384915.818	7.8284939.715	7.82
4980.716	7.8064990.137	7.8025022.947	7.7965040.559	7.7955045.615	7.794
5090.98	7.7985110.513	7.7855141.402	7.7825175.411	7.895191.824	7.94
5240.31	8.1135242.246	8.1195248.992	8.1555292.668	8.3835305.208	8.476
5343.09	8.7615370.106	9.0225393.512	9.2535426.182	9.404	

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	1465	.05	1519	.06

\*\*\*\*\*

Bank Sta: Left Right Coeff Contr. Expan.

1465	1519		.1	.3
------	------	--	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	1459	7.36	F
15255426.182		7.36	F

Downstream Deck/Roadway Coordinates num= 6

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0	7.36	-3.25	1465	7.36	-3.25	1465	7.36	4.8	
1519	7.36	4.8	1519	7.36	-3.255426.182	7.36	-3.25		

Downstream Bridge Cross Section Data Station Elevation Data num= 229

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	6.105	8.866	6.098	27.161	6.011	58.929	6.067	88.723	5.827
108.993	5.766	150.285	6.07	159.056	6.06	197.245	5.842	209.12	5.779
211.847	5.761	259.184	5.606	273.41	5.593	309.247	5.585	334.972	5.637
354.018	5.724	359.353	5.747	399.1	6.478	409.817	6.586	446.323	6.888
457.699	6.865	460.281	6.91	498.829	6.318	510.744	6.435	529.656	6.38

ExpandedLocal.rep

561.208	6.384	594.934	5.941	611.672	5.807	660.211	5.228	662.136	5.2
668.692	5.137	712.6	4.837	745.608	4.826	763.064	4.863	790.767	4.528
813.527	4.273	856.045	3.571	863.991	3.441	891.061	3.366	909.8	3.277
914.503	3.252	922.139	3.28	965.486	3.388	990.366	3.696	1016.47	4.143
1061.95	4.2251067.453	4.2151082.283	4.2131110.735	3.9881118.437	4.08				
1150.858	3.987	1169.42	4.3641185.372	4.3781190.585	4.3861222.373	4.29			
1227.872	4.2541240.252	4.1451276.222	3.9561302.445	3.771	1330.07	3.067			
1361.482	2.8121383.919	2.55	1401.85	2.5671437.768	2.36	1465	1.85		
1479	-2.56	1493	-3.25	1507	-2.01	1519	1.331545.466	2.3	
1563.452	2.3151599.315	2.5071600.739	2.5111603.943	2.5241653.164	2.785				
1655.883	2.7871693.389	2.8131707.223	2.8461723.784	2.9341761.293	3.402				
1792.626	2.9811815.363	2.8861842.582	2.9161869.433	3.0411891.863	3.154				
1923.503	3.412	1961.38	3.4091977.573	3.337	1991.1	3.3912031.643	3.428		
2080.178	3.852085.713	3.936	2121.14	4.0152139.783	3.3642157.992	3.546			
2185.329	3.8492192.978	3.855	2205.15	3.8082245.727	3.2712271.227	3.453			
2298.477	3.382341.842	3.6652348.614	3.842351.227	3.7012357.124	3.737				
2403.977	3.7722443.022	4.1632456.726	4.2442478.535	4.2852509.476	4.355				
2528.919	4.1992562.226	4.1232614.817	4.5962614.975	4.5972615.228	4.598				
2653.107	4.7712667.725	4.7942691.169	4.8512720.475	4.8892729.231	4.901				
2735.733	4.9022762.502	4.893	2771.57	4.8922774.174	4.8882821.992	4.869			
2852.368	4.8652872.414	4.8212893.594	4.8372922.836	4.852	2934.82	4.892			
2973.258	4.7992976.046	4.8142988.547	4.989	3023.68	5.4953058.498	5.853			
3074.102	6.0893099.724	6.3073124.524	6.3863163.564	6.5993174.946	6.668				
3214.591	6.8013225.368	6.8353228.462	6.847	3275.79	7.065	3293.36	7.129		
3326.212	7.2493358.258	7.3593376.634	7.4123423.157	7.5683427.056	7.578				
3440.636	7.6173477.478	7.7353511.984	7.796	3527.9	7.804	3553.21	7.826		
3578.322	7.6823594.436	7.6913628.744	7.704	3666.68	7.8223679.166	7.864			
3682.75	7.8733729.587	7.985	3759.34	8.0383780.009	8.0713812.547	8.164			
3830.431	8.2013877.445	7.9983880.853	7.9883892.725	7.9523931.275	7.809				
3942.343	7.8883981.697	8.0394007.242	8.164032.119	8.25	4072.14	8.286			
4082.541	8.314118.769	8.5594132.963	8.6594137.038	8.6474183.385	8.511				
4201.937	8.474233.807	8.4134266.835	8.3564284.229	8.3294331.733	8.248				
4334.651	8.2414344.814	8.2254385.073	8.1634396.632	8.1474435.495	8.088				
4461.53	8.0514485.917	8.0184501.409	8.0054536.339	7.9664570.858	7.951				
4586.761	7.9424591.327	7.9444637.183	7.9464656.225	7.9494687.605	7.945				
4721.123	7.934738.027	7.9194786.021	7.8834788.449	7.8824796.903	7.877				
4838.871	7.857	4850.92	7.8494889.293	7.8384915.818	7.8284939.715	7.82			
4980.716	7.8064990.137	7.8025022.947	7.7965040.559	7.7955045.615	7.794				
5090.98	7.7985110.513	7.7855141.402	7.7825175.411	7.895191.824	7.94				
5240.31	8.1135242.246	8.1195248.992	8.1555292.668	8.3835305.208	8.476				
5343.09	8.7615370.106	9.0225393.512	9.2535426.182	9.404					

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 1465 .05 1519 .06

Bank Sta: Left Right Coeff Contr. Expan.

ExpandedLocal.rep

	1465	1519		.1	.3
Ineffective Flow		num=	2		
Sta L	Sta R	Elev	Permanent		
	0	1462	7.36	F	
	15225426.182	7.36	F		

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
Maximum allowable submergence for weir flow = .98  
Elevation at which weir flow begins =  
Energy head used in spillway design =  
Spillway height used in design =  
Weir crest shape = Broad Crested

Number of Piers = 4

Pier Data

Pier Station	Upstream=	1466	Downstream=	1466
Upstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	-3.25	1	4.8	
Downstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	-3.25	1	4.8	

Pier Data

Pier Station	Upstream=	1483.4	Downstream=	1483.4
Upstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	-3.25	1	4.8	
Downstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	-3.25	1	4.8	

Pier Data

Pier Station	Upstream=	1500.8	Downstream=	1500.8
Upstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	-3.25	1	4.8	
Downstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	-3.25	1	4.8	

ExpandedLocal.rep

Pier Data

Pier Station Upstream= 1518.2 Downstream= 1518.2

Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 -3.25 1 4.8  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 -3.25 1 4.8

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth  
 inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: Doubloon

REACH: to Marsh RS: 17188

INPUT

Description: 6' DS Hwy 190

Station Elevation Data num= 229  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 6.105 8.866 6.098 27.161 6.011 58.929 6.067 88.723 5.827  
 108.993 5.766 150.285 6.07 159.056 6.06 197.245 5.842 209.12 5.779  
 211.847 5.761 259.184 5.606 273.41 5.593 309.247 5.585 334.972 5.637  
 354.018 5.724 359.353 5.747 399.1 6.478 409.817 6.586 446.323 6.888  
 457.699 6.865 460.281 6.91 498.829 6.318 510.744 6.435 529.656 6.38  
 561.208 6.384 594.934 5.941 611.672 5.807 660.211 5.228 662.136 5.2  
 668.692 5.137 712.6 4.837 745.608 4.826 763.064 4.863 790.767 4.528  
 813.527 4.273 856.045 3.571 863.991 3.441 891.061 3.366 909.8 3.277  
 914.503 3.252 922.139 3.28 965.486 3.388 990.366 3.696 1016.47 4.143

ExpandedLocal.rep

1061.95	4.2251067.453	4.2151082.283	4.2131110.735	3.9881118.437	4.08
1150.858	3.987 1169.42	4.3641185.372	4.3781190.585	4.3861222.373	4.29
1227.872	4.2541240.252	4.1451276.222	3.9561302.445	3.771 1330.07	3.067
1361.482	2.8121383.919	2.55 1401.85	2.5671437.768	2.36 1465	1.85
1479	-2.56 1493	-3.25 1507	-2.01 1519	1.331545.466	2.3
1563.452	2.3151599.315	2.5071600.739	2.5111603.943	2.5241653.164	2.785
1655.883	2.7871693.389	2.8131707.223	2.8461723.784	2.9341761.293	3.402
1792.626	2.9811815.363	2.8861842.582	2.9161869.433	3.0411891.863	3.154
1923.503	3.412 1961.38	3.4091977.573	3.337 1991.1	3.3912031.643	3.428
2080.178	3.852085.713	3.936 2121.14	4.0152139.783	3.3642157.992	3.546
2185.329	3.8492192.978	3.855 2205.15	3.8082245.727	3.2712271.227	3.453
2298.477	3.382341.842	3.6652348.614	3.842351.227	3.7012357.124	3.737
2403.977	3.7722443.022	4.1632456.726	4.2442478.535	4.2852509.476	4.355
2528.919	4.1992562.226	4.1232614.817	4.5962614.975	4.5972615.228	4.598
2653.107	4.7712667.725	4.7942691.169	4.8512720.475	4.8892729.231	4.901
2735.733	4.9022762.502	4.893 2771.57	4.8922774.174	4.8882821.992	4.869
2852.368	4.8652872.414	4.8212893.594	4.8372922.836	4.852 2934.82	4.892
2973.258	4.7992976.046	4.8142988.547	4.989 3023.68	5.4953058.498	5.853
3074.102	6.0893099.724	6.3073124.524	6.3863163.564	6.5993174.946	6.668
3214.591	6.8013225.368	6.8353228.462	6.847 3275.79	7.065 3293.36	7.129
3326.212	7.2493358.258	7.3593376.634	7.4123423.157	7.5683427.056	7.578
3440.636	7.6173477.478	7.7353511.984	7.796 3527.9	7.804 3553.21	7.826
3578.322	7.6823594.436	7.6913628.744	7.704 3666.68	7.8223679.166	7.864
3682.75	7.8733729.587	7.985 3759.34	8.0383780.009	8.0713812.547	8.164
3830.431	8.2013877.445	7.9983880.853	7.9883892.725	7.9523931.275	7.809
3942.343	7.8883981.697	8.0394007.242	8.164032.119	8.25 4072.14	8.286
4082.541	8.314118.769	8.5594132.963	8.6594137.038	8.6474183.385	8.511
4201.937	8.474233.807	8.4134266.835	8.3564284.229	8.3294331.733	8.248
4334.651	8.2414344.814	8.2254385.073	8.1634396.632	8.1474435.495	8.088
4461.53	8.0514485.917	8.0184501.409	8.0054536.339	7.9664570.858	7.951
4586.761	7.9424591.327	7.9444637.183	7.9464656.225	7.9494687.605	7.945
4721.123	7.934738.027	7.9194786.021	7.8834788.449	7.8824796.903	7.877
4838.871	7.857 4850.92	7.8494889.293	7.8384915.818	7.8284939.715	7.82
4980.716	7.8064990.137	7.8025022.947	7.7965040.559	7.7955045.615	7.794
5090.98	7.7985110.513	7.7855141.402	7.7825175.411	7.895191.824	7.94
5240.31	8.1135242.246	8.1195248.992	8.1555292.668	8.3835305.208	8.476
5343.09	8.7615370.106	9.0225393.512	9.2535426.182	9.404	

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 1465 .05 1519 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1465 1519 471 471 471 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 1462 7.36 F

15225426.182 7.36 F

CROSS SECTION

RIVER: Doubloon  
REACH: to Marsh RS: 16717

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-81	6.02	-71.68	6.02	-65.19	5.99	-52.46	5.94	-31.44	5.97
-30.37	5.97	-29.57	5.97	-19.08	5.98	4.44	5.81	12.22	5.76
31.47	5.7	33.52	5.7	36.42	5.72	39.25	5.73	58.59	5.86
74.07	5.95	76.91	5.97	80.76	5.97	86.12	5.96	92.51	5.93
108.88	5.84	125.1	5.75	126.25	5.75	138.72	5.69	141.59	5.67
143.69	5.66	147.27	5.65	153.54	5.63	169.44	5.58	178.5	5.55
191.33	5.5	206.27	5.49	211.64	5.48	213.32	5.48	214.58	5.48
235.95	5.47	243.93	5.47	248.13	5.47	270.96	5.51	275.62	5.52
280.29	5.54	282.95	5.55	290.97	5.59	296.57	5.61	302.45	5.71
317.76	5.96	336.66	6.26	338.34	6.28	349.6	6.38	352.57	6.4
373.69	6.54	387.39	6.63	387.95	6.63	397.7	6.61	399.91	6.6
402.62	6.64	422.2	6.37	443.12	6.08	454.72	6.18	455.64	6.19
457.01	6.18	457.64	6.18	458.73	6.18	475.51	6.14	479.8	6.14
491.82	6.14	501.97	6.14	508.67	6.14	519.78	6.01	524.15	5.96
526.64	5.93	535.75	5.83	544.1	5.73	561.45	5.61	561.69	5.61
580.81	5.41	590.65	5.31	596.26	5.25	612.69	5.09	614.71	5.06
616.77	5.04	621.6	5	631.08	4.95	641.85	4.88	665.89	4.74
667.73	4.73	668.14	4.73	679.22	4.73	700.72	4.72	701.45	4.72
702.42	4.72	702.67	4.72	720.76	4.76	737.08	4.58	749.86	4.45
757.96	4.38	767.04	4.29	772.69	4.24	773.78	4.23	788.99	4.02
808.31	3.77	815.19	3.67	818.45	3.63	826.8	3.51	843.93	3.49
854.86	3.47	855.24	3.47	872.42	3.41	874.93	3.4	876.82	3.4
879.55	3.39	879.87	3.38	887.9	3.42	891.29	3.43	915.17	3.49
929.66	3.53	933.44	3.54	950.78	3.75	959.58	3.85	964.63	3.93
986.4	4.26	986.59	4.26	986.89	4.26	987.01	4.27	1022.02	4.33
1030.5	4.34	1034.8	4.35	1040.58	4.34	1044.12	4.34	1056.16	4.35
1057.64	4.34	1076.35	4.21	1078.56	4.2	1086.06	4.15	1092.02	4.21
1094.15	4.24	1109.33	4.2	1120.25	4.18	1125.02	4.17	1128.21	4.16
1143.21	4.44	1147.72	4.52	1158.02	4.53	1164.48	4.54	1169.96	4.55
1184.82	4.51	1191.03	4.5	1195.85	4.48	1203.36	4.46	1209.13	4.43
1222.14	4.33	1224.03	4.32	1235.07	4.27	1257.04	4.16	1259.94	4.14
1260.3	4.14	1287.49	3.95	1290.04	3.89	1313.14	3.33	1316.51	3.25
1323.04	3.19	1326.92	3.16	1335.79	3.07	1349.52	2.95	1356.05	2.86
1371.78	2.66	1373.09	2.65	1389.05	2.62	1391.93	2.62	1411.28	2.47
1429.67	2.37	1458.29	1.89	1466.21	-.21	1474.14	-2.26	1477.74	-2.37

ExpandedLocal.rep

1481.33	-2.49	1495.71	-2.92	1503.18	-2.35	1510.64	-1.81	1511.79	-1.72
1518.11	-.31	1525.57	1.39	1550.78	2.29	1567.91	2.31	1602.07	2.48
1603.42	2.49	1606.48	2.5	1653.36	2.74	1655.95	2.74	1691.67	2.77
1704.85	2.8	1720.62	2.88	1756.34	3.31	1786.19	2.92	1807.84	2.84
1833.77	2.86	1835.63	2.87	1837.54	2.88	1859.34	2.99	1880.71	3.1
1910.84	3.35	1946.92	3.35	1962.34	3.29	1975.23	3.34	1977.01	3.35
1998.12	3.38	2013.84	3.39	2060.07	3.8	2065.34	3.88	2099.08	3.96
2116.84	3.37	2118.41	3.38	2134.18	3.54	2160.22	3.82	2167.5	3.83
2179.1	3.79	2210.79	3.39	2217.75	3.29	2242.03	3.46	2259.81	3.41
2267.99	3.39	2309.29	3.66	2315.74	3.82	2318.23	3.69	2323.62	3.72
2323.85	3.72	2368.47	3.76	2401.18	4.08	2405.66	4.12	2418.71	4.2
2439.49	4.23	2468.96	4.3	2486.38	4.16	2487.47	4.15	2519.2	4.08
2542.58	4.29	2569.29	4.52	2569.44	4.53	2569.68	4.53	2605.76	4.69
2619.68	4.71	2642.01	4.76	2649.15	4.77	2669.92	4.8	2678.26	4.81
2683.96	4.81	2684.45	4.81	2709.95	4.8	2718.59	4.8	2721.07	4.79
2766.61	4.78	2795.54	4.77	2811.89	4.74	2814.64	4.73	2825.33	4.74
2834.81	4.74	2835.67	4.75	2862.66	4.76	2874.08	4.8	2910.69	4.71
2913.34	4.72	2914.29	4.74	2925.25	4.88	2958.71	5.35	2966.73	5.43
2974.65	5.51	2991.87	5.69	3006.74	5.91	3031.14	6.11	3054.76	6.18
3091.94	6.38	3102.79	6.44	3108.1	6.46	3140.55	6.57	3150.81	6.6
3153.76	6.61	3198.83	6.82	3210.6	6.86	3215.57	6.88	3246.86	6.99
3249.51	7	3277.38	7.09	3294.88	7.14	3335.59	7.28	3339.19	7.29
3342.91	7.3	3355.84	7.34	3390.88	7.45	3390.93	7.45	3423.8	7.51
3438.96	7.52	3462.92	7.54	3463.06	7.54	3486.98	7.4	3502.33	7.41
3532.28	7.43	3535.01	7.43	3571.14	7.54	3583.03	7.58	3586.45	7.58
3625.68	7.68	3631.06	7.69	3659.39	7.74	3673.65	7.76	3679.08	7.77
3710.07	7.86	3727.1	7.89	3771.88	7.7	3775.13	7.69	3786.44	7.66
3788.45	7.65	3815.05	7.56	3823.15	7.53	3833.7	7.6	3871.18	7.74
3895.51	7.85	3919.2	7.94	3951.21	7.97	3956.46	7.97	3957.32	7.97
3960.44	7.98	3967.23	7.99	3991.04	8.15	4001.73	8.23	4015.25	8.32
4019.13	8.31	4063.28	8.18	4080.95	8.15	4085.44	8.14	4097.83	8.12
4111.3	8.09	4142.76	8.04	4159.33	8.02	4204.57	7.94	4207.35	7.94
4210.4	7.93	4217.03	7.92	4239.2	7.89	4255.38	7.87	4266.39	7.85
4276.72	7.84	4303.4	7.8	4328.2	7.77	4351.43	7.74	4366.18	7.73
4380.6	7.71	4399.45	7.69	4432.33	7.68	4439.48	7.68	4447.48	7.67
4451.82	7.68	4495.5	7.68	4513.64	7.68	4521.98	7.68	4543.52	7.68
4575.45	7.67	4585.33	7.66	4591.55	7.66	4637.26	7.63	4639.57	7.63
4647.63	7.62	4663.38	7.62	4687.6	7.61	4699.07	7.6	4735.62	7.59
4760.89	7.58	4765.01	7.58	4783.65	7.58	4804.75	7.57	4822.7	7.57
4831.67	7.56	4835.29	7.56	4862.92	7.56	4879.7	7.56	4884.51	7.56
4927.72	7.56	4946.15	7.55	4946.33	7.55	4975.75	7.55	5008.14	7.65
5023.77	7.7	5067.78	7.86	5069.95	7.86	5071.79	7.87	5078.22	7.9
5087.52	7.95	5090.52	7.97	5119.82	8.12	5131.76	8.2	5167.84	8.47
5193.58	8.71	5215.87	8.93	5228.93	8.99	5246.99	9.07		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*

ExpandedLocal.rep

-81 .06 1458.29 .05 1525.57 .06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1458.29	1525.57		471	471		.1	.3
Ineffective Flow		num=	2					
Sta L	Sta R	Elev	Permanent					
-811226.607		7.359	F					
1757.39	5246.99	7.369	F					

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 16246

INPUT

Description: Interpolated Section

Station Elevation Data	num=	394							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-162	5.94	-152.23	5.94	-145.43	5.91	-132.08	5.86	-110.05	5.89
-108.93	5.89	-108.09	5.89	-97.09	5.9	-72.44	5.74	-64.28	5.69
-44.1	5.63	-41.95	5.63	-38.91	5.65	-35.94	5.66	-15.67	5.77
.55	5.86	3.53	5.87	7.57	5.87	13.19	5.86	19.88	5.83
37.04	5.75	54.04	5.66	55.25	5.66	68.33	5.59	71.33	5.58
73.54	5.57	77.29	5.56	83.86	5.54	100.53	5.48	110.03	5.45
123.47	5.4	139.14	5.38	144.77	5.37	146.52	5.37	147.84	5.37
170.24	5.36	178.61	5.35	183.01	5.35	206.94	5.38	211.83	5.39
216.72	5.41	219.51	5.41	227.92	5.45	233.8	5.47	239.96	5.57
256	5.8	275.82	6.06	277.57	6.09	289.38	6.17	292.49	6.19
314.64	6.3	328.99	6.38	329.59	6.38	339.8	6.35	342.12	6.34
344.96	6.38	365.48	6.11	387.42	5.84	399.57	5.93	400.54	5.94
401.98	5.93	402.63	5.93	403.78	5.93	421.37	5.89	425.87	5.89
438.47	5.89	449.11	5.89	456.12	5.89	467.77	5.77	472.35	5.73
474.96	5.7	484.51	5.61	493.27	5.52	511.46	5.41	511.7	5.41
531.75	5.24	542.06	5.15	547.95	5.09	565.17	4.94	567.29	4.92
569.45	4.9	574.51	4.87	584.44	4.82	595.73	4.76	620.93	4.64
622.87	4.63	623.3	4.63	634.91	4.62	657.45	4.62	658.22	4.62
659.22	4.62	659.48	4.62	678.45	4.65	695.56	4.49	708.96	4.38
717.44	4.31	726.97	4.23	732.89	4.2	734.03	4.19	749.98	4.01
770.23	3.8	777.44	3.72	780.86	3.68	789.61	3.59	807.57	3.58
819.03	3.58	819.43	3.58	837.44	3.54	840.07	3.53	842.04	3.53
844.9	3.52	845.25	3.52	853.66	3.55	857.21	3.56	882.24	3.64
897.43	3.69	901.4	3.7	919.58	3.9	928.8	4	934.09	4.08
956.92	4.38	957.11	4.38	957.43	4.39	957.55	4.39	994.25	4.45
1003.14	4.47	1007.65	4.48	1013.71	4.47	1017.42	4.47	1030.04	4.48
1031.59	4.47	1051.2	4.36	1053.53	4.35	1061.38	4.31	1067.63	4.37
1069.86	4.39	1085.78	4.37	1097.22	4.35	1102.22	4.35	1105.57	4.34



ExpandedLocal.rep

1121.29	4.6	1126.02	4.68	1136.82	4.69	1143.59	4.7	1149.33	4.71
1164.9	4.68	1171.42	4.67	1176.47	4.66	1184.34	4.64	1190.4	4.61
1204.03	4.51	1206.01	4.51	1217.58	4.46	1240.61	4.34	1243.65	4.33
1244.04	4.33	1272.53	4.13	1275.21	4.08	1299.43	3.52	1302.96	3.43
1309.8	3.37	1313.87	3.33	1323.17	3.23	1337.56	3.08	1344.4	2.99
1360.9	2.76	1362.27	2.74	1379	2.67	1382.02	2.66	1402.3	2.48
1421.58	2.38	1451.57	1.93	1460.43	-.06	1469.29	-1.97	1474.14	-2.06
1479	-2.19	1498.43	-2.59	1506.86	-2.04	1515.29	-1.51	1516.58	-1.44
1523.71	-.14	1532.14	1.45	1556.09	2.29	1572.37	2.3	1604.82	2.46
1606.11	2.47	1609.01	2.48	1653.55	2.7	1656.01	2.7	1689.95	2.72
1702.47	2.75	1717.45	2.83	1751.4	3.23	1779.75	2.87	1800.32	2.78
1824.96	2.81	1826.73	2.82	1828.54	2.83	1849.25	2.93	1869.55	3.04
1898.18	3.28	1932.46	3.3	1947.11	3.25	1959.35	3.3	1961.04	3.3
1981.1	3.34	1996.04	3.36	2039.96	3.75	2044.97	3.83	2077.02	3.91
2093.9	3.37	2095.39	3.38	2110.37	3.53	2135.11	3.8	2142.03	3.81
2153.05	3.77	2183.15	3.4	2189.77	3.32	2212.84	3.47	2229.73	3.42
2237.5	3.4	2276.74	3.65	2282.87	3.8	2285.23	3.68	2290.35	3.71
2290.57	3.71	2332.97	3.74	2364.05	4.04	2368.3	4.08	2380.7	4.15
2400.44	4.18	2428.43	4.24	2444.99	4.12	2446.03	4.11	2476.17	4.05
2498.39	4.24	2523.76	4.45	2523.9	4.45	2524.13	4.45	2558.41	4.6
2571.64	4.62	2592.85	4.67	2599.63	4.68	2619.37	4.7	2627.29	4.71
2632.7	4.71	2633.18	4.71	2657.4	4.7	2665.61	4.7	2667.96	4.7
2711.23	4.68	2738.72	4.68	2754.25	4.64	2756.86	4.64	2767.02	4.65
2776.03	4.65	2776.84	4.65	2802.49	4.66	2813.33	4.7	2848.11	4.62
2850.64	4.63	2851.54	4.64	2861.95	4.78	2893.74	5.21	2901.36	5.29
2908.89	5.36	2925.25	5.52	2939.37	5.72	2962.56	5.91	2985	5.98
3020.32	6.16	3030.62	6.22	3035.68	6.24	3066.5	6.34	3076.25	6.37
3079.05	6.38	3121.88	6.57	3133.05	6.61	3137.78	6.63	3167.51	6.73
3170.02	6.74	3196.5	6.83	3213.13	6.88	3251.81	7	3255.23	7.01
3258.76	7.02	3271.05	7.06	3304.34	7.16	3304.39	7.16	3335.61	7.22
3350.02	7.23	3372.78	7.25	3372.92	7.25	3395.64	7.13	3410.22	7.14
3438.68	7.15	3441.27	7.15	3475.6	7.25	3486.9	7.29	3490.14	7.3
3527.42	7.38	3532.52	7.39	3559.45	7.44	3573	7.46	3578.15	7.47
3607.6	7.55	3623.78	7.58	3666.32	7.41	3669.41	7.4	3680.15	7.37
3682.06	7.36	3707.34	7.27	3715.03	7.25	3725.05	7.31	3760.66	7.44
3783.78	7.55	3806.29	7.63	3836.7	7.65	3841.68	7.66	3842.5	7.66
3845.47	7.66	3851.92	7.68	3874.54	7.83	3884.7	7.89	3897.54	7.98
3901.23	7.97	3943.17	7.86	3959.96	7.82	3964.22	7.81	3976	7.8
3988.8	7.77	4018.68	7.73	4034.42	7.71	4077.41	7.64	4080.05	7.64
4082.95	7.63	4089.25	7.62	4110.31	7.59	4125.68	7.57	4136.14	7.56
4145.96	7.55	4171.31	7.51	4194.87	7.49	4216.93	7.46	4230.95	7.45
4244.66	7.44	4262.56	7.42	4293.8	7.41	4300.6	7.41	4308.19	7.41
4312.32	7.41	4353.82	7.41	4371.05	7.42	4378.97	7.42	4399.44	7.42
4429.77	7.41	4439.16	7.4	4445.07	7.4	4488.5	7.38	4490.7	7.38
4498.35	7.37	4513.31	7.37	4536.33	7.36	4547.23	7.35	4581.95	7.35
4605.96	7.34	4609.88	7.34	4627.58	7.34	4647.63	7.33	4664.68	7.33
4673.21	7.33	4676.64	7.33	4702.9	7.32	4718.83	7.33	4723.41	7.32
4764.46	7.33	4781.97	7.32	4782.14	7.32	4810.09	7.32	4840.86	7.42

ExpandedLocal.rep

4855.72	7.46	4897.53	7.61	4899.59	7.62	4901.34	7.62	4907.45	7.65
4916.29	7.7	4919.13	7.71	4946.97	7.85	4958.32	7.93	4992.6	8.18
5017.04	8.41	5038.23	8.61	5050.63	8.66	5067.79	8.74		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-162	.06	1451.57	.05	1532.14	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1451.57	1532.14		470	470		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-162	1149.33	4.71	F
1992.78	5067.79	7.35857	F

CROSS SECTION

RIVER: Doubloun  
 REACH: to Marsh RS: 15776

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-243	5.86	-232.79	5.85	-225.66	5.83	-211.71	5.78	-188.66	5.81
-187.49	5.81	-186.61	5.81	-175.11	5.82	-149.32	5.67	-140.78	5.62
-119.68	5.57	-117.43	5.56	-114.24	5.57	-111.14	5.59	-89.93	5.69
-72.97	5.76	-69.85	5.78	-65.62	5.77	-59.75	5.76	-52.75	5.73
-34.8	5.65	-17.01	5.57	-15.75	5.56	-2.07	5.5	1.07	5.48
3.38	5.48	7.3	5.46	14.18	5.44	31.61	5.38	41.55	5.35
55.61	5.3	72	5.27	77.89	5.27	79.73	5.26	81.11	5.26
104.54	5.24	113.29	5.23	117.9	5.24	142.93	5.25	148.04	5.26
153.16	5.27	156.08	5.27	164.87	5.31	171.02	5.34	177.46	5.43
194.25	5.64	214.97	5.87	216.81	5.89	229.16	5.96	232.42	5.98
255.58	6.06	270.59	6.12	271.22	6.13	281.9	6.09	284.32	6.08
287.3	6.11	308.76	5.86	331.71	5.61	344.43	5.69	345.44	5.69
346.94	5.69	347.63	5.69	348.83	5.68	367.23	5.65	371.93	5.65
385.11	5.65	396.24	5.65	403.58	5.65	415.76	5.54	420.55	5.49
423.29	5.47	433.27	5.39	442.44	5.31	461.46	5.22	461.72	5.22
482.69	5.06	493.48	4.98	499.63	4.94	517.64	4.8	519.86	4.78
522.12	4.77	527.41	4.73	537.81	4.69	549.62	4.64	575.98	4.53
578	4.52	578.45	4.52	590.6	4.52	614.18	4.51	614.98	4.51
616.03	4.51	616.3	4.51	636.14	4.55	654.04	4.4	668.06	4.31
676.93	4.25	686.89	4.17	693.09	4.16	694.28	4.15	710.97	4
732.14	3.84	739.69	3.77	743.27	3.74	752.42	3.66	771.2	3.68

ExpandedLocal.rep

783.19	3.68	783.61	3.68	802.45	3.66	805.2	3.66	807.26	3.66
810.26	3.65	810.62	3.65	819.42	3.69	823.13	3.7	849.32	3.79
865.2	3.84	869.36	3.86	888.37	4.06	898.02	4.15	903.56	4.23
927.43	4.5	927.63	4.5	927.96	4.51	928.1	4.51	966.48	4.57
975.78	4.59	980.49	4.6	986.83	4.6	990.72	4.6	1003.92	4.61
1005.54	4.6	1026.05	4.51	1028.49	4.5	1036.7	4.47	1043.23	4.53
1045.57	4.55	1062.22	4.54	1074.19	4.53	1079.42	4.52	1082.93	4.52
1099.37	4.76	1104.31	4.84	1115.61	4.85	1122.69	4.86	1128.7	4.87
1144.99	4.85	1151.8	4.84	1157.09	4.83	1165.32	4.81	1171.66	4.78
1185.92	4.7	1187.99	4.69	1200.09	4.65	1224.18	4.53	1227.36	4.52
1227.77	4.51	1257.57	4.32	1260.37	4.26	1285.71	3.7	1289.4	3.62
1296.56	3.54	1300.81	3.5	1310.54	3.38	1325.59	3.21	1332.75	3.12
1350.01	2.86	1351.44	2.84	1368.94	2.73	1372.1	2.71	1393.32	2.49
1413.48	2.4	1444.86	1.97	1454.64	.09	1464.43	-1.67	1470.55	-1.76
1476.67	-1.89	1501.14	-2.25	1510.54	-1.72	1519.93	-1.22	1521.37	-1.15
1529.32	.03	1538.71	1.52	1561.41	2.28	1576.83	2.29	1607.57	2.44
1608.79	2.44	1611.54	2.45	1653.74	2.66	1656.07	2.66	1688.23	2.68
1700.09	2.7	1714.29	2.77	1746.45	3.14	1773.31	2.81	1792.81	2.73
1816.14	2.76	1817.82	2.76	1819.54	2.77	1839.16	2.88	1858.39	2.98
1885.52	3.21	1918	3.24	1931.88	3.2	1943.48	3.25	1945.08	3.26
1964.08	3.3	1978.24	3.33	2019.85	3.7	2024.59	3.77	2054.97	3.86
2070.95	3.37	2072.36	3.38	2086.56	3.52	2110	3.77	2116.56	3.78
2126.99	3.75	2155.52	3.42	2161.78	3.34	2183.65	3.48	2199.65	3.43
2207.01	3.41	2244.19	3.64	2250	3.77	2252.24	3.66	2257.09	3.69
2257.29	3.69	2297.46	3.73	2326.91	4	2330.94	4.04	2342.69	4.1
2361.39	4.13	2387.91	4.19	2403.6	4.07	2404.58	4.07	2433.14	4.01
2454.19	4.18	2478.23	4.38	2478.36	4.38	2478.58	4.38	2511.06	4.52
2523.59	4.53	2543.69	4.58	2550.12	4.59	2568.82	4.61	2576.32	4.62
2581.45	4.62	2581.9	4.62	2604.85	4.61	2612.62	4.61	2614.86	4.61
2655.85	4.59	2681.9	4.58	2696.61	4.55	2699.08	4.55	2708.71	4.55
2717.24	4.56	2718.02	4.56	2742.31	4.57	2752.59	4.6	2785.54	4.53
2787.93	4.54	2788.79	4.55	2798.65	4.68	2828.77	5.07	2835.99	5.14
2843.12	5.21	2858.62	5.35	2872	5.54	2893.97	5.71	2915.23	5.77
2948.7	5.94	2958.46	6	2963.25	6.01	2992.45	6.11	3001.69	6.13
3004.35	6.14	3044.92	6.32	3055.51	6.36	3059.99	6.37	3088.15	6.47
3090.54	6.48	3115.63	6.56	3131.38	6.61	3168.02	6.73	3171.27	6.74
3174.61	6.75	3186.26	6.78	3217.79	6.88	3217.84	6.88	3247.43	6.93
3261.07	6.94	3282.64	6.96	3282.77	6.96	3304.3	6.85	3318.12	6.86
3345.08	6.87	3347.53	6.87	3380.06	6.97	3390.76	7	3393.84	7.01
3429.16	7.09	3433.99	7.1	3459.5	7.14	3472.34	7.16	3477.22	7.17
3505.12	7.24	3520.45	7.27	3560.76	7.11	3563.68	7.1	3573.86	7.08
3575.67	7.07	3599.62	6.99	3606.91	6.96	3616.4	7.03	3650.14	7.15
3672.04	7.24	3693.37	7.31	3722.19	7.34	3726.91	7.34	3727.69	7.34
3730.5	7.35	3736.6	7.36	3758.03	7.5	3767.66	7.56	3779.83	7.64
3783.33	7.63	3823.06	7.53	3838.97	7.5	3843.01	7.49	3854.16	7.47
3866.29	7.46	3894.61	7.41	3909.52	7.4	3950.25	7.34	3952.75	7.33
3955.5	7.33	3961.47	7.32	3981.42	7.3	3995.98	7.28	4005.89	7.27
4015.19	7.26	4039.21	7.23	4061.53	7.2	4082.44	7.18	4095.73	7.17

ExpandedLocal.rep

4108.71	7.16	4125.67	7.15	4155.27	7.14	4161.71	7.14	4168.9	7.14
4172.82	7.14	4212.13	7.15	4228.46	7.15	4235.97	7.15	4255.36	7.16
4284.1	7.15	4292.99	7.14	4298.59	7.14	4339.74	7.12	4341.82	7.12
4349.07	7.12	4363.25	7.12	4385.05	7.11	4395.38	7.11	4428.28	7.1
4451.02	7.1	4454.74	7.1	4471.51	7.1	4490.51	7.09	4506.67	7.09
4514.74	7.09	4518	7.09	4542.87	7.09	4557.97	7.09	4562.31	7.09
4601.2	7.1	4617.79	7.09	4617.95	7.09	4644.43	7.09	4673.59	7.18
4687.66	7.22	4727.28	7.36	4729.23	7.37	4730.89	7.37	4736.68	7.4
4745.05	7.44	4747.74	7.46	4774.12	7.59	4784.87	7.66	4817.35	7.89
4840.51	8.1	4860.58	8.29	4872.34	8.34	4888.59	8.41		

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
-243	.06	1444.86	.05	1538.71	.06			

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
1444.86	1538.71	471	471	471	.1	.3	
Ineffective Flow	num=	2					
Sta L	Sta R	Elev	Permanent				
-243	1128.7	4.87	F				
2228.17	4888.59	7.35785	F				

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 15305

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-324	5.78	-313.34	5.77	-305.9	5.75	-291.33	5.71	-267.27	5.73
-266.04	5.73	-265.13	5.73	-253.12	5.74	-226.19	5.6	-217.28	5.55
-195.25	5.5	-192.9	5.49	-189.58	5.5	-186.33	5.52	-164.2	5.6
-146.48	5.67	-143.23	5.68	-138.82	5.67	-132.68	5.66	-125.37	5.63
-106.63	5.55	-88.06	5.48	-86.75	5.47	-72.46	5.41	-69.18	5.39
-66.78	5.38	-62.68	5.37	-55.5	5.35	-37.3	5.29	-26.93	5.25
-12.25	5.2	4.87	5.17	11.01	5.16	12.93	5.15	14.37	5.15
38.83	5.13	47.97	5.12	52.78	5.12	78.91	5.12	84.25	5.12
89.59	5.13	92.64	5.13	101.82	5.17	108.24	5.2	114.97	5.29
132.49	5.48	154.13	5.68	156.05	5.69	168.94	5.76	172.34	5.77
196.53	5.83	212.2	5.87	212.85	5.87	224	5.83	226.53	5.82
229.64	5.85	252.05	5.6	276.01	5.37	289.28	5.44	290.34	5.44
291.91	5.44	292.62	5.44	293.88	5.44	313.09	5.4	318	5.41
331.76	5.4	343.38	5.4	351.04	5.4	363.76	5.3	368.76	5.26

ExpandedLocal.rep

371.61	5.24	382.04	5.17	391.6	5.1	411.46	5.02	411.74	5.02
433.63	4.88	444.89	4.81	451.31	4.78	470.12	4.66	472.44	4.64
474.8	4.63	480.32	4.6	491.17	4.57	503.5	4.52	531.02	4.42
533.14	4.42	533.6	4.42	546.29	4.42	570.9	4.41	571.74	4.41
572.84	4.41	573.12	4.41	593.83	4.44	612.52	4.31	627.16	4.23
636.42	4.18	646.82	4.12	653.29	4.12	654.53	4.11	671.95	3.99
694.06	3.87	701.94	3.82	705.67	3.8	715.23	3.74	734.84	3.77
747.35	3.79	747.79	3.79	767.46	3.78	770.33	3.79	772.49	3.78
775.61	3.78	775.99	3.78	785.17	3.82	789.06	3.84	816.39	3.94
832.98	4	837.31	4.01	857.16	4.21	867.24	4.31	873.02	4.38
897.94	4.62	898.15	4.63	898.5	4.63	898.64	4.63	938.71	4.7
948.42	4.72	953.34	4.73	959.96	4.73	964.02	4.73	977.8	4.74
979.49	4.74	1000.91	4.66	1003.45	4.66	1012.02	4.63	1018.84	4.69
1021.29	4.71	1038.67	4.7	1051.16	4.7	1056.63	4.69	1060.28	4.69
1077.45	4.92	1082.61	4.99	1094.41	5.01	1101.8	5.02	1108.07	5.03
1125.08	5.02	1132.19	5.01	1137.71	5	1146.3	4.99	1152.92	4.96
1167.81	4.88	1169.97	4.88	1182.61	4.83	1207.76	4.72	1211.08	4.7
1211.5	4.7	1242.62	4.5	1245.54	4.45	1271.99	3.89	1275.85	3.8
1283.32	3.72	1287.76	3.67	1297.92	3.54	1313.63	3.35	1321.1	3.24
1339.12	2.96	1340.62	2.93	1358.89	2.78	1362.18	2.76	1384.34	2.51
1405.39	2.41	1438.14	2.01	1448.86	.23	1459.57	-1.37	1466.95	-1.45
1474.33	-1.59	1503.86	-1.92	1514.21	-1.4	1524.57	-.93	1526.16	-.87
1534.93	.2	1545.29	1.58	1566.72	2.27	1581.28	2.28	1610.33	2.42
1611.48	2.42	1614.07	2.43	1653.93	2.61	1656.14	2.62	1686.51	2.63
1697.71	2.66	1711.12	2.72	1741.5	3.05	1766.87	2.75	1785.29	2.68
1807.33	2.7	1808.92	2.71	1810.54	2.72	1829.07	2.82	1847.24	2.93
1872.86	3.15	1903.53	3.19	1916.65	3.15	1927.6	3.21	1929.12	3.21
1947.06	3.26	1960.43	3.29	1999.74	3.65	2004.22	3.72	2032.91	3.81
2048.01	3.37	2049.34	3.38	2062.75	3.51	2084.89	3.75	2091.09	3.76
2100.94	3.73	2127.89	3.44	2133.8	3.37	2154.45	3.48	2169.57	3.44
2176.52	3.42	2211.64	3.63	2217.12	3.75	2219.24	3.65	2223.82	3.68
2224.01	3.68	2261.96	3.71	2289.77	3.96	2293.58	4	2304.67	4.05
2322.34	4.08	2347.39	4.13	2362.21	4.03	2363.14	4.02	2390.11	3.97
2410	4.13	2432.7	4.31	2432.83	4.31	2433.03	4.31	2463.71	4.43
2475.55	4.45	2494.53	4.49	2500.6	4.49	2518.26	4.51	2525.35	4.52
2530.2	4.52	2530.62	4.52	2552.3	4.52	2559.64	4.51	2561.75	4.51
2600.47	4.49	2625.07	4.49	2638.97	4.46	2641.31	4.46	2650.4	4.46
2658.46	4.47	2659.19	4.47	2682.14	4.48	2691.84	4.51	2722.97	4.44
2725.23	4.45	2726.04	4.46	2735.35	4.57	2763.8	4.93	2770.62	4.99
2777.36	5.05	2792	5.19	2804.64	5.36	2825.39	5.51	2845.47	5.57
2877.08	5.72	2886.3	5.77	2890.83	5.79	2918.41	5.87	2927.13	5.9
2929.64	5.91	2967.97	6.07	2977.97	6.11	2982.2	6.12	3008.8	6.21
3011.05	6.22	3034.75	6.3	3049.63	6.34	3084.24	6.45	3087.31	6.46
3090.47	6.47	3101.46	6.5	3131.25	6.59	3131.3	6.59	3159.24	6.64
3172.13	6.65	3192.5	6.67	3192.63	6.67	3212.96	6.57	3226.01	6.58
3251.48	6.6	3253.8	6.6	3284.52	6.68	3294.63	6.71	3297.53	6.72
3330.89	6.79	3335.46	6.8	3359.56	6.84	3371.68	6.86	3376.29	6.87
3402.64	6.93	3417.13	6.96	3455.2	6.82	3457.96	6.81	3467.57	6.78

ExpandedLocal.rep

3469.28	6.78	3491.91	6.7	3498.79	6.68	3507.75	6.74	3539.62	6.85
3560.31	6.94	3580.46	7	3607.67	7.02	3612.13	7.03	3612.87	7.03
3615.52	7.03	3621.29	7.05	3641.53	7.17	3650.63	7.23	3662.12	7.3
3665.42	7.29	3702.95	7.2	3717.98	7.17	3721.8	7.17	3732.33	7.15
3743.79	7.14	3770.53	7.1	3784.62	7.08	3823.09	7.03	3825.45	7.03
3828.05	7.03	3833.68	7.02	3852.53	7	3866.29	6.98	3875.65	6.98
3884.43	6.97	3907.12	6.94	3928.2	6.92	3947.95	6.9	3960.5	6.9
3972.76	6.89	3988.78	6.88	4016.74	6.87	4022.82	6.87	4029.62	6.87
4033.31	6.87	4070.45	6.88	4085.87	6.89	4092.96	6.89	4111.28	6.89
4138.43	6.89	4146.82	6.88	4152.11	6.88	4190.98	6.87	4192.95	6.87
4199.79	6.87	4213.19	6.87	4233.78	6.86	4243.54	6.86	4274.61	6.86
4296.09	6.86	4299.6	6.86	4315.45	6.85	4333.39	6.85	4348.65	6.85
4356.28	6.85	4359.35	6.85	4382.85	6.85	4397.11	6.86	4401.21	6.86
4437.94	6.87	4453.61	6.86	4453.76	6.86	4478.78	6.86	4506.32	6.95
4519.61	6.99	4557.03	7.11	4558.87	7.12	4560.44	7.12	4565.9	7.15
4573.81	7.19	4576.36	7.2	4601.27	7.32	4611.43	7.39	4642.11	7.6
4663.98	7.79	4682.94	7.96	4694.04	8.01	4709.4	8.08		

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
*****								
-324	.06	1438.14	.05	1545.29	.06			

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1438.14	1545.29		471	471	471		.1	.3
Ineffective Flow	num=		2						
Sta L	Sta R	Elev	Permanent						
-324	1094.41	5.01	F						
2463.57	4709.4	7.35714	F						

CROSS SECTION

RIVER: Doublon  
 REACH: to Marsh RS: 14834

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-405	5.7	-393.89	5.69	-386.14	5.67	-370.95	5.63	-345.88	5.65
-344.6	5.65	-343.65	5.65	-331.13	5.65	-303.07	5.52	-293.78	5.48
-270.82	5.43	-268.37	5.42	-264.91	5.43	-261.53	5.44	-238.46	5.51
-220	5.57	-216.61	5.58	-212.01	5.57	-205.62	5.56	-198	5.54
-178.47	5.46	-159.12	5.38	-157.75	5.38	-142.86	5.32	-139.44	5.3
-136.93	5.29	-132.67	5.28	-125.18	5.25	-106.22	5.19	-95.4	5.15
-80.1	5.1	-62.27	5.06	-55.87	5.05	-53.86	5.05	-52.36	5.04

ExpandedLocal.rep

-26.87	5.01	-17.35	5	-12.33	5	14.9	4.99	20.46	4.99
26.03	5	29.2	4.99	38.77	5.04	45.46	5.07	52.47	5.15
70.73	5.32	93.28	5.48	95.29	5.5	108.72	5.55	112.26	5.56
137.47	5.59	153.8	5.62	154.48	5.62	166.1	5.57	168.74	5.56
171.98	5.58	195.33	5.35	220.3	5.13	234.14	5.19	235.24	5.2
236.87	5.19	237.62	5.19	238.92	5.19	258.94	5.16	264.06	5.16
278.4	5.16	290.51	5.16	298.49	5.16	311.75	5.06	316.96	5.03
319.94	5.01	330.8	4.95	340.77	4.89	361.47	4.82	361.75	4.82
384.57	4.71	396.31	4.65	403	4.62	422.6	4.51	425.01	4.5
427.47	4.49	433.23	4.47	444.54	4.44	457.39	4.4	486.07	4.32
488.27	4.31	488.76	4.31	501.98	4.31	527.63	4.31	528.5	4.31
529.65	4.31	529.94	4.31	551.53	4.34	571	4.22	586.25	4.16
595.91	4.12	606.74	4.06	613.49	4.08	614.78	4.07	632.94	3.98
655.98	3.91	664.19	3.87	668.08	3.85	678.04	3.81	698.48	3.87
711.52	3.89	711.98	3.89	732.47	3.91	735.47	3.91	737.71	3.91
740.97	3.91	741.36	3.91	750.93	3.96	754.98	3.97	783.47	4.09
800.75	4.15	805.27	4.17	825.96	4.37	836.46	4.46	842.48	4.53
868.46	4.75	868.68	4.75	869.03	4.75	869.18	4.75	910.95	4.82
921.06	4.84	926.19	4.85	933.09	4.86	937.32	4.86	951.68	4.88
953.44	4.87	975.76	4.82	978.41	4.81	987.35	4.79	994.45	4.85
997	4.86	1015.11	4.87	1028.13	4.87	1033.83	4.87	1037.64	4.87
1055.53	5.09	1060.91	5.15	1073.2	5.17	1080.91	5.18	1087.44	5.2
1105.17	5.19	1112.58	5.18	1118.33	5.17	1127.29	5.16	1134.18	5.14
1149.7	5.07	1151.95	5.06	1165.12	5.02	1191.33	4.9	1194.79	4.89
1195.23	4.89	1227.66	4.68	1230.7	4.63	1258.27	4.07	1262.29	3.99
1270.08	3.89	1274.71	3.84	1285.29	3.69	1301.67	3.48	1309.45	3.37
1328.23	3.06	1329.79	3.03	1348.83	2.84	1352.27	2.81	1375.35	2.52
1397.29	2.42	1431.43	2.05	1443.07	.38	1454.71	-1.07	1463.36	-1.15
1472	-1.29	1506.57	-1.59	1517.89	-1.08	1529.21	-.63	1530.96	-.58
1540.54	.37	1551.86	1.64	1572.03	2.26	1585.74	2.27	1613.08	2.4
1614.16	2.4	1616.61	2.41	1654.13	2.57	1656.2	2.57	1684.79	2.59
1695.33	2.61	1707.96	2.67	1736.55	2.97	1760.44	2.69	1777.77	2.63
1798.52	2.65	1800.01	2.66	1801.54	2.67	1818.98	2.77	1836.08	2.87
1860.2	3.08	1889.07	3.13	1901.42	3.11	1911.73	3.16	1913.15	3.16
1930.05	3.22	1942.63	3.26	1979.63	3.6	1983.85	3.66	2010.85	3.76
2025.06	3.37	2026.32	3.39	2038.94	3.51	2059.78	3.72	2065.61	3.73
2074.89	3.71	2100.25	3.46	2105.82	3.39	2125.26	3.49	2139.49	3.45
2146.03	3.43	2179.09	3.62	2184.25	3.73	2186.24	3.64	2190.55	3.66
2190.74	3.66	2226.45	3.7	2252.63	3.93	2256.21	3.96	2266.66	4.01
2283.29	4.03	2306.87	4.08	2320.82	3.98	2321.69	3.98	2347.08	3.93
2365.8	4.08	2387.17	4.24	2387.29	4.24	2387.48	4.24	2416.36	4.35
2427.5	4.36	2445.37	4.4	2451.08	4.4	2467.71	4.42	2474.38	4.43
2478.94	4.43	2479.34	4.43	2499.75	4.42	2506.66	4.42	2508.64	4.42
2545.09	4.4	2568.25	4.4	2581.33	4.37	2583.53	4.37	2592.09	4.37
2599.67	4.38	2600.36	4.38	2621.96	4.38	2631.1	4.41	2660.4	4.35
2662.52	4.36	2663.28	4.37	2672.05	4.47	2698.83	4.79	2705.25	4.85
2711.59	4.9	2725.38	5.02	2737.27	5.17	2756.8	5.31	2775.71	5.37
2805.46	5.51	2814.14	5.55	2818.4	5.56	2844.36	5.64	2852.58	5.67

ExpandedLocal.rep

2854.94	5.68	2891.01	5.83	2900.42	5.86	2904.41	5.87	2929.45	5.95
2931.57	5.96	2953.88	6.03	2967.88	6.07	3000.46	6.18	3003.35	6.19
3006.32	6.19	3016.67	6.22	3044.71	6.31	3044.75	6.31	3071.06	6.35
3083.19	6.36	3102.37	6.38	3102.48	6.38	3121.62	6.29	3133.91	6.3
3157.88	6.32	3160.06	6.32	3188.98	6.4	3198.49	6.43	3201.23	6.43
3232.63	6.5	3236.93	6.51	3259.61	6.54	3271.02	6.56	3275.36	6.57
3300.17	6.63	3313.8	6.65	3349.64	6.52	3352.24	6.51	3361.29	6.49
3362.9	6.49	3384.19	6.42	3390.67	6.4	3399.11	6.45	3429.11	6.55
3448.58	6.63	3467.54	6.69	3493.16	6.71	3497.36	6.71	3498.05	6.71
3500.55	6.72	3505.98	6.73	3525.03	6.84	3533.59	6.89	3544.41	6.96
3547.52	6.95	3582.85	6.87	3596.99	6.85	3600.58	6.84	3610.5	6.83
3621.28	6.82	3646.46	6.79	3659.72	6.77	3695.93	6.73	3698.15	6.73
3700.6	6.72	3705.9	6.72	3723.64	6.7	3736.59	6.69	3745.4	6.68
3753.67	6.68	3775.02	6.66	3794.87	6.64	3813.46	6.62	3825.27	6.62
3836.81	6.61	3851.9	6.6	3878.21	6.6	3883.93	6.6	3890.33	6.6
3893.81	6.61	3928.77	6.62	3943.28	6.62	3949.96	6.63	3967.2	6.63
3992.75	6.63	4000.66	6.63	4005.64	6.62	4042.22	6.62	4044.07	6.62
4050.52	6.62	4063.12	6.62	4082.51	6.61	4091.69	6.61	4120.94	6.61
4141.16	6.61	4144.46	6.61	4159.38	6.61	4176.27	6.61	4190.63	6.61
4197.81	6.61	4200.71	6.61	4222.82	6.62	4236.25	6.62	4240.1	6.62
4274.68	6.63	4289.43	6.63	4289.57	6.63	4313.12	6.63	4339.04	6.71
4351.55	6.75	4386.78	6.87	4388.51	6.87	4389.99	6.88	4395.13	6.9
4402.58	6.94	4404.97	6.95	4428.42	7.06	4437.98	7.12	4466.86	7.31
4487.45	7.49	4505.3	7.64	4515.75	7.68	4530.2	7.74		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -405 .06 1431.43 .05 1551.86 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1431.43 1551.86 471 471 471 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -405 1087.44 5.2 F  
 2698.96 4530.2 7.35642 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 14363

INPUT

Description: Interpolated Section

Station Elevation Data num= 394  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*



ExpandedLocal.rep

-486	5.61	-474.44	5.61	-466.37	5.6	-450.58	5.56	-424.48	5.57
-423.16	5.57	-422.16	5.57	-409.14	5.57	-379.95	5.45	-370.28	5.41
-346.39	5.36	-343.85	5.35	-340.24	5.36	-336.73	5.37	-312.72	5.43
-293.52	5.47	-289.99	5.48	-285.2	5.48	-278.55	5.47	-270.63	5.44
-250.31	5.36	-230.17	5.29	-228.74	5.28	-213.26	5.22	-209.7	5.21
-207.09	5.2	-202.65	5.19	-194.86	5.16	-175.13	5.09	-163.88	5.05
-147.96	5	-129.41	4.95	-122.74	4.94	-120.66	4.94	-119.1	4.93
-92.58	4.9	-82.67	4.88	-77.45	4.88	-49.12	4.86	-43.32	4.86
-37.54	4.86	-34.23	4.85	-24.27	4.9	-17.32	4.93	-10.02	5.01
8.98	5.15	32.44	5.29	34.52	5.3	48.5	5.34	52.19	5.35
78.41	5.35	95.41	5.36	96.11	5.36	108.21	5.31	110.95	5.3
114.32	5.32	138.62	5.1	164.59	4.9	178.99	4.94	180.13	4.95
181.83	4.94	182.61	4.94	183.97	4.94	204.8	4.92	210.13	4.92
225.05	4.91	237.65	4.91	245.95	4.91	259.74	4.83	265.17	4.8
268.26	4.78	279.57	4.73	289.94	4.68	311.47	4.63	311.77	4.62
335.51	4.53	347.72	4.48	354.68	4.46	375.07	4.37	377.59	4.36
380.14	4.35	386.14	4.33	397.9	4.31	411.27	4.28	441.11	4.21
443.4	4.21	443.91	4.21	457.66	4.21	484.35	4.2	485.26	4.2
486.45	4.2	486.76	4.2	509.22	4.23	529.48	4.13	545.35	4.08
555.4	4.06	566.67	4	573.69	4.03	575.04	4.03	593.92	3.97
617.9	3.94	626.44	3.92	630.49	3.91	640.85	3.88	662.11	3.96
675.68	4	676.16	4	697.48	4.03	700.6	4.04	702.94	4.04
706.32	4.05	706.73	4.05	716.69	4.09	720.9	4.11	750.54	4.24
768.53	4.31	773.23	4.33	794.75	4.52	805.68	4.61	811.94	4.68
838.97	4.87	839.2	4.87	839.57	4.87	839.72	4.88	883.18	4.94
893.7	4.96	899.04	4.98	906.22	4.98	910.61	4.99	925.56	5.01
927.39	5	950.61	4.97	953.37	4.96	962.67	4.95	970.06	5
972.71	5.02	991.56	5.03	1005.1	5.04	1011.03	5.04	1015	5.05
1033.61	5.25	1039.21	5.31	1052	5.33	1060.01	5.35	1066.81	5.36
1085.26	5.36	1092.97	5.35	1098.95	5.34	1108.27	5.33	1115.44	5.31
1131.59	5.25	1133.93	5.25	1147.63	5.21	1174.9	5.09	1178.5	5.08
1178.96	5.07	1212.7	4.86	1215.87	4.82	1244.55	4.25	1248.73	4.17
1256.84	4.07	1261.65	4.01	1272.67	3.85	1289.7	3.62	1297.81	3.49
1317.34	3.15	1318.96	3.13	1338.77	2.9	1342.35	2.86	1366.37	2.53
1389.2	2.43	1424.71	2.09	1437.29	.53	1449.86	-.78	1459.76	-.84
1469.67	-.99	1509.29	-1.26	1521.57	-.76	1533.86	-.34	1535.75	-.3
1546.14	.54	1558.43	1.7	1577.34	2.26	1590.2	2.26	1615.83	2.37
1616.85	2.38	1619.14	2.38	1654.32	2.53	1656.26	2.53	1683.07	2.54
1692.96	2.56	1704.79	2.61	1731.6	2.88	1754	2.64	1770.25	2.58
1789.7	2.6	1791.1	2.6	1792.53	2.61	1808.89	2.71	1824.92	2.81
1847.54	3.01	1874.61	3.08	1886.18	3.06	1895.85	3.11	1897.19	3.12
1913.03	3.19	1924.83	3.22	1959.52	3.55	1963.47	3.61	1988.8	3.71
2002.12	3.37	2003.3	3.39	2015.13	3.5	2034.67	3.7	2040.14	3.71
2048.84	3.69	2072.62	3.47	2077.84	3.41	2096.07	3.5	2109.41	3.46
2115.54	3.44	2146.54	3.61	2151.38	3.71	2153.24	3.63	2157.29	3.65
2157.46	3.65	2190.95	3.68	2215.49	3.89	2218.85	3.91	2228.65	3.96
2244.24	3.98	2266.35	4.02	2279.43	3.94	2280.25	3.93	2304.05	3.89
2321.6	4.02	2341.64	4.16	2341.75	4.17	2341.93	4.17	2369.01	4.26

ExpandedLocal.rep

2379.46	4.27	2396.21	4.31	2401.57	4.31	2417.16	4.33	2423.42	4.33
2427.69	4.33	2428.06	4.33	2447.19	4.33	2453.68	4.33	2455.54	4.32
2489.71	4.31	2511.42	4.3	2523.69	4.28	2525.75	4.28	2533.78	4.28
2540.89	4.28	2541.54	4.28	2561.79	4.29	2570.36	4.31	2597.83	4.26
2599.82	4.26	2600.53	4.27	2608.76	4.36	2633.87	4.65	2639.89	4.7
2645.83	4.75	2658.75	4.85	2669.9	4.99	2688.22	5.12	2705.94	5.16
2733.85	5.29	2741.98	5.33	2745.97	5.34	2770.32	5.41	2778.02	5.43
2780.23	5.44	2814.06	5.58	2822.88	5.61	2826.61	5.62	2850.09	5.69
2852.08	5.7	2873	5.77	2886.13	5.8	2916.68	5.9	2919.38	5.91
2922.17	5.92	2931.88	5.94	2958.17	6.02	2958.21	6.02	2982.87	6.07
2994.25	6.07	3012.23	6.09	3012.34	6.09	3030.28	6.02	3041.8	6.03
3064.28	6.04	3066.32	6.04	3093.44	6.11	3102.36	6.14	3104.92	6.14
3134.37	6.2	3138.4	6.21	3159.66	6.25	3170.36	6.26	3174.44	6.27
3197.69	6.32	3210.47	6.34	3244.08	6.22	3246.51	6.22	3255	6.2
3256.51	6.19	3276.47	6.14	3282.55	6.12	3290.46	6.16	3318.59	6.25
3336.85	6.32	3354.63	6.38	3378.65	6.4	3382.58	6.4	3383.23	6.4
3385.57	6.4	3390.66	6.41	3408.53	6.52	3416.56	6.56	3426.7	6.62
3429.61	6.62	3462.74	6.54	3476	6.52	3479.37	6.52	3488.67	6.51
3498.78	6.5	3522.38	6.47	3534.82	6.46	3568.77	6.43	3570.85	6.42
3573.14	6.42	3578.12	6.42	3594.75	6.4	3606.89	6.4	3615.15	6.39
3622.91	6.38	3642.93	6.37	3661.54	6.36	3678.97	6.34	3690.04	6.34
3700.86	6.34	3715.01	6.33	3739.68	6.33	3745.05	6.33	3751.04	6.33
3754.31	6.34	3787.08	6.35	3800.69	6.36	3806.95	6.36	3823.12	6.37
3847.08	6.37	3854.49	6.37	3859.16	6.37	3893.46	6.36	3895.2	6.36
3901.24	6.36	3913.06	6.36	3931.23	6.36	3939.85	6.36	3967.27	6.37
3986.23	6.37	3989.33	6.37	4003.31	6.37	4019.15	6.37	4032.62	6.38
4039.35	6.38	4042.06	6.38	4062.8	6.38	4075.39	6.39	4079	6.39
4111.42	6.4	4125.26	6.4	4125.39	6.4	4147.46	6.4	4171.77	6.48
4183.5	6.51	4216.53	6.62	4218.15	6.62	4219.54	6.63	4224.36	6.65
4231.34	6.68	4233.59	6.69	4255.58	6.79	4264.54	6.85	4291.61	7.02
4310.92	7.18	4327.65	7.32	4337.45	7.36	4351	7.41		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****					
-486	.06	1424.71	.05	1558.43	.06

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1424.71	1558.43		470	470	470		.1	.3
Ineffective Flow			num=	2					
	Sta L	Sta R	Elev	Permanent					
	-486	1066.81	5.36	F					
	2934.35	4351	7.35571	F					

CROSS SECTION

RIVER: Doublon

REACH: to Marsh

RS: 13893

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-567	5.53	-554.99	5.53	-546.61	5.52	-530.2	5.48	-503.09	5.49
-501.71	5.49	-500.68	5.49	-487.15	5.49	-456.82	5.38	-446.78	5.34
-421.96	5.29	-419.32	5.28	-415.58	5.29	-411.92	5.3	-386.99	5.34
-367.03	5.38	-363.37	5.38	-358.4	5.38	-351.49	5.37	-343.25	5.34
-322.14	5.27	-301.22	5.2	-299.74	5.19	-283.65	5.13	-279.96	5.11
-277.25	5.11	-272.63	5.09	-264.54	5.07	-244.04	5	-232.36	4.95
-215.82	4.89	-196.54	4.85	-189.62	4.83	-187.46	4.83	-185.83	4.82
-158.28	4.78	-147.99	4.76	-142.57	4.76	-113.13	4.72	-107.11	4.72
-101.1	4.72	-97.67	4.72	-87.32	4.76	-80.1	4.79	-72.52	4.86
-52.78	4.99	-28.4	5.09	-26.24	5.11	-11.72	5.13	-7.89	5.14
19.36	5.11	37.01	5.11	37.74	5.11	50.31	5.05	53.16	5.04
56.66	5.05	81.9	4.84	108.89	4.66	123.84	4.7	125.03	4.7
126.8	4.69	127.61	4.7	129.02	4.7	150.66	4.67	156.19	4.67
171.69	4.66	184.78	4.67	193.41	4.66	207.74	4.59	213.37	4.57
216.59	4.55	228.33	4.51	239.11	4.47	261.48	4.43	261.78	4.43
286.45	4.35	299.13	4.32	306.37	4.3	327.55	4.23	330.16	4.22
332.82	4.21	339.04	4.2	351.27	4.18	365.16	4.16	396.16	4.11
398.54	4.1	399.07	4.1	413.35	4.1	441.08	4.1	442.02	4.1
443.26	4.1	443.58	4.1	466.91	4.13	487.96	4.04	504.45	4.01
514.88	3.99	526.6	3.95	533.89	3.99	535.29	3.99	554.91	3.96
579.81	3.98	588.69	3.97	592.9	3.96	603.66	3.96	625.75	4.05
639.85	4.1	640.34	4.11	662.5	4.16	665.73	4.17	668.16	4.17
671.68	4.18	672.1	4.18	682.45	4.23	686.82	4.25	717.62	4.39
736.3	4.46	741.18	4.48	763.54	4.68	774.9	4.77	781.41	4.83
809.48	4.99	809.72	4.99	810.11	5	810.26	5	855.41	5.07
866.34	5.09	871.89	5.1	879.34	5.11	883.91	5.12	899.44	5.14
901.35	5.14	925.47	5.12	928.33	5.11	937.99	5.11	945.67	5.16
948.42	5.18	968	5.2	982.08	5.21	988.23	5.22	992.35	5.22
1011.69	5.41	1017.5	5.46	1030.79	5.49	1039.12	5.51	1046.18	5.52
1065.34	5.53	1073.35	5.53	1079.58	5.52	1089.25	5.51	1096.7	5.49
1113.48	5.44	1115.92	5.43	1130.15	5.4	1158.48	5.28	1162.22	5.26
1162.69	5.26	1197.75	5.04	1201.04	5	1230.83	4.44	1235.18	4.35
1243.6	4.24	1248.6	4.18	1260.04	4	1277.74	3.75	1286.16	3.62
1306.45	3.25	1308.14	3.22	1328.72	2.95	1332.43	2.91	1357.39	2.54
1381.1	2.45	1418	2.12	1431.5	.67	1445	-.48	1456.17	-.54
1467.33	-.7	1512	-.93	1525.25	-.44	1538.5	-.05	1540.54	-.01
1551.75	.71	1565	1.76	1582.66	2.25	1594.66	2.26	1618.58	2.35
1619.53	2.35	1621.67	2.36	1654.51	2.49	1656.33	2.49	1681.35	2.5
1690.58	2.52	1701.63	2.56	1726.65	2.79	1747.56	2.58	1762.73	2.53
1780.89	2.55	1782.2	2.55	1783.53	2.56	1798.8	2.66	1813.77	2.76
1834.88	2.95	1860.15	3.02	1870.95	3.02	1879.98	3.07	1881.23	3.07

ExpandedLocal.rep

1896.01	3.15	1907.03	3.19	1939.41	3.5	1943.1	3.55	1966.74	3.66
1979.18	3.38	1980.28	3.39	1991.32	3.49	2009.56	3.67	2014.67	3.68
2022.79	3.67	2044.99	3.49	2049.86	3.44	2066.87	3.51	2079.33	3.47
2085.05	3.45	2113.99	3.6	2118.5	3.69	2120.25	3.62	2124.02	3.63
2124.18	3.63	2155.44	3.67	2178.36	3.85	2181.49	3.87	2190.64	3.91
2205.19	3.93	2225.83	3.97	2238.04	3.89	2238.8	3.89	2261.02	3.86
2277.41	3.97	2296.11	4.09	2296.22	4.09	2296.38	4.09	2321.66	4.18
2331.41	4.19	2347.05	4.22	2352.05	4.22	2366.6	4.23	2372.45	4.24
2376.44	4.24	2376.78	4.24	2394.64	4.23	2400.69	4.23	2402.43	4.23
2434.33	4.21	2454.6	4.21	2466.05	4.19	2467.98	4.18	2475.47	4.19
2482.11	4.19	2482.71	4.19	2501.62	4.2	2509.61	4.22	2535.26	4.17
2537.12	4.17	2537.78	4.18	2545.46	4.26	2568.9	4.51	2574.52	4.55
2580.06	4.59	2592.13	4.69	2602.54	4.81	2619.63	4.92	2636.18	4.96
2662.23	5.07	2669.82	5.1	2673.55	5.11	2696.27	5.18	2703.46	5.2
2705.52	5.21	2737.1	5.33	2745.34	5.36	2748.82	5.37	2770.74	5.44
2772.6	5.44	2792.12	5.5	2804.38	5.54	2832.9	5.62	2835.42	5.63
2838.02	5.64	2847.08	5.66	2871.63	5.74	2871.66	5.74	2894.69	5.78
2905.3	5.79	2922.09	5.8	2922.19	5.8	2938.95	5.74	2949.7	5.75
2970.68	5.77	2972.59	5.77	2997.9	5.83	3006.23	5.85	3008.62	5.86
3036.1	5.91	3039.87	5.92	3059.72	5.95	3069.71	5.96	3073.51	5.97
3095.22	6.01	3107.15	6.03	3138.51	5.93	3140.79	5.92	3148.71	5.91
3150.12	5.9	3168.76	5.85	3174.43	5.84	3181.81	5.88	3208.07	5.95
3225.11	6.02	3241.71	6.06	3264.13	6.08	3267.81	6.08	3268.41	6.08
3270.6	6.09	3275.35	6.1	3292.03	6.19	3299.52	6.23	3308.99	6.28
3311.71	6.28	3342.63	6.22	3355.01	6.2	3358.16	6.2	3366.84	6.19
3376.27	6.18	3398.31	6.16	3409.91	6.15	3441.61	6.12	3443.55	6.12
3445.69	6.12	3450.34	6.12	3465.87	6.11	3477.2	6.1	3484.91	6.1
3492.14	6.09	3510.84	6.08	3528.21	6.07	3544.48	6.06	3554.81	6.06
3564.92	6.06	3578.12	6.06	3601.15	6.07	3606.16	6.07	3611.76	6.07
3614.8	6.07	3645.4	6.09	3658.1	6.09	3663.95	6.1	3679.04	6.1
3701.4	6.11	3708.32	6.11	3712.68	6.11	3744.7	6.11	3746.32	6.11
3751.96	6.11	3763	6.11	3779.96	6.12	3788	6.12	3813.6	6.12
3831.3	6.13	3834.19	6.13	3847.24	6.13	3862.03	6.13	3874.6	6.14
3880.88	6.14	3883.42	6.14	3902.77	6.15	3914.52	6.15	3917.9	6.15
3948.16	6.17	3961.08	6.17	3961.2	6.17	3981.81	6.18	4004.5	6.24
4015.45	6.27	4046.28	6.37	4047.8	6.37	4049.09	6.38	4053.59	6.4
4060.11	6.43	4062.2	6.44	4082.73	6.53	4091.09	6.58	4116.37	6.73
4134.39	6.87	4150.01	7	4159.16	7.03	4171.81	7.08		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -567 .06 1418 .05 1565 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1418 1565 471 471 471 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent

ExpandedLocal.rep

-567 1065.34 5.53 F  
 3169.75 4171.81 7.355 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 13422

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-648	5.45	-635.54	5.45	-626.85	5.44	-609.82	5.41	-581.7	5.41
-580.27	5.41	-579.2	5.41	-565.17	5.41	-533.7	5.3	-523.29	5.27
-497.54	5.22	-494.79	5.22	-490.91	5.22	-487.12	5.23	-461.25	5.26
-440.55	5.28	-436.75	5.29	-431.59	5.28	-424.42	5.27	-415.88	5.24
-393.98	5.17	-372.28	5.1	-370.74	5.1	-354.05	5.04	-350.22	5.02
-347.4	5.01	-342.62	5	-334.22	4.97	-312.96	4.9	-300.83	4.85
-283.68	4.79	-263.68	4.74	-256.5	4.72	-254.25	4.72	-252.57	4.72
-223.98	4.67	-213.31	4.65	-207.68	4.64	-177.14	4.59	-170.9	4.59
-164.66	4.59	-161.1	4.58	-150.37	4.62	-142.87	4.66	-135.01	4.72
-114.53	4.83	-89.25	4.9	-87	4.91	-71.94	4.92	-67.96	4.93
-39.7	4.88	-21.39	4.86	-20.62	4.86	-7.59	4.79	-4.63	4.78
-1	4.78	25.19	4.59	53.18	4.42	68.7	4.45	69.93	4.45
71.76	4.44	72.6	4.45	74.07	4.45	96.51	4.43	102.25	4.43
118.33	4.42	131.91	4.42	140.87	4.42	155.73	4.35	161.57	4.33
164.91	4.32	177.1	4.29	188.27	4.26	211.48	4.23	211.8	4.23
237.39	4.18	250.55	4.15	258.05	4.14	280.03	4.09	282.74	4.08
285.49	4.07	291.95	4.06	304.63	4.06	319.04	4.04	351.2	4
353.67	4	354.22	4	369.04	4	397.8	3.99	398.78	3.99
400.07	3.99	400.4	3.99	424.61	4.02	446.44	3.95	463.55	3.93
474.37	3.93	486.52	3.89	494.09	3.95	495.54	3.95	515.9	3.95
541.73	4.01	550.94	4.02	555.3	4.02	566.47	4.03	589.39	4.15
604.01	4.21	604.53	4.21	627.51	4.28	630.87	4.29	633.39	4.3
637.04	4.31	637.48	4.31	648.21	4.37	652.75	4.39	684.69	4.54
704.08	4.61	709.14	4.64	732.34	4.83	744.11	4.92	750.87	4.98
779.99	5.11	780.24	5.12	780.64	5.12	780.81	5.12	827.64	5.19
838.99	5.21	844.74	5.23	852.47	5.24	857.21	5.25	873.32	5.27
875.3	5.27	900.32	5.27	903.29	5.27	913.31	5.27	921.28	5.32
924.14	5.34	944.45	5.37	959.05	5.39	965.44	5.39	969.71	5.4
989.77	5.57	995.8	5.62	1009.59	5.65	1018.22	5.67	1025.55	5.68
1045.43	5.7	1053.74	5.7	1060.2	5.69	1070.24	5.68	1077.97	5.67
1095.37	5.62	1097.9	5.62	1112.66	5.59	1142.05	5.46	1145.93	5.45
1146.42	5.45	1182.79	5.23	1186.2	5.19	1217.11	4.62	1221.62	4.54
1230.36	4.42	1235.54	4.35	1247.41	4.16	1265.78	3.88	1274.51	3.74
1295.56	3.35	1297.31	3.32	1318.66	3.01	1322.52	2.95	1348.41	2.55

ExpandedLocal.rep

1373.01	2.46	1411.29	2.16	1425.71	.82	1440.14	-.18	1452.57	-.23
1465	-.4	1514.71	-.59	1528.93	-.12	1543.14	.24	1545.33	.27
1557.36	.88	1571.57	1.83	1587.97	2.24	1599.12	2.25	1621.34	2.33
1622.22	2.33	1624.21	2.34	1654.7	2.44	1656.39	2.45	1679.63	2.46
1688.2	2.47	1698.46	2.51	1721.71	2.7	1741.12	2.52	1755.21	2.48
1772.08	2.49	1773.29	2.5	1774.53	2.5	1788.71	2.6	1802.61	2.7
1822.22	2.88	1845.69	2.96	1855.72	2.97	1864.1	3.02	1865.26	3.03
1878.99	3.11	1889.22	3.16	1919.3	3.45	1922.73	3.5	1944.68	3.61
1956.23	3.38	1957.25	3.39	1967.52	3.48	1984.45	3.65	1989.19	3.66
1996.74	3.66	2017.35	3.51	2021.88	3.46	2037.68	3.51	2049.24	3.47
2054.56	3.46	2081.44	3.59	2085.63	3.66	2087.25	3.6	2090.76	3.62
2090.9	3.62	2119.94	3.65	2141.22	3.81	2144.13	3.83	2152.62	3.87
2166.14	3.88	2185.31	3.91	2196.65	3.85	2197.36	3.85	2217.99	3.82
2233.21	3.91	2250.58	4.02	2250.68	4.02	2250.84	4.02	2274.31	4.09
2283.36	4.1	2297.89	4.12	2302.54	4.13	2316.05	4.14	2321.48	4.14
2325.18	4.14	2325.51	4.14	2342.09	4.14	2347.71	4.14	2349.32	4.13
2378.95	4.12	2397.78	4.12	2408.41	4.1	2410.2	4.09	2417.16	4.1
2423.32	4.1	2423.88	4.1	2441.44	4.1	2448.87	4.12	2472.68	4.08
2474.41	4.08	2475.03	4.09	2482.16	4.16	2503.93	4.37	2509.15	4.4
2514.3	4.44	2525.5	4.52	2535.17	4.62	2551.05	4.72	2566.41	4.76
2590.61	4.85	2597.66	4.88	2601.12	4.89	2622.22	4.95	2628.9	4.97
2630.82	4.97	2660.15	5.08	2667.8	5.1	2671.03	5.11	2691.39	5.18
2693.11	5.18	2711.25	5.24	2722.63	5.27	2749.11	5.35	2751.46	5.36
2753.88	5.36	2762.29	5.38	2785.08	5.45	2785.12	5.45	2806.5	5.49
2816.36	5.5	2831.95	5.51	2832.04	5.51	2847.61	5.46	2857.59	5.47
2877.07	5.49	2878.85	5.49	2902.36	5.54	2910.09	5.56	2912.31	5.57
2937.84	5.61	2941.33	5.62	2959.77	5.65	2969.05	5.66	2972.58	5.67
2992.74	5.7	3003.82	5.72	3032.95	5.63	3035.06	5.63	3042.42	5.61
3043.73	5.61	3061.04	5.57	3066.31	5.55	3073.17	5.59	3097.55	5.66
3113.38	5.71	3128.8	5.75	3149.62	5.77	3153.03	5.77	3153.59	5.77
3155.62	5.77	3160.04	5.78	3175.53	5.86	3182.49	5.9	3191.28	5.94
3193.81	5.94	3222.53	5.89	3234.02	5.88	3236.94	5.87	3245	5.87
3253.77	5.86	3274.23	5.85	3285.01	5.84	3314.45	5.82	3316.26	5.82
3318.24	5.82	3322.55	5.82	3336.98	5.81	3347.5	5.81	3354.66	5.8
3361.38	5.8	3378.74	5.8	3394.87	5.79	3409.99	5.78	3419.59	5.79
3428.97	5.78	3441.23	5.78	3462.62	5.8	3467.27	5.8	3472.47	5.8
3475.3	5.8	3503.72	5.82	3515.51	5.83	3520.94	5.83	3534.96	5.84
3555.73	5.85	3562.15	5.85	3566.2	5.85	3595.94	5.86	3597.45	5.86
3602.68	5.86	3612.93	5.86	3628.69	5.87	3636.16	5.87	3659.93	5.88
3676.37	5.88	3679.05	5.88	3691.18	5.89	3704.9	5.89	3716.58	5.9
3722.42	5.9	3724.77	5.9	3742.75	5.91	3753.66	5.92	3756.8	5.92
3784.91	5.93	3796.9	5.93	3797.01	5.93	3816.15	5.95	3837.22	6.01
3847.39	6.03	3876.03	6.12	3877.44	6.13	3878.64	6.13	3882.82	6.15
3888.87	6.17	3890.81	6.18	3909.88	6.26	3917.65	6.31	3941.12	6.44
3957.86	6.56	3972.37	6.67	3980.86	6.71	3992.61	6.75		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val

ExpandedLocal.rep

\*\*\*\*\*

-648 .06 1411.29 .05 1571.57 .06

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1411.29	1571.57		471	471	471		.1	.3
Ineffective Flow		num=	2						
Sta L	Sta R	Elev	Permanent						
-648	1045.43	5.7	F						
3405.14	3992.61	7.35428	F						

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 12951

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-729	5.37	-716.09	5.37	-707.09	5.36	-689.44	5.33	-660.31	5.33
-658.83	5.33	-657.72	5.33	-643.18	5.32	-610.58	5.23	-599.79	5.2
-573.11	5.15	-570.27	5.15	-566.24	5.15	-562.32	5.15	-535.51	5.17
-514.07	5.19	-510.13	5.19	-504.78	5.18	-497.36	5.17	-488.51	5.14
-465.82	5.08	-443.33	5.01	-441.74	5	-424.45	4.94	-420.47	4.93
-417.56	4.92	-412.6	4.91	-403.91	4.88	-381.87	4.8	-369.31	4.75
-351.53	4.69	-330.82	4.63	-323.37	4.62	-321.05	4.61	-319.3	4.61
-289.69	4.55	-278.62	4.53	-272.8	4.52	-241.16	4.46	-234.69	4.46
-228.23	4.45	-224.54	4.44	-213.42	4.49	-205.65	4.52	-197.51	4.58
-176.29	4.67	-150.09	4.71	-147.77	4.71	-132.16	4.72	-128.04	4.72
-98.76	4.64	-79.78	4.6	-78.99	4.6	-65.49	4.53	-62.42	4.51
-58.66	4.52	-31.53	4.33	-2.52	4.19	13.55	4.2	14.83	4.2
16.73	4.2	17.6	4.2	19.11	4.2	42.37	4.19	48.32	4.19
64.98	4.17	79.05	4.18	88.32	4.17	103.72	4.12	109.78	4.1
113.24	4.09	125.86	4.07	137.44	4.05	161.49	4.03	161.82	4.03
188.32	4	201.96	3.99	209.74	3.98	232.51	3.94	235.31	3.94
238.17	3.94	244.86	3.93	258	3.93	272.93	3.92	306.25	3.89
308.8	3.89	309.37	3.89	324.73	3.89	354.53	3.89	355.54	3.89
356.88	3.89	357.22	3.89	382.3	3.91	404.92	3.86	422.64	3.86
433.86	3.86	446.45	3.83	454.28	3.91	455.79	3.91	476.88	3.94
503.65	4.05	513.19	4.07	517.71	4.08	529.28	4.1	553.03	4.24
568.18	4.31	568.71	4.32	592.52	4.41	596	4.42	598.61	4.43
602.39	4.44	602.85	4.44	613.97	4.5	618.67	4.52	651.77	4.68
671.85	4.77	677.1	4.8	701.13	4.99	713.33	5.07	720.33	5.13
750.51	5.24	750.76	5.24	751.18	5.24	751.35	5.24	799.87	5.31
811.63	5.34	817.58	5.35	825.6	5.37	830.51	5.38	847.2	5.4
849.25	5.4	875.17	5.42	878.25	5.42	888.63	5.43	896.89	5.48

ExpandedLocal.rep

899.85	5.49	920.89	5.53	936.02	5.56	942.64	5.57	947.07	5.58
967.85	5.73	974.1	5.78	988.38	5.81	997.33	5.83	1004.92	5.84
1025.52	5.87	1034.13	5.87	1040.82	5.86	1051.22	5.86	1059.23	5.84
1077.26	5.81	1079.88	5.8	1095.17	5.77	1125.62	5.65	1129.64	5.64
1130.15	5.63	1167.83	5.41	1171.37	5.37	1203.39	4.81	1208.06	4.72
1217.12	4.6	1222.49	4.52	1234.79	4.31	1253.81	4.02	1262.86	3.87
1284.67	3.45	1286.49	3.41	1308.61	3.06	1312.6	3	1339.42	2.56
1364.91	2.47	1404.57	2.2	1419.93	.97	1435.29	.11	1448.98	.07
1462.67	-.1	1517.43	-.26	1532.61	.2	1547.79	.54	1550.12	.56
1562.96	1.05	1578.14	1.89	1593.28	2.23	1603.57	2.24	1624.09	2.31
1624.91	2.31	1626.74	2.31	1654.9	2.4	1656.45	2.4	1677.91	2.41
1685.82	2.42	1695.3	2.45	1716.76	2.62	1734.68	2.47	1747.69	2.43
1763.26	2.44	1764.38	2.44	1765.53	2.45	1778.62	2.55	1791.46	2.64
1809.56	2.81	1831.23	2.91	1840.49	2.92	1848.23	2.98	1849.3	2.98
1861.98	3.07	1871.42	3.12	1899.19	3.4	1902.36	3.44	1922.62	3.56
1933.29	3.38	1934.23	3.39	1943.71	3.47	1959.34	3.62	1963.72	3.64
1970.68	3.64	1989.72	3.53	1993.9	3.49	2008.49	3.52	2019.16	3.48
2024.08	3.47	2048.88	3.58	2052.76	3.64	2054.25	3.59	2057.49	3.6
2057.63	3.61	2084.43	3.64	2104.08	3.77	2106.77	3.79	2114.61	3.82
2127.09	3.83	2144.79	3.86	2155.26	3.8	2155.91	3.8	2174.96	3.78
2189.01	3.86	2205.05	3.95	2205.14	3.95	2205.29	3.95	2226.96	4.01
2235.32	4.01	2248.73	4.03	2253.02	4.04	2265.5	4.05	2270.51	4.05
2273.93	4.05	2274.23	4.05	2289.54	4.04	2294.73	4.04	2296.22	4.04
2323.57	4.03	2340.95	4.02	2350.77	4.01	2352.42	4	2358.84	4.01
2364.54	4.01	2365.05	4.01	2381.27	4.01	2388.12	4.02	2410.11	3.98
2411.71	3.99	2412.28	3.99	2418.86	4.05	2438.96	4.23	2443.78	4.26
2448.53	4.29	2458.88	4.36	2467.81	4.44	2482.46	4.52	2496.65	4.55
2518.99	4.63	2525.5	4.66	2528.69	4.66	2548.18	4.72	2554.34	4.73
2556.11	4.74	2583.19	4.83	2590.25	4.85	2593.24	4.86	2612.04	4.92
2613.63	4.92	2630.37	4.97	2640.88	5	2665.33	5.07	2667.5	5.08
2669.73	5.08	2677.5	5.11	2698.54	5.17	2698.57	5.17	2718.31	5.2
2727.42	5.21	2741.81	5.23	2741.9	5.23	2756.27	5.18	2765.48	5.19
2783.47	5.21	2785.11	5.21	2806.81	5.26	2813.96	5.28	2816.01	5.28
2839.58	5.32	2842.8	5.32	2859.82	5.35	2868.39	5.36	2871.65	5.36
2890.26	5.4	2900.5	5.41	2927.39	5.34	2929.34	5.33	2936.13	5.32
2937.34	5.32	2953.32	5.28	2958.19	5.27	2964.52	5.3	2987.03	5.36
3001.65	5.4	3015.88	5.44	3035.11	5.45	3038.26	5.45	3038.78	5.45
3040.65	5.46	3044.73	5.47	3059.03	5.53	3065.45	5.56	3073.57	5.6
3075.9	5.6	3102.42	5.56	3113.03	5.55	3115.73	5.55	3123.17	5.54
3131.26	5.54	3150.16	5.53	3160.11	5.53	3187.29	5.52	3188.96	5.52
3190.79	5.51	3194.77	5.51	3208.09	5.51	3217.8	5.51	3224.41	5.51
3230.62	5.51	3246.65	5.51	3261.54	5.51	3275.49	5.51	3284.36	5.51
3293.02	5.51	3304.34	5.51	3324.09	5.53	3328.39	5.53	3333.19	5.53
3335.8	5.53	3362.03	5.56	3372.93	5.56	3377.94	5.57	3390.88	5.58
3410.05	5.59	3415.99	5.59	3419.72	5.59	3447.18	5.6	3448.57	5.6
3453.41	5.61	3462.87	5.61	3477.42	5.62	3484.31	5.62	3506.26	5.63
3521.44	5.64	3523.92	5.64	3535.11	5.65	3547.78	5.65	3558.56	5.66
3563.95	5.66	3566.13	5.66	3582.72	5.67	3592.8	5.68	3595.69	5.68



ExpandedLocal.rep

3621.65	5.7	3632.72	5.7	3632.82	5.7	3650.49	5.72	3669.95	5.77
3679.34	5.79	3705.78	5.87	3707.08	5.88	3708.18	5.88	3712.04	5.9
3717.63	5.92	3719.43	5.93	3737.03	6	3744.2	6.04	3765.88	6.15
3781.33	6.26	3794.72	6.35	3802.57	6.38	3813.41	6.42		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-729	.06	1404.57	.05	1578.14	.06

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1404.57	1578.14		471	471	471		.1	.3
Ineffective Flow	num=		2						
Sta L	Sta R	Elev	Permanent						
-729	1025.52	5.87	F						
3640.53	3813.41	7.35357	F						

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 12480

INPUT

Description: Interpolated Section

Station Elevation Data		num=		394					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-810	5.29	-796.64	5.29	-787.32	5.28	-769.07	5.26	-738.92	5.25
-737.38	5.25	-736.24	5.25	-721.19	5.24	-687.45	5.16	-676.29	5.13
-648.68	5.08	-645.74	5.08	-641.58	5.08	-637.51	5.08	-609.78	5.09
-587.58	5.09	-583.51	5.09	-577.98	5.08	-570.29	5.07	-561.13	5.05
-537.65	4.98	-514.39	4.92	-512.74	4.91	-494.84	4.85	-490.73	4.84
-487.71	4.83	-482.58	4.81	-473.59	4.78	-450.78	4.71	-437.78	4.65
-419.39	4.59	-397.95	4.53	-390.25	4.51	-387.85	4.5	-386.04	4.5
-355.39	4.43	-343.94	4.41	-337.92	4.4	-305.17	4.33	-298.48	4.32
-291.79	4.32	-287.98	4.3	-276.47	4.35	-268.43	4.38	-260	4.44
-238.05	4.51	-210.93	4.51	-208.53	4.52	-192.38	4.51	-188.12	4.51
-157.81	4.4	-138.18	4.35	-137.36	4.35	-123.39	4.26	-120.22	4.25
-116.32	4.25	-88.25	4.08	-58.23	3.95	-41.6	3.96	-40.27	3.96
-38.31	3.95	-37.41	3.95	-35.84	3.95	-11.77	3.94	-5.62	3.94
11.62	3.93	26.18	3.93	35.78	3.93	51.72	3.88	57.98	3.87
61.56	3.86	74.62	3.85	86.61	3.84	111.49	3.84	111.83	3.84
139.26	3.82	153.37	3.82	161.42	3.82	184.98	3.8	187.89	3.8
190.84	3.8	197.77	3.8	211.36	3.8	226.81	3.8	261.29	3.79
263.94	3.79	264.53	3.79	280.42	3.79	311.26	3.79	312.31	3.78
313.68	3.79	314.04	3.79	339.99	3.81	363.4	3.77	381.74	3.79
393.35	3.8	406.38	3.77	414.48	3.87	416.04	3.87	437.87	3.93

ExpandedLocal.rep

465.57	4.08	475.44	4.11	480.12	4.13	492.09	4.18	516.66	4.34
532.34	4.42	532.89	4.42	557.53	4.53	561.13	4.55	563.83	4.56
567.75	4.57	568.22	4.58	579.73	4.64	584.59	4.66	618.84	4.83
639.62	4.92	645.05	4.95	669.93	5.14	682.55	5.22	689.79	5.28
721.02	5.36	721.28	5.36	721.72	5.36	721.89	5.36	772.1	5.44
784.27	5.46	790.43	5.48	798.73	5.5	803.81	5.51	821.08	5.54
823.2	5.54	850.03	5.57	853.21	5.57	863.96	5.59	872.5	5.63
875.56	5.65	897.34	5.7	912.99	5.73	919.84	5.74	924.42	5.75
945.93	5.9	952.4	5.93	967.18	5.97	976.44	5.99	984.29	6.01
1005.61	6.03	1014.52	6.04	1021.44	6.03	1032.2	6.03	1040.49	6.02
1059.15	5.99	1061.86	5.99	1077.69	5.96	1109.2	5.84	1113.36	5.82
1113.89	5.82	1152.88	5.59	1156.54	5.56	1189.68	4.99	1194.51	4.91
1203.87	4.77	1209.44	4.69	1222.16	4.47	1241.85	4.15	1251.21	3.99
1273.79	3.55	1275.66	3.51	1298.55	3.12	1302.69	3.05	1330.44	2.57
1356.82	2.48	1397.86	2.24	1414.14	1.11	1430.43	.41	1445.38	.38
1460.33	.2	1520.14	.07	1536.29	.52	1552.43	.83	1554.91	.84
1568.57	1.22	1584.71	1.95	1598.6	2.23	1608.03	2.23	1626.84	2.28
1627.59	2.28	1629.27	2.29	1655.09	2.36	1656.52	2.36	1676.19	2.37
1683.45	2.37	1692.13	2.4	1711.81	2.53	1728.24	2.41	1740.17	2.38
1754.45	2.39	1755.48	2.39	1756.53	2.4	1768.53	2.49	1780.3	2.59
1796.9	2.75	1816.76	2.85	1825.26	2.88	1832.35	2.93	1833.33	2.94
1844.96	3.04	1853.62	3.09	1879.08	3.35	1881.98	3.39	1900.57	3.51
1910.34	3.38	1911.21	3.39	1919.9	3.46	1934.24	3.6	1938.25	3.61
1944.63	3.62	1962.08	3.55	1965.92	3.51	1979.29	3.53	1989.08	3.49
1993.59	3.49	2016.33	3.57	2019.89	3.62	2021.26	3.58	2024.22	3.59
2024.35	3.59	2048.93	3.62	2066.94	3.73	2069.41	3.75	2076.6	3.77
2088.04	3.78	2104.27	3.8	2113.86	3.76	2114.46	3.76	2131.94	3.74
2144.82	3.81	2159.52	3.88	2159.61	3.88	2159.74	3.88	2179.61	3.92
2187.28	3.93	2199.57	3.94	2203.5	3.94	2214.94	3.95	2219.54	3.96
2222.67	3.96	2222.95	3.96	2236.99	3.95	2241.75	3.95	2243.11	3.95
2268.2	3.93	2284.13	3.93	2293.13	3.91	2294.64	3.91	2300.53	3.91
2305.75	3.92	2306.23	3.92	2321.09	3.92	2327.38	3.93	2347.54	3.89
2349	3.9	2349.53	3.9	2355.56	3.95	2373.99	4.09	2378.41	4.11
2382.77	4.13	2392.25	4.19	2400.44	4.26	2413.88	4.32	2426.89	4.35
2447.37	4.41	2453.34	4.43	2456.27	4.44	2474.13	4.49	2479.79	4.5
2481.41	4.5	2506.23	4.59	2512.71	4.6	2515.45	4.61	2532.68	4.66
2534.14	4.66	2549.49	4.71	2559.13	4.73	2581.55	4.8	2583.53	4.8
2585.58	4.81	2592.7	4.83	2612	4.88	2612.03	4.88	2630.13	4.91
2638.48	4.92	2651.67	4.94	2651.75	4.94	2664.93	4.91	2673.38	4.92
2689.87	4.94	2691.38	4.94	2711.27	4.97	2717.82	4.99	2719.7	4.99
2741.31	5.02	2744.27	5.03	2759.88	5.05	2767.73	5.06	2770.72	5.06
2787.79	5.09	2797.17	5.1	2821.83	5.04	2823.62	5.04	2829.85	5.03
2830.95	5.03	2845.61	5	2850.07	4.99	2855.87	5.01	2876.52	5.06
2889.92	5.1	2902.96	5.13	2920.59	5.14	2923.48	5.14	2923.96	5.14
2925.68	5.14	2929.41	5.15	2942.53	5.21	2948.42	5.23	2955.86	5.26
2958	5.26	2982.31	5.23	2992.04	5.23	2994.51	5.23	3001.34	5.22
3008.76	5.22	3026.08	5.22	3035.21	5.22	3060.13	5.21	3061.66	5.21
3063.34	5.21	3066.99	5.21	3079.2	5.21	3088.11	5.22	3094.17	5.22

ExpandedLocal.rep

3099.86	5.22	3114.55	5.22	3128.21	5.22	3141	5.23	3149.13	5.23
3157.07	5.23	3167.45	5.24	3185.56	5.26	3189.5	5.26	3193.9	5.26
3196.3	5.27	3220.35	5.29	3230.34	5.3	3234.93	5.3	3246.8	5.31
3264.38	5.32	3269.82	5.33	3273.25	5.33	3298.42	5.35	3299.7	5.35
3304.13	5.35	3312.8	5.36	3326.14	5.37	3332.46	5.37	3352.59	5.39
3366.51	5.4	3368.78	5.4	3379.04	5.41	3390.66	5.41	3400.55	5.42
3405.49	5.43	3407.48	5.43	3422.7	5.44	3431.94	5.45	3434.59	5.45
3458.39	5.47	3468.54	5.47	3468.63	5.47	3484.84	5.49	3502.68	5.53
3511.28	5.56	3535.52	5.63	3536.72	5.63	3537.73	5.63	3541.27	5.65
3546.4	5.66	3548.04	5.67	3564.18	5.73	3570.76	5.76	3590.63	5.86
3604.8	5.95	3617.08	6.03	3624.27	6.05	3634.22	6.08		

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
-810	.06	1397.86	.05	1584.71	.06			

Bank	Sta: Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1397.86	1584.71		471	471		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
-810	1014.52	6.04	F

CROSS SECTION

RIVER: Doublon  
 REACH: to Marsh RS: 12009

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-891	5.2	-877.19	5.21	-867.56	5.2	-848.69	5.18	-817.52	5.17
-815.94	5.17	-814.76	5.17	-799.2	5.16	-764.33	5.09	-752.79	5.06
-724.25	5.01	-721.21	5.01	-716.91	5.01	-712.71	5.01	-684.04	5
-661.1	4.99	-656.89	4.99	-651.17	4.98	-643.23	4.97	-633.76	4.95
-609.49	4.89	-585.44	4.82	-583.74	4.82	-565.24	4.76	-560.99	4.74
-557.87	4.74	-552.57	4.72	-543.27	4.69	-519.7	4.61	-506.26	4.55
-487.25	4.49	-465.09	4.42	-457.13	4.4	-454.64	4.39	-452.77	4.39
-421.1	4.32	-409.26	4.29	-403.03	4.28	-369.19	4.2	-362.27	4.19
-355.36	4.18	-351.41	4.16	-339.52	4.21	-331.21	4.25	-322.5	4.3
-299.8	4.35	-271.78	4.32	-269.29	4.32	-252.6	4.3	-248.19	4.3
-216.87	4.16	-196.57	4.1	-195.73	4.09	-181.29	4	-178.01	3.99
-173.98	3.99	-144.96	3.82	-113.94	3.71	-96.74	3.71	-95.37	3.71
-93.34	3.7	-92.41	3.71	-90.79	3.71	-65.91	3.7	-59.55	3.7
-41.73	3.68	-26.68	3.69	-16.76	3.68	-.29	3.64	6.19	3.64

ExpandedLocal.rep

9.89	3.63	23.39	3.63	35.77	3.63	61.5	3.64	61.85	3.64
90.2	3.65	104.79	3.65	113.11	3.66	137.46	3.66	140.46	3.66
143.52	3.66	150.67	3.66	164.73	3.67	180.7	3.68	216.34	3.68
219.07	3.68	219.68	3.68	236.11	3.68	267.98	3.68	269.07	3.68
270.49	3.68	270.86	3.68	297.68	3.7	321.88	3.68	340.84	3.71
352.84	3.73	366.3	3.72	374.68	3.83	376.29	3.83	398.85	3.92
427.49	4.12	437.69	4.16	442.53	4.19	454.91	4.25	480.3	4.43
496.51	4.53	497.07	4.53	522.54	4.65	526.27	4.67	529.06	4.69
533.1	4.71	533.59	4.71	545.49	4.77	550.51	4.8	585.92	4.98
607.4	5.08	613.01	5.11	638.72	5.3	651.77	5.38	659.25	5.43
691.53	5.48	691.81	5.48	692.25	5.48	692.43	5.49	744.34	5.56
756.91	5.59	763.28	5.6	771.85	5.62	777.11	5.64	794.96	5.67
797.15	5.67	824.88	5.72	828.17	5.73	839.28	5.75	848.11	5.79
851.28	5.81	873.78	5.86	889.96	5.9	897.04	5.92	901.78	5.93
924.01	6.06	930.7	6.09	945.97	6.13	955.54	6.15	963.67	6.17
985.7	6.2	994.91	6.21	1002.06	6.21	1013.18	6.2	1021.75	6.2
1041.04	6.18	1043.84	6.18	1060.2	6.15	1092.77	6.02	1097.07	6.01
1097.62	6.01	1137.92	5.77	1141.7	5.74	1175.96	5.18	1180.95	5.09
1190.63	4.95	1196.38	4.86	1209.54	4.62	1229.89	4.28	1239.56	4.12
1262.9	3.65	1264.84	3.61	1288.5	3.17	1292.77	3.1	1321.46	2.59
1348.72	2.5	1391.14	2.28	1408.36	1.26	1425.57	.71	1441.79	.68
1458	.5	1522.86	.4	1539.96	.84	1557.07	1.12	1559.7	1.13
1574.18	1.39	1591.29	2.01	1603.91	2.22	1612.49	2.22	1629.6	2.26
1630.28	2.26	1631.8	2.26	1655.28	2.32	1656.58	2.32	1674.47	2.32
1681.07	2.33	1688.97	2.34	1706.86	2.44	1721.81	2.35	1732.65	2.33
1745.64	2.33	1746.57	2.34	1747.53	2.34	1758.44	2.44	1769.14	2.53
1784.23	2.68	1802.3	2.8	1810.03	2.83	1816.48	2.88	1817.37	2.89
1827.94	3	1835.82	3.05	1858.97	3.3	1861.61	3.33	1878.51	3.46
1887.4	3.38	1888.19	3.39	1896.09	3.46	1909.13	3.57	1912.77	3.59
1918.58	3.6	1934.45	3.56	1937.94	3.53	1950.1	3.54	1959	3.5
1963.1	3.5	1983.78	3.56	1987.01	3.6	1988.26	3.57	1990.96	3.58
1991.07	3.58	2013.42	3.61	2029.8	3.7	2032.05	3.71	2038.58	3.72
2048.99	3.73	2063.74	3.75	2072.47	3.72	2073.02	3.71	2088.91	3.7
2100.62	3.75	2113.99	3.8	2114.07	3.81	2114.19	3.81	2132.26	3.84
2139.23	3.84	2150.41	3.85	2153.99	3.85	2164.39	3.86	2168.57	3.86
2171.42	3.86	2171.67	3.86	2184.44	3.85	2188.76	3.85	2190.01	3.85
2212.82	3.84	2227.3	3.83	2235.49	3.82	2236.87	3.82	2242.22	3.82
2246.97	3.82	2247.4	3.82	2260.92	3.82	2266.64	3.83	2284.97	3.8
2286.3	3.81	2286.77	3.81	2292.26	3.84	2309.02	3.95	2313.04	3.96
2317	3.98	2325.63	4.02	2333.07	4.07	2345.29	4.12	2357.12	4.14
2375.75	4.19	2381.18	4.21	2383.84	4.21	2400.09	4.25	2405.23	4.27
2406.7	4.27	2429.28	4.34	2435.17	4.35	2437.66	4.36	2453.33	4.4
2454.66	4.4	2468.62	4.44	2477.38	4.46	2497.77	4.52	2499.57	4.53
2501.43	4.53	2507.91	4.55	2525.46	4.59	2525.48	4.59	2541.94	4.62
2549.54	4.63	2561.54	4.65	2561.61	4.65	2573.59	4.63	2581.27	4.64
2596.27	4.66	2597.64	4.66	2615.73	4.69	2621.69	4.7	2623.4	4.7
2643.05	4.73	2645.74	4.73	2659.93	4.75	2667.07	4.76	2669.79	4.76
2685.31	4.78	2693.84	4.79	2716.27	4.75	2717.89	4.74	2723.56	4.74

ExpandedLocal.rep

2724.57	4.74	2737.89	4.72	2741.95	4.71	2747.23	4.73	2766	4.76
2778.18	4.79	2790.05	4.81	2806.08	4.82	2808.71	4.83	2809.14	4.83
2810.7	4.83	2814.1	4.83	2826.02	4.88	2831.38	4.9	2838.15	4.92
2840.1	4.92	2862.2	4.91	2871.05	4.9	2873.3	4.9	2879.51	4.9
2886.25	4.9	2902.01	4.9	2910.31	4.91	2932.97	4.91	2934.36	4.91
2935.89	4.91	2939.2	4.91	2950.31	4.92	2958.41	4.92	2963.92	4.93
2969.1	4.93	2982.46	4.94	2994.88	4.94	3006.51	4.95	3013.9	4.95
3021.12	4.96	3030.56	4.97	3047.03	4.99	3050.61	4.99	3054.61	5
3056.79	5	3078.67	5.02	3087.75	5.03	3091.93	5.04	3102.72	5.05
3118.71	5.06	3123.65	5.07	3126.77	5.07	3149.66	5.1	3150.82	5.1
3154.85	5.1	3162.74	5.11	3174.87	5.12	3180.62	5.13	3198.92	5.14
3211.57	5.15	3213.64	5.16	3222.97	5.16	3233.54	5.17	3242.53	5.18
3247.03	5.19	3248.84	5.19	3262.68	5.2	3271.08	5.21	3273.49	5.21
3295.13	5.23	3304.36	5.24	3304.45	5.24	3319.18	5.26	3335.4	5.3
3343.23	5.32	3365.27	5.38	3366.36	5.38	3367.28	5.38	3370.5	5.39
3375.16	5.41	3376.66	5.42	3391.33	5.47	3397.31	5.49	3415.38	5.57
3428.27	5.64	3439.44	5.71	3445.98	5.73	3455.02	5.75		

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
-891	.06	1391.14	.05	1591.29	.06			

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1391.14	1591.29		470	470	470	.1	.3	
Ineffective Flow			num=	1					
Sta L	Sta R	Elev	Permanent						
-891	994.91	6.21	F						

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 11539

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-972	5.12	-957.74	5.12	-947.8	5.12	-928.31	5.1	-896.13	5.09
-894.5	5.09	-893.27	5.09	-877.21	5.08	-841.21	5.01	-829.29	4.99
-799.83	4.95	-796.69	4.94	-792.24	4.94	-787.91	4.94	-758.3	4.92
-734.62	4.9	-730.27	4.9	-724.36	4.89	-716.16	4.87	-706.39	4.85
-681.33	4.79	-656.49	4.73	-654.73	4.72	-635.63	4.67	-631.25	4.65
-628.03	4.64	-622.55	4.63	-612.95	4.6	-588.61	4.51	-574.74	4.45
-555.11	4.39	-532.22	4.32	-524.01	4.29	-521.44	4.28	-519.51	4.28
-486.8	4.2	-474.58	4.18	-468.15	4.16	-433.2	4.07	-426.06	4.06

ExpandedLocal.rep

-418.92	4.04	-414.85	4.02	-402.57	4.07	-393.99	4.11	-384.99	4.16
-361.56	4.19	-332.62	4.13	-330.05	4.13	-312.82	4.09	-308.27	4.09
-275.93	3.93	-254.97	3.85	-254.1	3.84	-239.18	3.74	-235.8	3.73
-231.65	3.72	-201.68	3.57	-169.64	3.47	-151.89	3.46	-150.48	3.46
-148.38	3.45	-147.42	3.46	-145.74	3.46	-120.06	3.45	-113.49	3.45
-95.09	3.44	-79.55	3.44	-69.31	3.44	-52.3	3.41	-45.61	3.4
-41.79	3.4	-27.85	3.41	-15.06	3.42	11.5	3.44	11.86	3.44
41.14	3.47	56.2	3.49	64.79	3.5	89.94	3.52	93.03	3.52
96.19	3.52	103.58	3.53	118.09	3.55	134.58	3.55	171.38	3.58
174.21	3.58	174.83	3.58	191.79	3.58	224.71	3.58	225.83	3.58
227.3	3.58	227.68	3.58	255.38	3.6	280.36	3.58	299.94	3.64
312.32	3.67	326.23	3.66	334.88	3.78	336.54	3.79	359.84	3.91
389.4	4.15	399.94	4.21	404.93	4.24	417.72	4.33	443.94	4.53
460.67	4.63	461.26	4.63	487.56	4.78	491.4	4.8	494.28	4.82
498.46	4.84	498.96	4.84	511.25	4.91	516.44	4.94	552.99	5.13
575.17	5.23	580.97	5.27	607.51	5.45	620.99	5.53	628.72	5.58
662.04	5.6	662.33	5.61	662.79	5.61	662.98	5.61	716.57	5.68
729.55	5.71	736.13	5.73	744.98	5.75	750.4	5.77	768.83	5.8
771.1	5.8	799.73	5.87	803.13	5.88	814.6	5.91	823.72	5.95
826.99	5.96	850.23	6.03	866.94	6.07	874.25	6.09	879.14	6.11
902.09	6.22	908.99	6.25	924.77	6.29	934.65	6.31	943.04	6.33
965.78	6.37	975.29	6.38	982.68	6.38	994.17	6.38	1003.01	6.37
1022.93	6.36	1025.82	6.36	1042.71	6.34	1076.34	6.21	1080.78	6.19
1081.35	6.19	1122.96	5.95	1126.87	5.92	1162.24	5.36	1167.4	5.27
1177.39	5.12	1183.33	5.03	1196.91	4.78	1217.92	4.42	1227.92	4.24
1252.01	3.74	1254.01	3.7	1278.44	3.23	1282.85	3.15	1312.48	2.6
1340.63	2.51	1384.43	2.32	1402.57	1.41	1420.71	1.01	1438.19	.99
1455.67	.8	1525.57	.74	1543.64	1.16	1561.71	1.41	1564.49	1.41
1579.79	1.56	1597.86	2.08	1609.22	2.21	1616.95	2.21	1632.35	2.24
1632.96	2.24	1634.34	2.24	1655.47	2.27	1656.64	2.27	1672.75	2.28
1678.69	2.28	1685.8	2.29	1701.91	2.36	1715.37	2.29	1725.13	2.28
1736.82	2.28	1737.66	2.28	1738.52	2.29	1748.35	2.38	1757.99	2.47
1771.57	2.62	1787.84	2.74	1794.79	2.79	1800.6	2.84	1801.41	2.85
1810.92	2.96	1818.02	3.02	1838.86	3.25	1841.24	3.28	1856.45	3.41
1864.46	3.38	1865.16	3.39	1872.28	3.45	1884.02	3.55	1887.3	3.56
1892.53	3.58	1906.82	3.58	1909.96	3.56	1920.91	3.54	1928.92	3.51
1932.61	3.51	1951.23	3.55	1954.14	3.58	1955.26	3.56	1957.69	3.56
1957.8	3.56	1977.92	3.59	1992.67	3.66	1994.68	3.66	2000.57	3.68
2009.94	3.68	2023.22	3.69	2031.08	3.67	2031.57	3.67	2045.88	3.66
2056.42	3.7	2068.46	3.73	2068.53	3.73	2068.64	3.73	2084.91	3.75
2091.19	3.76	2101.25	3.76	2104.47	3.76	2113.84	3.76	2117.6	3.77
2120.17	3.77	2120.39	3.77	2131.89	3.76	2135.78	3.76	2136.9	3.76
2157.44	3.75	2170.48	3.74	2177.85	3.73	2179.09	3.73	2183.91	3.73
2188.19	3.73	2188.57	3.73	2200.74	3.73	2205.89	3.73	2222.4	3.71
2223.6	3.72	2224.02	3.72	2228.96	3.74	2244.05	3.8	2247.67	3.82
2251.24	3.83	2259.01	3.86	2265.71	3.89	2276.71	3.93	2287.36	3.94
2304.13	3.97	2309.01	3.99	2311.41	3.99	2326.04	4.02	2330.67	4.03
2332	4.04	2352.32	4.09	2357.63	4.1	2359.87	4.11	2373.98	4.14

ExpandedLocal.rep

2375.17	4.14	2387.74	4.18	2395.63	4.2	2413.98	4.24	2415.61	4.25
2417.28	4.25	2423.12	4.27	2438.91	4.31	2438.94	4.31	2453.76	4.33
2460.59	4.34	2471.4	4.36	2471.46	4.36	2482.25	4.35	2489.17	4.36
2502.67	4.38	2503.9	4.38	2520.19	4.4	2525.56	4.41	2527.09	4.41
2544.79	4.43	2547.21	4.44	2559.99	4.45	2566.42	4.46	2568.86	4.46
2582.84	4.48	2590.52	4.48	2610.71	4.45	2612.17	4.45	2617.27	4.44
2618.18	4.44	2630.17	4.43	2633.82	4.43	2638.58	4.44	2655.48	4.47
2666.45	4.49	2677.13	4.5	2691.57	4.51	2693.93	4.51	2694.32	4.51
2695.73	4.51	2698.79	4.52	2709.52	4.55	2714.35	4.56	2720.44	4.58
2722.19	4.58	2742.1	4.58	2750.06	4.58	2752.09	4.58	2757.67	4.58
2763.75	4.58	2777.93	4.59	2785.4	4.6	2805.8	4.61	2807.06	4.61
2808.43	4.61	2811.42	4.61	2821.42	4.62	2828.71	4.63	2833.68	4.63
2838.33	4.64	2850.37	4.65	2861.55	4.66	2872.02	4.67	2878.67	4.68
2885.18	4.68	2893.67	4.69	2908.5	4.72	2911.72	4.72	2915.33	4.73
2917.29	4.73	2936.98	4.76	2945.16	4.77	2948.92	4.77	2958.64	4.79
2973.03	4.8	2977.48	4.81	2980.29	4.81	3000.9	4.84	3001.94	4.84
3005.57	4.85	3012.68	4.86	3023.6	4.87	3028.77	4.88	3045.25	4.9
3056.64	4.91	3058.5	4.91	3066.91	4.92	3076.42	4.93	3084.51	4.94
3088.56	4.95	3090.19	4.95	3102.65	4.97	3110.21	4.98	3112.39	4.98
3131.87	5	3140.18	5.01	3140.26	5.01	3153.52	5.03	3168.13	5.06
3175.18	5.08	3195.02	5.13	3196	5.13	3196.83	5.13	3199.73	5.14
3203.92	5.16	3205.27	5.16	3218.48	5.2	3223.87	5.22	3240.14	5.28
3251.74	5.34	3261.79	5.38	3267.68	5.4	3275.82	5.42		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -972 .06 1384.43 .05 1597.86 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1384.43 1597.86 471 471 471 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 -972 975.29 6.38 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 11068

INPUT

Description: Interpolated Section  
 Station Elevation Data num= 394  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1053 5.04-1038.29 5.04-1028.03 5.04-1007.93 5.03 -974.74 5.01  
 -973.05 5.01 -971.79 5.01 -955.23 4.99 -918.08 4.94 -905.79 4.92

ExpandedLocal.rep

-875.4	4.88	-872.16	4.87	-867.58	4.87	-863.1	4.86	-832.57	4.83
-808.13	4.8	-803.65	4.8	-797.56	4.79	-789.1	4.77	-779.01	4.75
-753.16	4.7	-727.55	4.64	-725.73	4.63	-706.03	4.57	-701.51	4.56
-698.18	4.55	-692.54	4.53	-682.63	4.5	-657.53	4.42	-643.21	4.35
-622.96	4.28	-599.36	4.21	-590.88	4.18	-588.23	4.17	-586.24	4.17
-552.51	4.09	-539.9	4.06	-533.26	4.04	-497.22	3.94	-489.85	3.92
-482.49	3.91	-478.28	3.88	-465.62	3.94	-456.76	3.97	-447.49	4.02
-423.31	4.03	-393.47	3.93	-390.82	3.93	-373.04	3.89	-368.34	3.88
-334.98	3.69	-313.36	3.59	-312.46	3.59	-297.08	3.48	-293.59	3.47
-289.31	3.46	-258.39	3.31	-225.35	3.24	-207.03	3.22	-205.58	3.21
-203.41	3.2	-202.42	3.21	-200.7	3.21	-174.2	3.21	-167.42	3.21
-148.44	3.19	-132.41	3.2	-121.85	3.19	-104.3	3.17	-97.4	3.17
-93.46	3.17	-79.08	3.19	-65.89	3.21	-38.49	3.24	-38.12	3.24
-7.92	3.3	7.62	3.32	16.48	3.34	42.42	3.37	45.61	3.38
48.87	3.38	56.49	3.39	71.46	3.42	88.47	3.43	126.43	3.47
129.34	3.47	129.99	3.47	147.48	3.48	181.43	3.47	182.59	3.47
184.11	3.47	184.5	3.47	213.07	3.49	238.84	3.49	259.03	3.56
271.81	3.61	286.15	3.6	295.08	3.74	296.8	3.75	320.82	3.9
351.32	4.19	362.19	4.26	367.34	4.3	380.53	4.4	407.57	4.62
424.84	4.74	425.44	4.74	452.57	4.9	456.53	4.93	459.51	4.95
463.81	4.97	464.33	4.97	477	5.04	482.36	5.07	520.07	5.28
542.95	5.39	548.93	5.42	576.31	5.61	590.21	5.68	598.18	5.73
632.56	5.73	632.85	5.73	633.32	5.73	633.52	5.73	688.8	5.8
702.19	5.83	708.98	5.85	718.11	5.88	723.7	5.9	742.71	5.93
745.05	5.94	774.59	6.02	778.09	6.03	789.92	6.07	799.33	6.11
802.7	6.12	826.67	6.2	843.91	6.25	851.45	6.27	856.49	6.28
880.17	6.38	887.29	6.41	903.56	6.45	913.76	6.47	922.41	6.49
945.87	6.54	955.68	6.55	963.3	6.55	975.15	6.55	984.27	6.55
1004.81	6.55	1007.8	6.55	1025.23	6.53	1059.92	6.4	1064.5	6.38
1065.08	6.38	1108	6.14	1112.03	6.11	1148.52	5.54	1153.84	5.46
1164.15	5.3	1170.27	5.2	1184.29	4.93	1205.96	4.55	1216.27	4.37
1241.12	3.84	1243.19	3.8	1268.39	3.28	1272.94	3.19	1303.49	2.61
1332.53	2.52	1377.71	2.36	1396.79	1.55	1415.86	1.3	1434.6	1.29
1453.33	1.1	1528.29	1.07	1547.32	1.48	1566.36	1.71	1569.29	1.7
1585.39	1.73	1604.43	2.14	1614.54	2.21	1621.41	2.21	1635.1	2.22
1635.65	2.22	1636.87	2.22	1655.67	2.23	1656.71	2.23	1671.03	2.23
1676.31	2.23	1682.64	2.24	1696.96	2.27	1708.93	2.24	1717.61	2.23
1728.01	2.23	1728.76	2.23	1729.52	2.24	1738.26	2.33	1746.83	2.42
1758.91	2.55	1773.38	2.69	1779.56	2.74	1784.73	2.79	1785.44	2.8
1793.91	2.92	1800.21	2.98	1818.75	3.2	1820.86	3.22	1834.39	3.36
1841.51	3.39	1842.14	3.39	1848.47	3.44	1858.91	3.52	1861.83	3.54
1866.48	3.56	1879.18	3.6	1881.97	3.58	1891.71	3.55	1898.84	3.52
1902.12	3.52	1918.68	3.54	1921.27	3.55	1922.27	3.54	1924.43	3.55
1924.52	3.55	1942.41	3.58	1955.53	3.62	1957.32	3.62	1962.56	3.63
1970.89	3.63	1982.7	3.64	1989.69	3.63	1990.13	3.63	2002.85	3.63
2012.23	3.65	2022.93	3.66	2022.99	3.66	2023.09	3.66	2037.56	3.67
2043.14	3.67	2052.09	3.67	2054.96	3.67	2063.29	3.67	2066.63	3.67
2068.91	3.67	2069.11	3.67	2079.34	3.67	2082.8	3.66	2083.79	3.66



ExpandedLocal.rep

2102.06	3.65	2113.66	3.65	2120.21	3.64	2121.31	3.64	2125.6	3.64
2129.4	3.64	2129.75	3.64	2140.57	3.64	2145.15	3.64	2159.83	3.62
2160.89	3.62	2161.27	3.62	2165.67	3.63	2179.08	3.66	2182.3	3.67
2185.47	3.67	2192.38	3.69	2198.34	3.71	2208.13	3.73	2217.6	3.74
2232.51	3.76	2236.85	3.76	2238.99	3.76	2251.99	3.79	2256.11	3.8
2257.29	3.8	2275.37	3.84	2280.08	3.85	2282.08	3.86	2294.62	3.88
2295.69	3.88	2306.86	3.91	2313.88	3.93	2330.2	3.97	2331.65	3.97
2333.14	3.98	2338.32	3.99	2352.37	4.02	2352.39	4.02	2365.57	4.05
2371.65	4.06	2381.26	4.07	2381.32	4.07	2390.91	4.07	2397.06	4.09
2409.07	4.1	2410.16	4.11	2424.65	4.12	2429.42	4.12	2430.79	4.13
2446.52	4.14	2448.68	4.14	2460.04	4.15	2465.76	4.16	2467.93	4.16
2480.36	4.17	2487.19	4.17	2505.15	4.16	2506.45	4.15	2510.98	4.15
2511.79	4.15	2522.46	4.15	2525.7	4.15	2529.93	4.15	2544.96	4.17
2554.72	4.18	2564.22	4.19	2577.05	4.2	2579.16	4.2	2579.5	4.2
2580.75	4.2	2583.47	4.2	2593.02	4.22	2597.31	4.23	2602.73	4.24
2604.29	4.24	2621.99	4.25	2629.07	4.25	2630.87	4.26	2635.84	4.26
2641.24	4.26	2653.86	4.28	2660.5	4.28	2678.64	4.3	2679.76	4.3
2680.98	4.31	2683.64	4.31	2692.53	4.32	2699.02	4.33	2703.43	4.34
2707.57	4.35	2718.27	4.36	2728.21	4.38	2737.53	4.39	2743.45	4.4
2749.23	4.41	2756.79	4.42	2769.97	4.45	2772.84	4.45	2776.04	4.46
2777.79	4.46	2795.3	4.49	2802.57	4.5	2805.92	4.51	2814.56	4.52
2827.36	4.54	2831.32	4.55	2833.81	4.55	2852.14	4.59	2853.07	4.59
2856.3	4.6	2862.61	4.61	2872.33	4.62	2876.93	4.63	2891.58	4.65
2901.71	4.67	2903.37	4.67	2910.84	4.68	2919.3	4.69	2926.5	4.71
2930.1	4.71	2931.55	4.71	2942.63	4.73	2949.35	4.74	2951.28	4.74
2968.61	4.77	2976	4.78	2976.07	4.78	2987.87	4.8	3000.85	4.83
3007.12	4.84	3024.77	4.88	3025.64	4.88	3026.38	4.89	3028.96	4.89
3032.69	4.9	3033.89	4.91	3045.64	4.94	3050.43	4.95	3064.89	4.99
3075.21	5.03	3084.15	5.06	3089.39	5.07	3096.63	5.09		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1053 .06 1377.71 .05 1604.43 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1377.71 1604.43 471 471 471 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 -1053 955.68 6.55 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 10597

INPUT

ExpandedLocal.rep

Description:

Station Elevation Data num= 171									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1134	4.958	-1108.27	4.966	-1053.35	4.933	-1051.61	4.932	-1050.31	4.931
-994.96	4.867	-950.97	4.808	-942.91	4.798	-938.3	4.792	-906.83	4.746
-881.65	4.707	-870.75	4.689	-851.64	4.654	-825	4.601	-798.6	4.542
-768.34	4.458	-762.52	4.442	-752.31	4.409	-726.44	4.32	-711.69	4.253
-657.76	4.073	-655.03	4.063	-652.98	4.058	-618.21	3.974	-598.38	3.924
-553.64	3.79	-546.05	3.771	-541.72	3.741	-509.98	3.88	-485.07	3.871
-454.31	3.741	-428.42	3.665	-394.04	3.451	-371.76	3.339	-354.98	3.223
-315.11	3.057	-262.18	2.969	-258.45	2.955	-257.43	2.963	-255.65	2.964
-221.36	2.967	-201.8	2.948	-185.28	2.954	-156.31	2.932	-149.2	2.94
-145.14	2.945	-130.32	2.972	-88.49	3.047	-56.98	3.119	-40.97	3.157
-31.84	3.177	1.54	3.244	24.82	3.293	42.35	3.313	81.47	3.364
85.14	3.365	103.17	3.371	138.16	3.369	139.35	3.368	141.32	3.37
197.32	3.403	231.3	3.542	246.08	3.547	255.28	3.7	281.81	3.892
313.24	4.221	324.44	4.311	371.21	4.714	389	4.841	417.58	5.026
424.73	5.077	429.17	5.103	448.28	5.21	487.14	5.429	510.72	5.54
545.1	5.762	567.64	5.877	603.07	5.849	603.37	5.85	603.86	5.851
661.03	5.928	674.83	5.959	697	6.026	719	6.072	749.44	6.174
753.05	6.185	774.94	6.266	803.12	6.363	820.88	6.418	828.65	6.442
858.25	6.543	882.36	6.61	925.96	6.711	936.07	6.726	943.92	6.722
989.78	6.732	1007.74	6.716	1043.49	6.585	1048.81	6.566	1097.2	6.294
1134.8	5.729	1150.91	5.473	1157.22	5.368	1171.66	5.089	1204.62	4.495
1230.23	3.94	1258.33	3.336	1294.51	2.619	1371	2.4	1391	1.7
1411	1.6	1431	1.6	1451	1.4	1531	1.4	1551	1.8
1571	2	1591	1.9	1611	2.2	1719.85	2.175	1720.52	2.182
1769.48	2.754	1776.89	2.884	1819.12	3.394	1851.55	3.618	1868.76	3.527
1891.16	3.532	1918.39	3.582	1948.3	3.581	1968.03	3.593	2005.44	3.578
2017.66	3.577	2062.57	3.549	2067.29	3.547	2070.92	3.547	2098.52	3.532
2116.93	3.521	2119.71	3.521	2166.56	3.539	2202.54	3.601	2216.2	3.623
2246.42	3.693	2265.83	3.738	2291.12	3.781	2315.47	3.828	2348.26	3.844
2365.1	3.861	2405.4	3.86	2414.74	3.863	2462.54	3.882	2464.38	3.882
2465.78	3.883	2476.52	3.895	2509.66	3.932	2514.01	3.937	2553.53	4.003
2563.64	4.025	2576.81	4.057	2613.28	4.131	2633.95	4.186	2662.91	4.246
2685.15	4.289	2712.55	4.358	2748.23	4.427	2762.18	4.454	2772.9	4.477
2811.82	4.547	2854.52	4.634	2861.45	4.648	2862.5	4.65	2911.09	4.747
2917.43	4.757								

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
-1134	.06	1371	.05	1611	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1371	1611		97	97	.1	.3
Ineffective Flow			num=	1			

ExpandedLocal.rep

Sta L Sta R Elev Permanent  
 -1134 988.78 6.732 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 10500

INPUT

Description:

Station Elevation Data num= 79

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
871	4.956	871.306	4.953	908.698	4.602	919.654	4.5	919.917	4.495
968.88	3.866	1015.595	3.243	1018.106	3.203	1063.692	2.542	1067.332	2.502
1111.788	2.252	1116.558	2.227	1159.885	2.008	1195.77	2.33	1209.87	1.8
1216.37	1.61	1232.14	1.56	1236.96	1.52	1247.72	1.48	1257.56	1.48
1263.31	1.42	1278.15	1.37	1354.31	1.37	1370.47	1.62	1374.71	1.7
1395.12	1.88	1412.49	1.8	1415.52	1.8	1435.92	2.141	1488.461	1.664
1496.984	1.678	1528.893	1.741	1547.791	1.776	1579.737	1.852	1598.598	1.9
1609.756	1.941	1649.405	2.062	1650.188	2.065	1653.237	2.077	1690.619	2.219
1700.212	2.245	1731.051	2.366	1751.02	2.456	1771.483	2.534	1801.827	2.583
1811.914	2.615	1851.225	2.732	1852.346	2.735	1852.634	2.736	1892.778	2.858
1903.441	2.893	1933.209	2.971	1954.248	3.032	1973.641	3.071	2005.055	3.147
2014.072	3.163	2049.213	3.241	2054.504	3.252	2055.862	3.256	2058.157	3.263
2106.669	3.398	2135.367	3.503	2157.476	3.588	2194.848	3.767	2208.283	3.829
2216.231	3.868	2247.202	4.034	2259.09	4.099	2297.094	4.312	2309.897	4.379
2331.539	4.523	2360.704	4.665	2377.957	4.766	2411.511	4.961	2418.389	5
2445.19	5.149	2458.82	5.225	2462.318	5.244	2464.514	5.257		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
871	.06	1195.77	.05	1435.92	.06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1195.77 1435.92 392 392 392 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 10108

INPUT

Description:

Station Elevation Data num= 79

ExpandedLocal.rep

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
871	4.956	871.306	4.953	908.698	4.602	919.654	4.5	919.917	4.495
968.88	3.866	1015.595	3.243	1018.106	3.203	1063.692	2.542	1067.332	2.502
1111.788	2.252	1116.558	2.227	1159.885	2.008	1195.77	2.33	1209.87	1.8
1216.37	1.61	1232.14	1.56	1236.96	1.52	1247.72	1.48	1257.56	1.48
1263.31	1.42	1278.15	1.27	1354.31	1.27	1370.47	1.62	1374.71	1.7
1395.12	1.88	1412.49	1.8	1415.52	1.8	1435.92	2.141	1488.461	1.664
1496.984	1.678	1528.893	1.741	1547.791	1.776	1579.737	1.852	1598.598	1.9
1609.756	1.941	1649.405	2.062	1650.188	2.065	1653.237	2.077	1690.619	2.219
1700.212	2.245	1731.051	2.366	1751.02	2.456	1771.483	2.534	1801.827	2.583
1811.914	2.615	1851.225	2.732	1852.346	2.735	1852.634	2.736	1892.778	2.858
1903.441	2.893	1933.209	2.971	1954.248	3.032	1973.641	3.071	2005.055	3.147
2014.072	3.163	2049.213	3.241	2054.504	3.252	2055.862	3.256	2058.157	3.263
2106.669	3.398	2135.367	3.503	2157.476	3.588	2194.848	3.767	2208.283	3.829
2216.231	3.868	2247.202	4.034	2259.09	4.099	2297.094	4.312	2309.897	4.379
2331.539	4.523	2360.704	4.665	2377.957	4.766	2411.511	4.961	2418.389	5
2445.19	5.149	2458.82	5.225	2462.318	5.244	2464.514	5.257		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
871	.06	1195.77	.05	1435.92	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1195.77	1435.92		489	489	.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 9619

INPUT

Description: Interpolated Section

Station Elevation Data		num= 155		Sta	Elev	Sta	Elev	Sta	Elev
860.8	4.75	861.13	4.75	875.91	4.63	883.08	4.56	889.72	4.5
901.51	4.4	913.34	4.3	913.63	4.3	921.07	4.22	926.32	4.16
959.07	3.77	966.51	3.69	994.4	3.36	997.06	3.33	1016.96	3.08
1019.67	3.04	1033.89	2.85	1035.06	2.83	1036.13	2.82	1064.45	2.43
1068.9	2.39	1072.83	2.35	1120.84	2.17	1125.99	2.15	1172.79	1.99
1211.54	2.26	1226.05	1.68	1232.73	1.52	1248.96	1.5	1253.92	1.44
1264.99	1.36	1275.12	1.36	1281.03	1.3	1296.3	1.14	1368.62	1.14
1385.1	1.52	1389.42	1.6	1410.23	1.76	1427.95	1.69	1431.04	1.7
1451.84	2.07	1469.05	1.91	1476.31	1.86	1503.98	1.69	1510.74	1.64
1519	1.66	1520.3	1.66	1538.92	1.7	1556.07	1.72	1561.7	1.73

ExpandedLocal.rep

1573.85	1.75	1577.25	1.75	1604.4	1.81	1608.79	1.82	1613.06	1.82
1628.52	1.85	1634.21	1.86	1643.72	1.89	1646.72	1.91	1662.43	2
1670.14	2.05	1679.44	2.08	1691.16	2.17	1692.04	2.17	1695.46	2.2
1696.91	2.21	1716.07	2.34	1723.67	2.39	1737.37	2.48	1744.31	2.52
1748.12	2.55	1752.7	2.58	1777.21	2.73	1782.69	2.76	1789.33	2.8
1805.08	2.88	1815.59	2.93	1825.96	2.98	1828.01	2.98	1830.74	2.99
1843.73	3.02	1862.03	3.07	1862.59	3.07	1873.34	3.1	1873.59	3.11
1899.22	3.18	1917.41	3.24	1918.66	3.24	1918.99	3.24	1931.59	3.28
1935.85	3.29	1943.16	3.31	1963.99	3.37	1972.48	3.4	1975.94	3.41
1989.58	3.45	2009.11	3.5	2009.31	3.5	2032.9	3.57	2042.58	3.59
2045.74	3.59	2047.58	3.6	2054.64	3.61	2082.37	3.68	2089.85	3.7
2099.96	3.72	2105.58	3.73	2119	3.76	2125.19	3.78	2139.35	3.81
2142	3.81	2145.29	3.82	2146.81	3.82	2149.38	3.83	2155.63	3.84
2162.51	3.86	2201.09	3.95	2201.98	3.95	2203.76	3.96	2225.84	4.02
2235.93	4.05	2249.7	4.09	2250.59	4.1	2260.72	4.13	2298.31	4.27
2299.2	4.27	2302.61	4.28	2317.67	4.34	2326.58	4.37	2346.91	4.45
2347.81	4.46	2361.3	4.52	2374.63	4.57	2395.52	4.67	2396.41	4.67
2417.23	4.77	2431.58	4.83	2444.13	4.89	2444.58	4.89	2445.02	4.89
2455.85	4.94	2488.54	5.1	2492.74	5.12	2493.63	5.12	2507.88	5.18
2541.35	5.32	2542.24	5.32	2545.5	5.33	2553.21	5.36	2583.25	5.48
2589.95	5.51	2590.85	5.51	2598.53	5.54	2602.45	5.56	2604.91	5.57

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 860.8 .06 1211.54 .048 1451.84 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1211.54 1451.84 489 489 489 .1 .3

CROSS SECTION

RIVER: Doubloun  
 REACH: to Marsh RS: 9130

INPUT

Description: Interpolated Section

Station Elevation Data num= 156

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
850.6	4.55	850.95	4.55	866.83	4.44	874.52	4.36	881.66	4.3
894.33	4.2	907.04	4.1	907.34	4.1	915.33	4.03	920.97	3.97
956.14	3.59	964.13	3.51	994.09	3.19	996.95	3.16	1018.32	2.91
1021.23	2.87	1036.51	2.69	1037.76	2.67	1038.91	2.66	1069.33	2.26
1074.11	2.23	1078.33	2.21	1129.9	2.09	1135.43	2.07	1185.69	1.97
1227.31	2.19	1242.23	1.56	1249.09	1.43	1249.1	1.43	1265.78	1.44
1270.88	1.37	1282.27	1.24	1292.68	1.23	1298.76	1.18	1314.46	1.02

ExpandedLocal.rep

1382.93	1.02	1399.73	1.43	1404.13	1.49	1425.34	1.64	1443.41	1.58
1446.56	1.6	1467.77	2.01	1486.83	1.81	1494.87	1.78	1525.53	1.65
1533.03	1.62	1542.18	1.64	1543.61	1.64	1564.24	1.68	1583.24	1.7
1589.49	1.71	1602.95	1.73	1606.71	1.73	1636.79	1.78	1641.65	1.79
1646.39	1.79	1663.52	1.82	1669.82	1.83	1680.36	1.85	1683.68	1.88
1701.09	2.02	1709.63	2.09	1719.94	2.14	1732.92	2.27	1733.89	2.28
1737.68	2.32	1739.28	2.33	1760.52	2.53	1768.94	2.61	1784.11	2.75
1791.8	2.81	1796.03	2.85	1801.1	2.9	1828.26	3.11	1834.33	3.16
1841.69	3.21	1859.13	3.31	1870.78	3.37	1882.27	3.43	1884.55	3.43
1887.57	3.44	1901.96	3.48	1922.23	3.55	1922.85	3.55	1934.76	3.59
1935.04	3.59	1963.44	3.68	1983.59	3.74	1984.98	3.75	1985.34	3.75
1999.3	3.79	2004.02	3.8	2012.12	3.82	2035.2	3.89	2044.6	3.92
2048.44	3.93	2063.55	3.97	2085.19	4.03	2085.41	4.03	2111.55	4.1
2122.27	4.13	2125.77	4.13	2127.81	4.14	2135.63	4.16	2166.35	4.24
2174.65	4.26	2185.85	4.28	2192.07	4.29	2206.94	4.33	2213.8	4.34
2229.49	4.37	2232.43	4.38	2236.07	4.38	2237.75	4.39	2240.6	4.39
2247.52	4.41	2255.15	4.42	2297.9	4.51	2298.88	4.51	2300.86	4.52
2325.32	4.57	2336.5	4.6	2351.75	4.64	2352.74	4.64	2363.96	4.67
2405.61	4.79	2406.59	4.79	2410.38	4.8	2427.06	4.84	2436.94	4.87
2459.46	4.94	2460.45	4.95	2475.4	5	2490.17	5.05	2513.32	5.13
2514.3	5.14	2537.37	5.22	2553.27	5.28	2567.17	5.33	2567.67	5.34
2568.16	5.34	2580.15	5.39	2616.38	5.53	2621.03	5.55	2622.02	5.55
2637.8	5.6	2674.88	5.69	2675.87	5.69	2679.48	5.7	2688.02	5.73
2721.31	5.82	2728.74	5.84	2729.73	5.84	2738.24	5.86	2742.58	5.87
2745.31	5.88								

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 850.6 .06 1227.31 .046 1467.77 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1227.31 1467.77 489 489 489 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 8641

INPUT

Description: Interpolated Section  
 Station Elevation Data num= 157  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 840.4 4.35 840.78 4.35 857.75 4.24 865.97 4.16 873.6 4.09  
 887.14 4 900.73 3.91 901.05 3.9 909.6 3.84 915.62 3.78  
 953.22 3.4 961.76 3.32 993.78 3.03 996.84 3 1019.68 2.75

ExpandedLocal.rep

1022.8	2.71	1039.13	2.52	1040.46	2.51	1041.7	2.5	1074.21	2.09
1079.32	2.07	1083.83	2.06	1138.95	2	1144.87	2	1198.59	1.95
1243.08	2.11	1258.4	1.44	1265.46	1.33	1265.47	1.33	1282.61	1.39
1287.85	1.29	1299.54	1.13	1310.23	1.11	1316.48	1.05	1332.61	.89
1397.23	.89	1414.35	1.33	1418.85	1.39	1440.46	1.53	1440.47	1.53
1458.87	1.46	1462.08	1.49	1483.69	1.94	1504.61	1.72	1513.44	1.69
1547.09	1.62	1555.31	1.6	1565.35	1.62	1566.92	1.62	1589.56	1.66
1610.42	1.68	1617.27	1.69	1632.04	1.71	1636.18	1.71	1669.19	1.75
1674.52	1.76	1679.72	1.76	1698.51	1.78	1705.43	1.79	1716.99	1.81
1720.64	1.84	1739.75	2.04	1749.12	2.13	1760.43	2.19	1774.68	2.37
1775.75	2.39	1779.9	2.44	1781.66	2.46	1804.97	2.72	1814.21	2.83
1830.86	3.01	1839.3	3.1	1843.93	3.15	1849.5	3.22	1879.3	3.49
1885.97	3.55	1894.04	3.62	1913.19	3.74	1925.97	3.81	1938.58	3.87
1941.08	3.88	1944.4	3.89	1960.19	3.95	1982.44	4.03	1983.12	4.04
1996.19	4.08	1996.49	4.08	2027.66	4.18	2049.77	4.25	2051.3	4.25
2051.69	4.25	2067.01	4.3	2072.19	4.31	2081.08	4.33	2106.41	4.41
2116.73	4.44	2120.94	4.45	2137.53	4.49	2161.27	4.56	2161.52	4.56
2190.19	4.64	2201.97	4.66	2205.81	4.67	2208.05	4.68	2216.63	4.7
2250.34	4.79	2259.45	4.81	2271.74	4.84	2278.56	4.85	2294.88	4.89
2302.41	4.91	2319.64	4.94	2322.85	4.94	2326.85	4.95	2328.7	4.95
2331.83	4.96	2339.42	4.97	2347.79	4.99	2394.7	5.07	2395.79	5.07
2397.95	5.07	2424.79	5.12	2437.07	5.15	2453.8	5.18	2454.89	5.19
2467.2	5.21	2512.91	5.3	2513.99	5.31	2518.14	5.31	2536.46	5.35
2547.29	5.38	2572.01	5.43	2573.09	5.44	2589.5	5.48	2605.71	5.53
2631.11	5.6	2632.2	5.6	2657.51	5.68	2674.96	5.73	2690.21	5.78
2690.76	5.78	2691.3	5.78	2704.46	5.83	2744.21	5.96	2749.32	5.98
2750.4	5.98	2767.73	6.01	2808.42	6.07	2809.5	6.07	2813.46	6.08
2822.84	6.09	2859.37	6.15	2867.52	6.16	2868.61	6.16	2877.95	6.18
2882.72	6.18	2885.71	6.19						

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 840.4 .06 1243.08 .04 1483.69 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1243.08 1483.69 489 489 489 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 8152

INPUT

Description: Interpolated Section  
 Station Elevation Data num= 157  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

ExpandedLocal.rep

\*\*\*\*\*

830.2	4.15	830.6	4.14	848.67	4.05	857.42	3.95	865.54	3.89
879.96	3.8	894.42	3.71	894.76	3.71	903.86	3.65	910.27	3.59
950.29	3.22	959.39	3.14	993.47	2.87	996.73	2.84	1021.04	2.58
1024.36	2.55	1041.74	2.36	1043.16	2.35	1044.48	2.33	1079.09	1.92
1084.53	1.91	1089.33	1.91	1148.01	1.92	1154.3	1.92	1211.49	1.93
1258.85	2.04	1274.58	1.32	1281.82	1.24	1281.83	1.24	1299.43	1.33
1304.81	1.22	1316.81	1.01	1327.79	.98	1334.21	.93	1350.77	.77
1411.54	.77	1428.98	1.24	1433.56	1.28	1455.57	1.41	1455.58	1.41
1474.33	1.35	1477.6	1.39	1499.62	1.88	1522.39	1.62	1532	1.61
1568.64	1.59	1577.59	1.59	1588.53	1.6	1590.24	1.6	1614.89	1.65
1637.59	1.66	1645.05	1.67	1661.14	1.69	1665.64	1.69	1701.58	1.72
1707.38	1.73	1713.05	1.74	1733.51	1.75	1741.04	1.75	1753.63	1.76
1757.6	1.81	1778.41	2.05	1788.61	2.17	1800.92	2.25	1816.44	2.47
1817.6	2.49	1822.13	2.56	1824.04	2.59	1849.41	2.91	1859.48	3.04
1877.6	3.27	1886.8	3.39	1891.84	3.46	1897.91	3.53	1930.35	3.87
1937.61	3.95	1946.4	4.03	1967.24	4.16	1981.16	4.25	1994.89	4.32
1997.61	4.33	2001.22	4.34	2018.42	4.41	2042.64	4.52	2043.38	4.52
2057.61	4.57	2057.94	4.57	2091.87	4.68	2115.95	4.75	2117.62	4.76
2118.04	4.76	2134.72	4.81	2140.37	4.82	2150.04	4.85	2177.62	4.92
2188.86	4.95	2193.44	4.97	2211.5	5.02	2237.35	5.08	2237.62	5.09
2268.84	5.17	2281.66	5.2	2285.84	5.21	2288.28	5.22	2297.62	5.24
2334.33	5.34	2344.24	5.36	2357.63	5.39	2365.06	5.41	2382.83	5.45
2391.03	5.47	2409.78	5.5	2413.28	5.51	2417.63	5.51	2419.64	5.52
2423.05	5.52	2431.32	5.54	2440.43	5.55	2491.51	5.63	2492.69	5.63
2495.04	5.63	2524.27	5.67	2537.63	5.7	2555.86	5.73	2557.04	5.73
2570.45	5.75	2620.21	5.82	2621.39	5.82	2625.91	5.83	2645.85	5.86
2657.64	5.88	2684.56	5.92	2685.74	5.92	2703.6	5.96	2721.25	6
2748.91	6.06	2750.09	6.06	2777.65	6.14	2796.65	6.18	2813.26	6.23
2813.85	6.23	2814.44	6.23	2828.76	6.27	2872.05	6.4	2877.6	6.41
2878.79	6.42	2897.65	6.42	2941.95	6.44	2943.14	6.44	2947.45	6.45
2957.65	6.46	2997.43	6.48	3006.3	6.49	3007.49	6.49	3017.66	6.49
3022.85	6.49	3026.11	6.5						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
830.2	.06	1258.85	.04	1499.62	.06

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1258.85	1499.62		489	489	.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 7663



ExpandedLocal.rep

INPUT

Description:

Station Elevation Data

num= 94

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
820	3.945	839.588	3.853	848.873	3.751	857.479	3.683	898.121	3.456
904.924	3.4	947.369	3.034	993.167	2.703	996.617	2.674	1044.36	2.197
1045.865	2.184	1047.26	2.171	1083.968	1.751	1274.62	1.97	1290.76	1.2
1298.19	1.15	1316.25	1.27	1321.77	1.14	1334.09	.89	1345.35	.86
1351.93	.81	1368.92	.64	1425.85	.64	1443.61	1.14	1448.27	1.18
1470.69	1.29	1489.79	1.24	1493.12	1.29	1515.54	1.81	1540.172	1.53
1550.565	1.526	1590.191	1.552	1611.7	1.582	1640.211	1.634	1672.835	1.649
1690.23	1.666	1733.97	1.696	1740.249	1.706	1768.507	1.711	1790.268	1.722
1817.064	2.072	1828.094	2.214	1841.415	2.299	1866.42	2.714	1893.861	3.096
1904.746	3.262	1934.292	3.679	1946.307	3.853	1981.398	4.254	1998.753	4.444
2036.355	4.685	2051.199	4.773	2058.05	4.788	2076.646	4.873	2103.645	5.002
2119.395	5.063	2156.092	5.178	2202.435	5.315	2208.538	5.33	2219	5.357
2260.984	5.472	2285.474	5.541	2313.43	5.613	2361.354	5.741	2365.876	5.753
2368.514	5.762	2418.322	5.892	2451.554	5.972	2470.769	6.018	2479.637	6.034
2503.708	6.072	2523.215	6.105	2533.07	6.117	2588.312	6.188	2589.589	6.189
2623.749	6.225	2657.909	6.272	2659.186	6.273	2727.506	6.342	2728.783	6.341
2797.103	6.412	2798.38	6.413	2866.7	6.527	2867.977	6.529	2936.297	6.673
2936.935	6.675	2937.574	6.676	3005.894	6.846	3007.171	6.847	3075.491	6.82
3076.768	6.823	145.088	6.816	3146.365	6.816	3166.505	6.805		

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
820	.06	1274.62	.04	1515.54	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1274.62	1515.54		432	432		.1	.3

CROSS SECTION

RIVER: Doubloon

REACH: to Marsh

RS: 7231

INPUT

Description: Interpolated Section

Station Elevation Data

num= 127

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
828.6	4.34	840.11	4.29	848.36	4.25	855.67	4.17	857.73	4.15
866.41	4.08	871.23	4.06	889.29	3.96	907.35	3.83	907.41	3.83
914.27	3.78	922.91	3.7	938.48	3.57	957.09	3.39	974.59	3.23
1003.3	2.94	1005.72	2.92	1006.78	2.91	1041.84	2.49	1054.94	2.33

ExpandedLocal.rep

1056.46	2.32	1057.4	2.31	1057.87	2.3	1072.96	2.11	1091.02	1.88
1094.9	1.83	1109.08	1.79	1140.21	1.74	1176.32	1.71	1191.89	1.7
1207.45	1.69	1225.51	1.69	1287.23	1.91	1303.7	1.1	1311.28	1.08
1329.7	1.22	1335.34	1.08	1347.91	.8	1359.39	.76	1366.11	.71
1383.44	.54	1437.3	.54	1455.31	1.06	1460.04	1.1	1482.78	1.2
1502.15	1.15	1505.53	1.21	1528.28	1.76	1548.95	1.5	1557.68	1.49
1590.93	1.46	1608.99	1.45	1630.16	1.46	1632.92	1.46	1660.3	1.48
1674.9	1.49	1709.93	1.52	1711.61	1.52	1716.88	1.53	1740.6	1.54
1758.86	1.55	1781.35	1.84	1789.71	1.94	1790.61	1.95	1801.79	2.02
1822.78	2.36	1845.81	2.67	1854.95	2.8	1858.47	2.85	1879.75	3.13
1889.83	3.27	1919.28	3.59	1927.23	3.68	1933.85	3.75	1965.41	3.95
1977.87	4.03	1983.62	4.04	1999.23	4.11	2021.89	4.22	2035.11	4.28
2065.91	4.38	2086.79	4.45	2104.81	4.5	2109.93	4.52	2118.71	4.54
2153.95	4.65	2174.5	4.71	2197.97	4.77	2224.31	4.85	2238.19	4.9
2241.99	4.91	2244.2	4.92	2286.01	5.06	2313.9	5.15	2330.03	5.2
2337.47	5.22	2357.67	5.27	2374.05	5.31	2382.32	5.33	2383.87	5.33
2428.68	5.45	2429.76	5.45	2452.63	5.51	2458.43	5.52	2487.1	5.59
2488.17	5.59	2521.39	5.65	2545.51	5.68	2546.58	5.68	2601.17	5.77
2603.93	5.77	2605	5.77	2662.34	5.86	2663.41	5.87	2680.94	5.9
2720.76	5.98	2721.29	5.98	2721.83	5.98	2749.71	6.04	2779.17	6.11
2780.24	6.11	2818.46	6.1	2837.59	6.1	2838.66	6.1	2896	6.1
2897.07	6.1	2913.98	6.09						

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 828.6 .06 1287.23 .04 1528.28 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1287.23 1528.28 431 431 431 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 6800

INPUT

Description: Interpolated Section

Station Elevation Data num= 127

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
837.2	4.73	848.81	4.68	857.13	4.64	864.51	4.57	866.58	4.55
875.34	4.49	880.21	4.45	898.42	4.37	916.64	4.21	916.7	4.21
923.62	4.15	932.34	4.07	948.04	3.95	966.82	3.74	984.47	3.55
1013.42	3.18	1015.87	3.15	1016.94	3.14	1052.3	2.65	1065.52	2.47
1067.05	2.45	1068	2.44	1068.47	2.43	1083.7	2.22	1101.92	1.97
1105.83	1.91	1120.13	1.82	1151.53	1.67	1187.97	1.57	1203.67	1.53

ExpandedLocal.rep

1219.36	1.51	1237.58	1.48	1299.85	1.85	1316.64	1.01	1324.37	1
1343.16	1.18	1348.91	1.02	1361.72	.7	1373.44	.66	1380.29	.62
1397.97	.44	1448.74	.44	1467.01	.98	1471.81	1.02	1494.87	1.1
1514.52	1.06	1517.95	1.13	1541.02	1.71	1557.73	1.48	1564.79	1.45
1591.68	1.36	1606.28	1.32	1623.39	1.29	1625.62	1.29	1647.76	1.31
1659.57	1.32	1687.9	1.35	1689.25	1.35	1693.52	1.36	1712.69	1.37
1727.46	1.38	1745.65	1.6	1752.4	1.68	1753.13	1.69	1762.17	1.74
1779.14	2	1797.76	2.23	1805.15	2.34	1808	2.37	1825.2	2.59
1833.36	2.69	1857.17	2.93	1863.6	3	1868.95	3.05	1894.47	3.22
1904.54	3.28	1909.19	3.29	1921.81	3.35	1940.13	3.45	1950.82	3.49
1975.73	3.58	1992.61	3.64	2007.18	3.69	2011.32	3.71	2018.42	3.73
2046.91	3.82	2063.53	3.88	2082.51	3.94	2103.8	4	2115.03	4.06
2118.1	4.07	2119.89	4.08	2153.69	4.23	2176.24	4.33	2189.28	4.38
2195.3	4.41	2211.64	4.46	2224.88	4.51	2231.57	4.53	2232.82	4.54
2269.06	4.72	2269.92	4.72	2288.42	4.81	2293.1	4.82	2316.29	4.9
2317.15	4.9	2344.01	4.98	2363.52	5.03	2364.39	5.03	2408.52	5.12
2410.75	5.12	2411.62	5.13	2457.98	5.2	2458.85	5.2	2473.02	5.23
2505.22	5.28	2505.65	5.28	2506.08	5.28	2528.62	5.32	2552.45	5.38
2553.31	5.38	2584.22	5.38	2599.68	5.38	2600.55	5.38	2646.91	5.38
2647.78	5.38	2661.45	5.37						

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
837.2	.06	1299.85	.04	1541.02	.06			

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1299.85	1541.02		432	432	432		.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 6368

INPUT

Description: Interpolated Section

Station Elevation Data num= 127

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
845.8	5.12	857.51	5.07	865.91	5.03	873.35	4.97	875.44	4.95
884.27	4.89	889.18	4.85	907.55	4.78	925.93	4.59	925.99	4.59
932.97	4.53	941.77	4.44	957.6	4.33	976.54	4.09	994.35	3.87
1023.55	3.42	1026.02	3.38	1027.1	3.37	1062.77	2.82	1076.1	2.61
1077.65	2.58	1078.61	2.57	1079.08	2.56	1094.44	2.34	1112.81	2.05
1116.76	1.99	1131.19	1.84	1162.86	1.61	1199.61	1.44	1215.45	1.37
1231.28	1.32	1249.65	1.27	1312.46	1.8	1329.58	.91	1337.46	.93
1356.62	1.13	1362.48	.96	1375.54	.61	1387.49	.57	1394.47	.52

ExpandedLocal.rep

1412.49	.34	1460.19	.34	1478.72	.91	1483.58	.93	1506.97	1.01
1526.89	.98	1530.36	1.04	1553.75	1.65	1566.51	1.45	1571.9	1.41
1592.42	1.27	1603.56	1.19	1616.63	1.12	1618.33	1.12	1635.23	1.14
1644.24	1.15	1665.86	1.18	1666.9	1.18	1670.15	1.19	1684.79	1.2
1696.06	1.22	1709.94	1.37	1715.1	1.42	1715.65	1.43	1722.55	1.47
1735.5	1.64	1749.72	1.8	1755.35	1.87	1757.53	1.9	1770.66	2.04
1776.88	2.11	1795.06	2.27	1799.96	2.31	1804.05	2.36	1823.53	2.49
1831.21	2.53	1834.76	2.55	1844.39	2.6	1858.38	2.67	1866.54	2.71
1885.55	2.79	1898.43	2.84	1909.55	2.88	1912.71	2.89	1918.13	2.91
1939.88	3	1952.56	3.04	1967.04	3.1	1983.3	3.16	1991.87	3.21
1994.21	3.23	1995.58	3.24	2021.38	3.4	2038.59	3.5	2048.54	3.56
2053.14	3.59	2065.6	3.66	2075.71	3.72	2080.81	3.74	2081.77	3.75
2109.43	3.98	2110.09	3.99	2124.2	4.1	2127.78	4.12	2145.48	4.22
2146.14	4.22	2166.64	4.32	2181.53	4.37	2182.19	4.37	2215.87	4.48
2217.58	4.48	2218.24	4.48	2253.63	4.54	2254.29	4.54	2265.11	4.56
2289.68	4.58	2290.01	4.58	2290.34	4.58	2307.54	4.61	2325.73	4.65
2326.39	4.65	2349.97	4.65	2361.78	4.65	2362.44	4.65	2397.82	4.66
2398.49	4.66	2408.92	4.66						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
845.8	.06	1312.46	.04	1553.75	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1312.46	1553.75		431	431	.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 5937

INPUT

Description: Interpolated Section

Station Elevation Data num= 127

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
854.4	5.51	866.21	5.47	874.68	5.42	882.18	5.37	884.29	5.36
893.2	5.29	898.15	5.25	916.69	5.18	935.22	4.97	935.28	4.97
942.32	4.9	951.19	4.82	967.16	4.71	986.27	4.44	1004.23	4.2
1033.68	3.66	1036.17	3.62	1037.25	3.6	1073.24	2.98	1086.68	2.74
1088.24	2.72	1089.21	2.7	1089.69	2.69	1105.18	2.45	1123.71	2.14
1127.69	2.07	1142.24	1.87	1174.19	1.54	1211.25	1.3	1227.22	1.2
1243.2	1.14	1261.73	1.06	1325.08	1.74	1342.52	.82	1350.56	.85
1370.07	1.09	1376.05	.9	1389.36	.51	1401.53	.47	1408.65	.43
1427.02	.24	1471.63	.24	1490.42	.83	1495.35	.85	1519.06	.91
1539.25	.89	1542.78	.96	1566.49	1.6	1575.29	1.42	1579.01	1.37

ExpandedLocal.rep

1593.17	1.17	1600.85	1.07	1609.86	.95	1611.04	.95	1622.69	.97
1628.91	.98	1643.82	1.01	1644.54	1.01	1646.78	1.01	1656.88	1.03
1664.65	1.05	1674.23	1.13	1677.79	1.16	1678.17	1.17	1682.93	1.19
1691.86	1.28	1701.67	1.37	1705.56	1.41	1707.06	1.43	1716.11	1.5
1720.41	1.53	1732.95	1.61	1736.33	1.63	1739.15	1.66	1752.58	1.75
1757.89	1.79	1760.33	1.8	1766.98	1.84	1776.62	1.89	1782.25	1.92
1795.36	1.99	1804.25	2.03	1811.92	2.07	1814.1	2.08	1817.84	2.1
1832.84	2.17	1841.59	2.21	1851.58	2.26	1862.8	2.31	1868.71	2.37
1870.32	2.39	1871.26	2.4	1889.06	2.57	1900.93	2.68	1907.8	2.75
1910.97	2.78	1919.57	2.85	1926.54	2.92	1930.06	2.95	1930.72	2.96
1949.8	3.25	1950.25	3.25	1959.99	3.4	1962.46	3.42	1974.67	3.53
1975.12	3.53	1989.26	3.66	1999.53	3.71	1999.99	3.71	2023.22	3.84
2024.4	3.84	2024.86	3.84	2049.27	3.87	2049.72	3.87	2057.19	3.89
2074.14	3.89	2074.36	3.89	2074.59	3.89	2086.46	3.89	2099	3.92
2099.46	3.92	2115.73	3.93	2123.87	3.93	2124.33	3.93	2148.74	3.94
2149.19	3.94	2156.39	3.94						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
854.4	.06	1325.08	.04	1566.49	.06

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1325.08	1566.49		432	432	432		.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 5505

INPUT

Description:

Station Elevation Data num= 51

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
863	5.907	874.911	5.86	891.019	5.772	907.127	5.653	925.817	5.588
944.508	5.346	960.616	5.188	976.724	5.085	1014.105	4.517	1046.321	3.85
1083.702	3.141	1099.81	2.832	1115.918	2.562	1134.608	2.226	1153.299	1.89
1185.515	1.474	1222.896	1.171	1239.004	1.039	1255.112	.952	1273.802	.848
1337.69	1.68	1355.47	.72	1363.65	.78	1383.53	1.04	1389.62	.84
1403.18	.42	1415.58	.37	1422.83	.33	1441.54	.14	1483.08	.14
1502.12	.75	1507.12	.77	1531.15	.82	1551.62	.8	1555.19	.88
1579.23	1.551	1603.097	.776	1621.787	.836	1640.477	.903	1656.586	.951
1672.694	.953	1710.074	1.228	1742.291	1.467	1779.671	2.165	1795.78	2.695
1811.888	2.992	1830.578	3.193	1849.268	3.214	1865.377	3.171	1881.485	3.205
1903.861	3.222								

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 863 .06 1337.69 .04 1579.23 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1337.69 1579.23 797.67 422 357 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 5083

INPUT

Description: Interpolated Section

Station Elevation Data num= 162  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 575.33 5.74 577.78 5.73 583.24 5.72 585.44 5.72 590.6 5.71  
 594.86 5.7 613.3 5.65 621.26 5.62 630.17 5.58 643.36 5.52  
 647.67 5.49 661.11 5.44 669.73 5.4 673.41 5.39 678.3 5.36  
 690.81 5.26 703.47 5.15 708.94 5.1 731.62 4.94 733.52 4.93  
 735.35 4.91 754.03 4.81 761.75 4.77 763.58 4.76 775.1 4.66  
 793.64 4.51 802.13 4.44 823.03 4.28 823.69 4.27 839.71 4.12  
 853.75 3.98 872.64 3.79 875.84 3.76 883.8 3.69 892.1 3.62  
 913.86 3.42 922.61 3.34 937.11 3.21 943.15 3.16 943.91 3.15  
 944.48 3.15 963.52 2.98 973.97 2.9 989.92 2.77 996.87 2.71  
 1004.03 2.64 1013.66 2.55 1020.56 2.48 1027.98 2.41 1034.08 2.35  
 1049.05 2.19 1051.2 2.17 1064.14 2.06 1070.12 2.01 1084.17 1.88  
 1094.19 1.79 1101.64 1.72 1104.01 1.7 1124.25 1.55 1154.03 1.31  
 1154.31 1.3 1154.42 1.3 1154.68 1.3 1165.29 1.2 1184.36 1.03  
 1191.69 .98 1206.41 .91 1214.42 .88 1218.1 .87 1225.19 .85  
 1238.71 .82 1244.47 .8 1248.73 .79 1258.8 .84 1274.53 .92  
 1295.7 1.03 1301.93 1.06 1304.59 1.07 1311.19 1.11 1334.64 1.22  
 1353.46 1.61 1371.64 .6 1380.02 .69 1400.35 .98 1406.58 .76  
 1420.45 .3 1433.14 .25 1440.55 .21 1459.69 .01 1497.39 .01  
 1516.75 .65 1521.83 .67 1546.26 .7 1567.08 .69 1570.71 .78  
 1595.15 1.49 1603.15 1.08 1614.13 .97 1622.52 .88 1631.71 .78  
 1642.76 .67 1643.74 .67 1649.29 .68 1653.53 .69 1666.87 .72  
 1680.04 .75 1684.33 .77 1684.53 .77 1685.18 .77 1715.54 .88  
 1717.31 .88 1724.92 .92 1737.18 .97 1746.55 1.02 1749.44 1.04  
 1765.51 1.1 1777.55 1.14 1781.57 1.16 1806.1 1.29 1807.49 1.3  
 1808.56 1.31 1825.07 1.38 1839.56 1.43 1846.69 1.46 1856.13 1.48  
 1870.57 1.53 1877.81 1.54 1887.28 1.56 1901.58 1.59 1920.39 1.63  
 1927.87 1.67 1932.58 1.7 1947.83 1.8 1963.59 1.9 1968.46 1.94  
 1994.6 2.14 1994.94 2.14 2009.05 2.34 2025.6 2.57 2027.07 2.59  
 2049.64 2.84 2053.59 2.89 2056.61 2.92 2059.2 2.95 2079.15 3.13

ExpandedLocal.rep

2087.62	3.21	2090.23	3.23	2096.48	3.28	2118.62	3.39	2130.82	3.42
2133.76	3.43	2141.48	3.44	2149.63	3.45	2159.06	3.46	2165.89	3.46
2171.41	3.47	2180.64	3.49	2198.02	3.52	2210.47	3.53	2211.64	3.53
2212	3.53	2242.65	3.54						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
575.33	.06	1353.46	.04	1595.15	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1353.46	1595.15		797.67	422		.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 4661

INPUT

Description: Interpolated Section

Station Elevation Data num= 162

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
287.67	5.56	291.07	5.56	298.66	5.56	301.72	5.56	308.88	5.55
314.81	5.54	340.44	5.5	351.51	5.47	363.88	5.42	382.21	5.36
388.21	5.33	406.89	5.25	418.88	5.2	423.99	5.17	430.79	5.14
448.17	5.03	465.77	4.91	473.38	4.86	504.89	4.67	507.54	4.65
510.08	4.64	536.04	4.51	546.78	4.46	549.32	4.44	565.33	4.35
591.1	4.22	602.9	4.17	631.95	4.04	632.87	4.03	655.14	3.93
674.65	3.83	700.91	3.69	705.36	3.67	716.43	3.62	727.96	3.57
758.2	3.43	770.37	3.37	790.53	3.29	798.91	3.25	799.98	3.25
800.77	3.24	827.23	3.14	841.76	3.08	863.93	2.98	873.59	2.93
883.53	2.88	896.92	2.79	906.52	2.73	916.82	2.67	925.31	2.62
946.11	2.47	949.1	2.45	967.08	2.33	975.41	2.27	994.93	2.13
1008.86	2.03	1019.21	1.95	1022.51	1.92	1050.64	1.72	1092.03	1.39
1092.41	1.38	1092.57	1.38	1092.93	1.38	1107.68	1.24	1134.19	.98
1144.38	.93	1164.84	.82	1175.97	.8	1181.08	.79	1190.94	.77
1209.73	.75	1217.74	.74	1223.66	.73	1237.66	.75	1259.52	.78
1288.94	.83	1297.6	.85	1301.3	.85	1310.47	.87	1343.07	.91
1369.23	1.53	1387.82	.48	1396.38	.6	1417.17	.92	1423.54	.69
1437.73	.18	1450.7	.12	1458.28	.08	1477.85	-.11	1511.69	-.11
1531.37	.56	1536.54	.56	1561.38	.58	1582.54	.57	1586.23	.68
1611.08	1.42	1623.06	.75	1639.52	.7	1652.09	.66	1665.86	.61
1682.42	.57	1683.89	.57	1692.21	.58	1698.56	.59	1718.55	.62
1738.28	.67	1744.72	.69	1745.02	.69	1746	.69	1791.49	.85
1794.15	.87	1805.55	.92	1823.92	1.01	1837.96	1.1	1842.3	1.12
1866.38	1.24	1884.43	1.34	1890.45	1.36	1927.21	1.54	1929.3	1.55

ExpandedLocal.rep

1930.89	1.56	1955.64	1.64	1977.36	1.7	1988.04	1.72	2002.18	1.74
2023.83	1.77	2034.67	1.78	2048.87	1.78	2070.29	1.79	2098.48	1.79
2109.7	1.81	2116.76	1.82	2139.6	1.88	2163.23	1.93	2170.53	1.96
2209.7	2.12	2210.22	2.12	2231.36	2.29	2256.16	2.46	2258.37	2.48
2292.19	2.78	2298.11	2.84	2302.63	2.88	2306.52	2.91	2336.41	3.16
2349.1	3.27	2353.02	3.3	2362.38	3.37	2395.56	3.57	2413.85	3.62
2418.25	3.64	2429.83	3.67	2442.03	3.71	2456.17	3.73	2466.4	3.75
2474.68	3.77	2488.5	3.79	2514.55	3.83	2533.21	3.85	2534.97	3.85
2535.51	3.85	2581.43	3.87						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
287.67	.06	1369.23	.04	1611.08	.06

\*\*\*\*\*

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
1369.23	1611.08	797.67	422	357	.1	.3	

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 4239

INPUT

Description:

Station Elevation Data num= 123

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5.392	4.357	5.395	14.08	5.398	17.991	5.398	27.167	5.392
67.577	5.354	97.6	5.266	121.074	5.205	152.669	5.066	168.025	4.995
174.571	4.962	205.534	4.793	228.068	4.67	278.172	4.399	281.565	4.381
318.059	4.2	335.062	4.132	355.568	4.046	388.559	3.939	403.674	3.894
442.056	3.797	470.571	3.736	495.553	3.678	529.176	3.597	549.049	3.557
563.814	3.523	602.546	3.439	618.127	3.406	654.679	3.342	656.043	3.34
657.057	3.339	709.54	3.263	750.3	3.149	763.037	3.112	780.181	3.04
805.669	2.935	816.534	2.888	843.178	2.749	870.031	2.599	880.686	2.541
905.683	2.38	923.528	2.267	936.786	2.173	977.025	1.899	1030.029	1.468
1030.522	1.465	1030.72	1.463	1031.186	1.457	1084.019	.936	1123.272	.74
1137.516	.713	1156.688	.691	1180.754	.683	1191.013	.677	1216.515	.66
1244.51	.646	1282.19	.638	1293.28	.638	1298.007	.636	1309.758	.627
1351.504	.606	1385	1.46	1404	.36	1434	.86	1455	.06
1476	-.04	1496	-.24	1526	-.24	1546	.46	1598	.46
1627	1.361	1642.973	.414	1664.905	.422	1681.658	.434	1700.014	.442
1724.043	.467	1735.123	.479	1743.586	.493	1770.231	.528	1805.113	.609
1805.514	.611	1806.814	.615	1867.442	.832	1886.182	.917	1910.667	1.048
1929.371	1.171	1967.252	1.387	1991.299	1.529	2048.321	1.792	2051.102	1.804
2053.227	1.811	2086.211	1.907	2115.155	1.968	2129.391	1.985	2177.083	2.013



ExpandedLocal.rep

2191.538	2.009	2210.46	1.9992239.011	1.981	2291.53	1.9482300.939	1.942
2331.382	1.9542362.868		1.965	2372.6	1.9882424.796	2.0962453.669	2.23
2486.724	2.3572534.739		2.7122542.627		2.7862548.652	2.8332593.666	3.196
2610.58	3.3332615.808		3.3752672.508		3.7512696.878	3.8272718.171	3.91
2734.436	3.965	2753.28	4.0122777.947		4.0642796.365	4.098	2855.95
2858.293	4.1742859.017		4.1752920.221		4.187		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	1385	.04	1627	.06

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1385	1627		474	494	494		.1	.3

CROSS SECTION

RIVER: Doublon  
 REACH: to Marsh RS: 3745

INPUT

Description: Interpolated Section

Station Elevation Data num= 244

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	4.88	3.89	4.88	7.54	4.88	12.57	4.89	16.06	4.89
24.26	4.88	33.15	4.87	60.34	4.86	87.15	4.79	108.11	4.75
133.21	4.65	136.32	4.64	136.88	4.64	150.03	4.58	154.25	4.56
155.87	4.55	183.52	4.4	203.64	4.3	248.38	4.06	251.41	4.05
258.89	4.01	283.99	3.9	299.18	3.84	317.49	3.78	344.36	3.7
346.94	3.69	360.44	3.65	384.56	3.6	394.71	3.56	420.17	3.48
442.48	3.4	448.1	3.39	472.5	3.32	490.24	3.28	503.43	3.24
510.23	3.23	538.01	3.15	551.84	3.11	551.92	3.11	579.69	3.04
584.56	3.02	585.78	3.02	586.68	3.02	633.55	2.9	641.52	2.87
669.94	2.77	681.31	2.73	685.91	2.71	696.62	2.66	719.38	2.56
729.08	2.52	752.87	2.39	772.36	2.28	776.85	2.26	777.24	2.26
779.74	2.24	786.36	2.21	787.53	2.2	808.68	2.07	824.62	1.97
836.45	1.89	872.38	1.65	917.96	1.29	919.71	1.28	920.15	1.27
920.33	1.27	920.74	1.27	967.92	.83	1002.97	.66	1015.68	.64
1032.8	.62	1041.53	.61	1054.29	.61	1056.18	.61	1063.45	.6
1071.65	.6	1086.22	.59	1111.22	.57	1144.86	.57	1154.77	.57
1158.99	.56	1169.48	.56	1194.4	.54	1206.75	.55	1236.66	1.31
1253.75	.32	1259.35	.38	1280.73	.74	1299.62	.1	1307	.08
1318.51	-.05	1336.5	-.34	1361.5	-.34	1367.78	-.06	1376.97	.05
1386.92	.34	1387.13	.34	1404.06	.37	1414.7	.34	1420.99	.34
1431.64	.37	1447.11	.39	1452.92	.31	1453.04	.31	1463.56	.52
1467.43	.7	1480.49	.82	1489.91	1.17	1501.44	.72	1509.93	.39

ExpandedLocal.rep

1516.47	.39	1528.72	.4	1537.42	.4	1543.04	.41	1557.46	.42
1558.41	.42	1569.61	.43	1581.42	.43	1591.6	.44	1596.18	.44
1599.53	.45	1611.54	.46	1622.74	.47	1625.43	.47	1636.04	.48
1645.54	.49	1649.31	.5	1654.47	.5	1669.43	.52	1675.88	.53
1691.55	.56	1702.45	.58	1713.16	.6	1713.66	.6	1715.29	.61
1717.35	.61	1729.02	.65	1737.56	.66	1755.58	.7	1762.9	.72
1780.22	.75	1781.58	.75	1782.15	.75	1783.57	.76	1791.28	.77
1808.72	.82	1814.77	.84	1829.57	.9	1835.29	.92	1843.1	.95
1845.46	.96	1847.76	.97	1860.91	1.03	1865.56	1.05	1868.9	1.06
1885.68	1.13	1895	1.17	1910.46	1.23	1916.38	1.26	1924.44	1.29
1935.24	1.33	1946.52	1.38	1953.88	1.4	1960.02	1.43	1983.32	1.52
1984.79	1.52	1992.65	1.55	2009.57	1.62	2012.76	1.63	2018	1.65
2021.48	1.67	2024.15	1.67	2029.01	1.69	2034.29	1.7	2039.78	1.72
2058.76	1.76	2063.83	1.78	2065.49	1.78	2083.24	1.79	2087.87	1.8
2101.77	1.85	2107.72	1.87	2111.92	1.87	2119.61	1.89	2132.19	1.9
2135.97	1.91	2156.67	1.95	2160.01	1.96	2179.39	1.99	2181.15	2
2184.06	2	2197.51	2.01	2205.62	2.02	2208.11	2.02	2221.22	2.02
2230.1	2.02	2232.15	2.02	2254.58	2.05	2256.2	2.05	2257.01	2.05
2279.05	2.08	2279.19	2.08	2281.18	2.08	2305.54	2.11	2322.84	2.13
2326.48	2.13	2332.04	2.14	2334.63	2.14	2339.86	2.15	2340.45	2.15
2357.82	2.18	2365.1	2.19	2372.79	2.2	2374.79	2.2	2383.11	2.21
2389.93	2.22	2408.07	2.23	2410.73	2.23	2412.25	2.24	2424.05	2.26
2424.45	2.26	2431.53	2.28	2433.02	2.28	2446.96	2.31	2489.88	2.4
2526.07	2.54	2567.5	2.68	2627.68	3.02	2637.57	3.09	2645.12	3.14
2701.54	3.49	2722.74	3.62	2729.29	3.66	2800.36	4.03	2830.91	4.11
2857.6	4.2	2877.98	4.26	2901.6	4.32	2932.52	4.39	2955.61	4.44
3030.29	4.56	3033.23	4.56	3034.14	4.56	3110.85	4.63		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 1236.66 .04 1489.91 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1236.66 1489.91 495 495 495 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 3250

INPUT

Description: Interpolated Section  
 Station Elevation Data num= 244  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 4.37 3.42 4.37 6.64 4.37 11.06 4.37 14.14 4.37

ExpandedLocal.rep

21.35	4.37	29.17	4.37	53.1	4.36	76.69	4.32	95.14	4.29
117.23	4.22	119.97	4.21	120.47	4.21	132.03	4.16	135.75	4.14
137.18	4.14	161.51	4.01	179.21	3.92	218.59	3.73	221.25	3.71
227.83	3.68	249.93	3.6	263.29	3.56	279.4	3.51	303.06	3.45
305.33	3.44	317.2	3.41	338.43	3.37	347.36	3.32	369.77	3.22
389.4	3.13	394.35	3.11	415.82	3.04	431.44	3	443.04	2.96
449.03	2.95	473.48	2.86	485.64	2.82	485.72	2.82	510.15	2.72
514.44	2.7	515.51	2.7	516.31	2.69	557.55	2.54	564.57	2.51
589.58	2.4	599.59	2.35	603.64	2.33	613.06	2.28	633.09	2.19
641.63	2.15	662.56	2.04	679.72	1.94	683.66	1.92	684.01	1.91
686.21	1.9	692.04	1.87	693.07	1.87	711.68	1.75	725.7	1.67
736.12	1.6	767.74	1.4	807.85	1.1	809.39	1.09	809.78	1.08
809.93	1.08	810.3	1.08	851.81	.72	882.66	.58	893.85	.56
908.92	.54	916.59	.54	927.83	.53	929.49	.53	935.89	.53
943.1	.52	955.93	.51	977.93	.5	1007.54	.49	1016.25	.49
1019.97	.49	1029.2	.48	1051.13	.47	1062	.5	1088.32	1.16
1103.5	.28	1108.48	.3	1127.46	.62	1144.24	.14	1150.79	.13
1161.01	-.06	1176.99	-.44	1196.99	-.44	1204.62	-.06	1215.77	-.09
1227.85	.22	1228.1	.23	1248.64	.29	1261.56	.23	1269.19	.23
1282.1	.29	1300.89	.33	1307.93	.16	1308.07	.16	1320.84	.33
1325.54	.59	1341.39	.5	1352.81	.98	1366.67	.63	1376.88	.36
1384.75	.37	1399.48	.38	1409.93	.39	1416.69	.39	1434.03	.41
1435.17	.41	1448.63	.41	1462.83	.42	1475.06	.43	1480.57	.43
1484.6	.44	1499.04	.45	1512.51	.46	1515.73	.46	1528.49	.47
1539.91	.48	1544.45	.49	1550.65	.49	1568.64	.52	1576.39	.53
1595.22	.56	1608.33	.58	1621.2	.6	1621.8	.6	1623.76	.6
1626.24	.61	1640.27	.64	1650.53	.65	1672.21	.67	1681	.68
1701.82	.7	1703.46	.7	1704.15	.7	1705.84	.7	1715.12	.72
1736.08	.75	1743.36	.77	1761.15	.81	1768.02	.83	1777.41	.86
1780.25	.87	1783.01	.88	1798.82	.93	1804.42	.95	1808.43	.96
1828.61	1.02	1839.81	1.05	1858.4	1.1	1865.51	1.12	1875.2	1.15
1888.18	1.18	1901.75	1.22	1910.59	1.25	1917.97	1.28	1945.98	1.37
1947.76	1.37	1957.2	1.41	1977.54	1.48	1981.37	1.49	1987.67	1.51
1991.86	1.53	1995.06	1.54	2000.91	1.55	2007.25	1.57	2013.86	1.58
2036.68	1.64	2042.77	1.65	2044.77	1.65	2066.1	1.65	2071.68	1.66
2088.38	1.73	2095.53	1.76	2100.58	1.77	2109.83	1.79	2124.96	1.81
2129.49	1.83	2154.38	1.91	2158.4	1.92	2181.69	1.98	2183.81	1.98
2187.31	1.99	2203.48	2.01	2213.23	2.03	2216.22	2.04	2231.99	2.04
2242.66	2.05	2245.13	2.05	2272.08	2.12	2274.03	2.13	2275.01	2.13
2301.51	2.18	2301.67	2.18	2304.07	2.19	2333.35	2.26	2354.15	2.31
2358.53	2.32	2365.2	2.33	2368.33	2.34	2374.61	2.36	2375.32	2.36
2396.2	2.41	2404.95	2.43	2414.2	2.45	2416.6	2.45	2426.6	2.47
2434.8	2.47	2456.61	2.5	2459.81	2.5	2461.64	2.51	2475.82	2.54
2476.31	2.54	2484.81	2.56	2486.61	2.56	2503.36	2.59	2554.96	2.71
2598.46	2.85	2648.27	3	2720.62	3.34	2732.51	3.4	2741.59	3.44
2809.42	3.77	2834.9	3.9	2842.78	3.94	2928.22	4.3	2964.94	4.4
2997.02	4.5	3021.53	4.56	3049.93	4.63	3087.1	4.72	3114.85	4.77
3204.63	4.94	3208.17	4.95	3209.26	4.95	3301.48	5.08		

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 1088.32 .04 1352.81 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1088.32 1352.81 494 494 494 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 2756

INPUT

Description: Interpolated Section

Station Elevation Data num= 244  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 3.85 2.96 3.86 5.73 3.86 9.56 3.86 12.21 3.86  
 18.44 3.86 25.19 3.86 45.86 3.87 66.24 3.85 82.17 3.84  
 101.25 3.8 103.61 3.79 104.05 3.78 114.04 3.74 117.25 3.73  
 118.48 3.73 139.49 3.63 154.79 3.55 188.79 3.39 191.1 3.38  
 196.78 3.35 215.86 3.3 227.4 3.27 241.32 3.24 261.75 3.2  
 263.71 3.19 273.97 3.17 292.31 3.14 300.02 3.09 319.37 2.97  
 336.33 2.86 340.6 2.83 359.15 2.76 372.63 2.72 382.65 2.68  
 387.83 2.67 408.94 2.57 419.45 2.52 419.52 2.52 440.62 2.4  
 444.32 2.38 445.25 2.38 445.94 2.37 481.56 2.18 487.62 2.14  
 509.22 2.02 517.87 1.97 521.36 1.95 529.5 1.91 546.8 1.82  
 554.17 1.79 572.26 1.69 587.07 1.6 590.48 1.57 590.78 1.57  
 592.68 1.56 597.71 1.54 598.6 1.53 614.68 1.44 626.79 1.37  
 635.79 1.31 663.1 1.15 697.74 .9 699.07 .89 699.4 .89  
 699.54 .89 699.86 .89 735.71 .61 762.35 .5 772.02 .48  
 785.03 .47 791.66 .46 801.37 .45 802.8 .45 808.33 .45  
 814.56 .45 825.64 .44 844.64 .43 870.21 .42 877.74 .42  
 880.94 .42 888.92 .41 907.86 .4 917.25 .45 939.99 1.01  
 953.25 .23 957.6 .21 974.2 .5 988.86 .18 994.59 .19  
 1003.52 -.07 1017.49 -.54 1032.49 -.54 1041.46 -.05 1054.57 -.23  
 1068.77 .11 1069.07 .11 1093.23 .2 1108.41 .11 1117.38 .11  
 1132.57 .2 1154.66 .26 1162.94 .01 1163.11 .01 1178.12 .14  
 1183.65 .49 1202.28 .19 1215.72 .79 1231.91 .53 1243.83 .34  
 1253.03 .34 1270.23 .36 1282.44 .37 1290.34 .38 1310.59 .39  
 1311.93 .39 1327.65 .4 1344.24 .41 1358.53 .42 1364.96 .42  
 1369.67 .43 1386.54 .44 1402.27 .45 1406.04 .45 1420.94 .46  
 1434.28 .47 1439.58 .48 1446.83 .49 1467.84 .51 1476.89 .52  
 1498.89 .55 1514.2 .57 1529.24 .59 1529.95 .59 1532.23 .6  
 1535.13 .6 1551.52 .64 1563.51 .63 1588.83 .64 1599.1 .65

ExpandedLocal.rep

1623.43	.65	1625.33	.65	1626.14	.65	1628.12	.65	1638.95	.66
1663.45	.68	1671.94	.7	1692.73	.73	1700.76	.75	1711.73	.77
1715.04	.78	1718.27	.78	1736.74	.83	1743.27	.84	1747.97	.85
1771.53	.91	1784.62	.93	1806.33	.98	1814.65	.99	1825.96	1.02
1841.13	1.03	1856.97	1.07	1867.3	1.1	1875.92	1.13	1908.65	1.22
1910.72	1.22	1921.75	1.26	1945.52	1.34	1949.99	1.35	1957.35	1.38
1962.24	1.39	1965.98	1.4	1972.82	1.42	1980.22	1.44	1987.94	1.45
2014.6	1.51	2021.71	1.52	2024.04	1.52	2048.97	1.5	2055.48	1.52
2074.99	1.62	2083.35	1.66	2089.25	1.67	2100.05	1.69	2117.72	1.72
2123.02	1.75	2152.09	1.86	2156.79	1.88	2184	1.96	2186.47	1.96
2190.56	1.98	2209.45	2.02	2220.84	2.04	2224.33	2.05	2242.75	2.06
2255.22	2.07	2258.1	2.08	2289.59	2.19	2291.87	2.2	2293.01	2.2
2323.96	2.29	2324.15	2.29	2326.95	2.29	2361.16	2.42	2385.46	2.49
2390.57	2.5	2398.37	2.53	2402.02	2.54	2409.36	2.56	2410.19	2.56
2434.58	2.64	2444.8	2.66	2455.61	2.69	2458.42	2.7	2470.1	2.72
2479.68	2.73	2505.15	2.77	2508.89	2.77	2511.03	2.78	2527.59	2.81
2528.16	2.81	2538.09	2.83	2540.19	2.84	2559.76	2.88	2620.04	3.01
2670.86	3.17	2729.05	3.33	2813.57	3.65	2827.45	3.71	2838.06	3.75
2917.29	4.06	2947.06	4.18	2956.27	4.22	3056.07	4.57	3098.97	4.68
3136.45	4.79	3165.08	4.86	3198.25	4.94	3241.67	5.04	3274.09	5.11
3378.98	5.33	3383.1	5.33	3384.38	5.34	3492.11	5.52		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	939.99	.04	1215.72	.06

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	939.99	1215.72		494	494	.1	.3

CROSS SECTION

RIVER: Doubloun

REACH: to Marsh

RS: 2262

INPUT

Description: Interpolated Section

Station Elevation Data num= 244

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	3.34	2.49	3.34	4.83	3.34	8.05	3.35	10.28	3.35
15.53	3.35	21.22	3.35	38.63	3.37	55.79	3.37	69.2	3.38
85.28	3.37	87.26	3.36	87.63	3.36	96.04	3.33	98.74	3.32
99.78	3.31	117.48	3.24	130.36	3.18	159	3.05	160.94	3.04
165.73	3.03	181.8	2.99	191.52	2.98	203.24	2.96	220.44	2.95
222.1	2.95	230.73	2.93	246.18	2.91	252.67	2.85	268.97	2.71
283.25	2.59	286.85	2.55	302.47	2.49	313.83	2.44	322.27	2.4

\*\*\*\*\*

ExpandedLocal.rep

326.63	2.39	344.41	2.28	353.26	2.23	353.31	2.23	371.09	2.09
374.21	2.06	374.99	2.05	375.56	2.05	405.56	1.82	410.67	1.77
428.86	1.64	436.14	1.59	439.09	1.56	445.94	1.53	460.51	1.45
466.72	1.42	481.95	1.33	494.43	1.26	497.3	1.23	497.55	1.23
499.15	1.22	503.39	1.2	504.14	1.2	517.68	1.13	527.88	1.07
535.45	1.03	558.45	.9	587.63	.71	588.75	.7	589.03	.7
589.15	.7	589.41	.7	619.61	.5	642.05	.42	650.19	.41
661.15	.39	666.73	.39	674.9	.38	676.11	.38	680.77	.37
686.01	.37	695.34	.36	711.35	.36	732.88	.35	739.22	.35
741.92	.34	748.64	.34	764.59	.33	772.5	.4	791.65	.86
803	.19	806.72	.13	820.93	.38	833.48	.22	838.38	.25
846.03	-.09	857.98	-.64	867.98	-.64	878.3	-.05	893.37	-.36
909.69	-.01	910.04	-.01	937.81	.11	955.26	-.01	965.58	-.01
983.04	.11	1008.43	.19	1017.95	-.14	1018.14	-.14	1035.41	-.05
1041.75	.38	1063.18	-.13	1078.62	.6	1097.15	.44	1110.79	.31
1121.3	.32	1140.98	.34	1154.95	.35	1163.99	.36	1187.16	.38
1188.68	.38	1206.67	.39	1225.65	.4	1241.99	.41	1249.35	.41
1254.74	.42	1274.03	.43	1292.03	.43	1296.35	.44	1313.39	.45
1328.65	.47	1334.72	.47	1343.01	.48	1367.04	.5	1377.4	.51
1402.57	.55	1420.08	.57	1437.28	.58	1438.09	.59	1440.71	.59
1444.02	.59	1462.76	.63	1476.48	.61	1505.45	.61	1517.2	.61
1545.03	.59	1547.21	.59	1548.13	.59	1550.4	.59	1562.79	.6
1590.81	.61	1600.53	.62	1624.31	.65	1633.49	.66	1646.04	.68
1649.83	.68	1653.53	.69	1674.65	.73	1682.13	.74	1687.5	.75
1714.46	.79	1729.43	.81	1754.26	.85	1763.78	.86	1776.72	.88
1794.07	.88	1812.2	.92	1824.01	.94	1833.88	.99	1871.31	1.07
1873.68	1.08	1886.3	1.12	1913.49	1.2	1918.6	1.21	1927.02	1.24
1932.62	1.25	1936.9	1.27	1944.72	1.29	1953.19	1.31	1962.02	1.32
1992.51	1.38	2000.65	1.4	2003.32	1.39	2031.84	1.36	2039.28	1.38
2061.6	1.5	2071.16	1.55	2077.91	1.57	2090.27	1.59	2110.48	1.63
2116.55	1.66	2149.81	1.81	2155.18	1.83	2186.31	1.94	2189.13	1.95
2193.81	1.96	2215.41	2.02	2228.45	2.05	2232.44	2.07	2253.52	2.09
2267.77	2.1	2271.07	2.11	2307.1	2.26	2309.7	2.27	2311.01	2.27
2346.42	2.39	2346.64	2.39	2349.84	2.4	2388.97	2.57	2416.76	2.67
2422.62	2.69	2431.54	2.72	2435.71	2.74	2444.11	2.77	2445.05	2.77
2472.96	2.87	2484.65	2.9	2497.01	2.94	2500.23	2.95	2513.59	2.97
2524.55	2.99	2553.69	3.04	2557.96	3.04	2560.42	3.05	2579.36	3.09
2580.01	3.09	2591.38	3.11	2593.78	3.12	2616.17	3.16	2685.12	3.32
2743.26	3.48	2809.82	3.65	2906.51	3.96	2922.39	4.01	2934.52	4.05
3025.17	4.35	3059.23	4.46	3069.75	4.5	3183.93	4.85	3233	4.97
3275.88	5.08	3308.63	5.16	3346.58	5.25	3396.25	5.37	3433.34	5.45
3553.32	5.71	3558.04	5.72	3559.5	5.72	3682.74	5.97		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 791.65 .04 1078.62 .06

ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 791.65 1078.62 495 495 495 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 1767

INPUT

Description: Interpolated Section

Station Elevation Data num= 244

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	2.83	2.02	2.83	3.92	2.83	6.54	2.83	8.36	2.84
12.62	2.84	17.24	2.84	31.39	2.88	45.33	2.9	56.24	2.92
69.3	2.94	70.91	2.93	71.21	2.93	78.04	2.91	80.24	2.91
81.09	2.9	95.47	2.85	105.93	2.81	129.21	2.72	130.78	2.71
134.67	2.7	147.73	2.69	155.63	2.69	165.16	2.69	179.14	2.7
180.48	2.7	187.5	2.69	200.05	2.68	205.33	2.62	218.57	2.45
230.18	2.31	233.1	2.28	245.79	2.21	255.02	2.16	261.88	2.12
265.42	2.11	279.87	1.99	287.07	1.93	287.11	1.93	301.55	1.77
304.09	1.74	304.72	1.73	305.19	1.73	329.57	1.46	333.72	1.41
348.5	1.26	354.42	1.21	356.81	1.18	362.38	1.15	374.22	1.08
379.27	1.05	391.64	.98	401.78	.91	404.11	.89	404.32	.89
405.62	.89	409.06	.87	409.67	.87	420.67	.81	428.96	.77
435.12	.74	453.81	.65	477.52	.51	478.43	.51	478.66	.51
478.75	.51	478.97	.51	503.51	.39	521.74	.34	528.36	.33
537.26	.32	541.8	.31	548.44	.3	549.42	.3	553.21	.3
557.47	.3	565.05	.29	578.05	.28	595.56	.28	600.71	.27
602.9	.27	608.36	.27	621.32	.26	627.75	.35	643.31	.71
652.75	.15	655.85	.04	667.66	.26	678.1	.26	682.18	.3
688.54	-.1	698.48	-.74	703.48	-.74	715.13	-.04	732.17	-.5
750.61	-.13	751	-.12	782.39	.03	802.12	-.12	813.78	-.12
833.5	.03	862.2	.13	872.96	-.29	873.18	-.29	892.69	-.25
899.86	.27	924.07	-.44	941.53	.41	962.38	.34	977.74	.29
989.58	.3	1011.74	.32	1027.46	.33	1037.63	.34	1063.72	.37
1065.44	.37	1085.69	.38	1107.06	.39	1125.46	.4	1133.74	.4
1139.8	.41	1161.53	.42	1181.8	.42	1186.65	.43	1205.84	.44
1223.02	.46	1229.85	.46	1239.18	.47	1266.24	.5	1277.9	.51
1306.24	.54	1325.96	.56	1345.32	.58	1346.23	.58	1349.18	.58
1352.91	.59	1374.01	.63	1389.46	.6	1422.07	.58	1435.3	.58
1466.63	.54	1469.08	.54	1470.12	.54	1472.68	.54	1486.63	.54
1518.18	.54	1529.11	.55	1555.89	.57	1566.23	.57	1580.35	.59
1584.62	.59	1588.78	.6	1612.57	.63	1620.99	.63	1627.03	.64
1657.38	.68	1674.23	.69	1702.2	.72	1712.91	.73	1727.48	.74
1747.01	.73	1767.42	.76	1780.73	.79	1791.83	.84	1833.97	.93
1836.65	.93	1850.85	.97	1881.46	1.06	1887.22	1.07	1896.7	1.1

ExpandedLocal.rep

1903	1.12	1907.82	1.13	1916.62	1.15	1926.16	1.18	1936.1	1.19
1970.43	1.25	1979.59	1.27	1982.6	1.26	2014.7	1.22	2023.09	1.24
2048.22	1.38	2058.98	1.44	2066.58	1.46	2080.49	1.49	2103.25	1.54
2110.07	1.58	2147.52	1.76	2153.57	1.79	2188.61	1.92	2191.79	1.93
2197.06	1.95	2221.38	2.02	2236.06	2.06	2240.55	2.08	2264.28	2.11
2280.33	2.13	2284.05	2.14	2324.6	2.33	2327.54	2.34	2329.01	2.35
2368.88	2.5	2369.12	2.5	2372.72	2.51	2416.78	2.72	2448.07	2.85
2454.66	2.88	2464.71	2.92	2469.4	2.94	2478.86	2.97	2479.92	2.98
2511.35	3.1	2524.51	3.14	2538.42	3.18	2542.04	3.19	2557.08	3.23
2569.42	3.24	2602.23	3.31	2607.04	3.31	2609.8	3.32	2631.13	3.36
2631.87	3.36	2644.66	3.39	2647.37	3.4	2672.57	3.45	2750.2	3.63
2815.66	3.79	2890.6	3.97	2999.45	4.27	3017.33	4.32	3030.99	4.36
3133.04	4.64	3171.39	4.75	3183.24	4.78	3311.78	5.12	3367.03	5.25
3415.31	5.37	3452.18	5.46	3494.9	5.56	3550.82	5.69	3592.58	5.79
3727.66	6.1	3732.97	6.11	3734.62	6.11	3873.37	6.41		

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
0	.06	643.31	.04	941.53	.06			

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	643.31	941.53		494	494	494		.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 1273

INPUT

Description:

Station Elevation Data num= 126

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	2.3123	018066	2.31813	26685	2.33253	31787	2.5154	78784	2.504
61.73901	2.492103	6189	2.368137	8298	2.45153	9199	2.451179	3508	1.999
204.22	1.825220	8718	1.639	232.019	1.453256	7668	1.041274	5349	.801
309.136	.571311	0869	.549312	0889	.546	315.207	.535367	4109	.321
416.8679	.234422	7329	.224428	9238	.221478	0549	.19494	9709	.56
504.9709	-.04525	9709	.36538	9709	-.84551	9709	-.04570	9709	-.64
591.9709	-.24626	9709	-.06648	9709	-.24661	9709	-.24683	9709	-.06
715.9709	.06727	9709	-.44749	9709	-.44757	9709	.16784	9709	-.76
804.432	.222827	6189	.247857	8579	.273	882.491	.3	911.283	.327
940.287	.352	964.709	.3671008	926	.3881018	135	.3921024	873	.395
1071.56	.4141117	393	.4471124	986	.4511135	362	.461178	411	.502
1209.913	.541231	837	.561261	797	.5781285	263	.6221302	434	.579
1338.688	.5551353	405	.5421388	233	.4921390	961	.4881392	114	.487



ExpandedLocal.rep

1394.954	.4871445.539	.4711487.474	.4841498.965	.4881514.668	.499
1524.04	.506 1550.48	.5251559.842	.5311600.306	.5681619.041	.575
1650.131	.5951678.239	.6071699.957	.5761737.438	.6351749.782	.69
1796.637	.7791799.608	.7791815.402	.8271849.434	.921855.835	.934
1888.524	1.0171899.129	1.0471910.178	1.0581948.349	1.1241958.533	1.141
1997.569	1.0712006.889	1.099 2046.79	1.3382055.244	1.359 2096.01	1.45
2103.599	1.5012145.231	1.7162151.954	1.752194.451	1.9132200.309	1.939
2243.671	2.0762248.664	2.0962292.892	2.153 2297.02	2.1692342.112	2.401
2345.375	2.4142391.332	2.6012391.605	2.6022395.609	2.6212444.594	2.874
2486.71	3.0612497.878	3.1152513.615	3.1782514.792	3.1832549.727	3.327
2564.359	3.3722583.855	3.4422600.578	3.4842614.298	3.4992650.765	3.58
2656.121	3.5852682.901	3.6372697.943	3.6682700.952	3.6762728.971	3.73
4064	6.86				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06494.9709	.04	804.432	.06	

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	494.9709	804.432		0	0		.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 15291

INPUT

Description: 310' DS Confluence with W-15

Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5.9	25	5.3	28	2.71	35	.71	45	-2.79
55	-3.39	65	-3.19	75	-.09	80	2.72	82	2.88
107	2.81	115.34	3.031	129.799	3.072	161.7	3.221	184.766	3.383
198.406	3.412	225.82	3.462	235.111	3.496	239.733	3.563	253.508	3.886
294.7	5.017	308.521	5.555	336.301	6.098	345.226	6.361	349.667	6.275
381.931	5.806	404.634	6.046	446.782	6.048	455.342	6.064	459.6	6.066
492.047	6.059	514.567	5.989	528.752	5.962	533.489	5.968		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	25	.05	82	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	25	82		898	898		.1	.3

ExpandedLocal.rep

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 14393

INPUT  
 Description:

Station Elevation Data num= 42

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5.9	25	5.3	28	2.71	35	.71	45	-2.79
55	-3.39	65	-3.19	75	-.09	80	2.72	82	2.88
106.21	3.058	118.92	3.133	144.8	3.41	155.689	3.517	161.037	3.589
176.705	3.796	215.863	4.27	222.078	4.356	249.006	4.744	264.388	4.972
274.853	5.078	299.811	5.377	334.375	5.673	336.495	5.688	393.898	6.053
423.983	6.171	441.501	6.238	453.42	6.268	511.471	6.423	512.942	6.427
516.073	6.435	572.464	6.585	598.959	6.659	631.986	6.743	654.036	6.796
686.447	6.866	689.459	6.872	691.508	6.875	702.28	6.915	751.03	7.059
773.935	7.039	782.072	7.011						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	25	.05	82	.06

Bank Sta: Left 25 Right 82 Lengths: Left 1509 Channel 897 Right 1270 Coeff Contr. .1 Expan. .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 13496

INPUT  
 Description:

Station Elevation Data num= 41

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-449.311	10.003	405.892	10.061	383.328	9.459	351.134	8.72	337.084	8.202
-296.376	6.697	272.923	5.908	241.618	5.216	236.122	5.192	224.857	4.959
-186.86	4.073	150.655	4.224	132.102	4.213	-112.63	4.221	-88.915	4.172
-77.344	4.181	-52.113	4.209	-22.586	4.529	-15.312	4.526	-.403	4.823
0	4.825	0	5.9	25	5.3	28	2.71	35	.71
45	-2.79	55	-3.39	65	-3.19	75	-.09	80	2.72
82	2.88	107	2.81	123.632	3.676	172.844	3.891	174.08	3.904

ExpandedLocal.rep

174.862 3.909 178.326 3.905 224.529 3.859 237.98 3.945 274.977 3.997  
 291.138 3.988

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -449.311 .06 25 .05 82 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 25 82 571 898 1088 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 12598

INPUT  
 Description:

Station Elevation Data num= 40  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -669.291 10.86-649.733 10.434-617.824 9.806-585.856 9.353-566.356 9.066  
 -557.751 8.971-514.888 8.51 -483.57 8.226-463.421 8.101-452.718 8.067  
 -417.762 8.03-413.315 8.029-411.953 8.025-409.389 8.02-360.485 7.945  
 -334.509 7.911-309.018 7.862-295.106 7.832 -257.55 7.753-255.703 7.746  
 -249.669 7.728-206.082 7.576-186.847 7.486-172.312 7.417-150.425 7.299  
 -130.427 7.169 -86.772 6.902 -52.833 6.548 -23.12 6.183 25 5.3  
 28 2.71 35 .71 45 -2.79 55 -3.39 65 -3.19  
 75 -.09 80 2.72 82 2.88 107 2.81 224 5.1

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -669.291 .06 25 .05 82 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 25 82 1182 962 764 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 11636

INPUT  
 Description:

Station Elevation Data num= 97

ExpandedLocal.rep

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-74	8.348	-68.141	8.373	-53.282	8.483	-38.901	8.444	1.561	8.477
43.371	8.009	56.403	7.766	88.869	7.247	111.245	6.288	122.6	5.35
126.38	5.21	128.52	3.54	129.8	2.67	133.87	1.7	137.79	.73
139.22	.31	144.57	-1.57	149.21	-3.12	149.92	-3.2	155.27	-3.56
160.62	-3.94	167.78	-3.52	171.23	-3.2	174.94	-1.96	181.83	.13
182.09	.26	187.13	2.69	187.82	2.75	189.25	3.12	211.23	3.07
225.383	3.333	257.978	3.569	263.375	3.591	270.806	3.595	320.248	3.588
356.161	3.631	377.12	3.684	405.975	3.805	433.993	3.876	454.344	4.371
459.103	4.497	477.489	4.981	490.796	5.209	539.993	6.144	547.544	6.295
549.587	6.341	553.144	6.377	585.636	6.913	604.292	7.082	651.975	7.65
657.734	7.717	661.04	7.732	673.265	7.729	717.789	7.622	750.806	7.568
774.537	7.518	806.537	7.369	816.572	7.326	831.827	7.261	846.609	7.188
873.224	7.04	890.667	6.923	936.389	6.53	949.507	6.393	974.454	5.97
1008.347	5.485	1026.168	4.897	1067.186	4.001	1115.948	3.962	1122.036	3.945
1126.026	3.926	1145.191	3.867	1184.866	3.748	1193.125	3.726	1205.728	3.71
1243.705	3.671	1295.508	3.741	1299.759	3.746	1302.545	3.756	1315.928	3.811
1361.385	3.987	1370.848	4.043	1385.288	4.109	1416.776	4.258	1419.776	4.273
1446.107	4.892	1453.176	5.032	1473.382	5.426	1494.365	6.021	1517.176	6.766
1531.544	7.235	1586.701	8.741	1589.706	8.812	1594.821	8.828	1647.868	8.98
1679.036	9.113	1706.029	9.141						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-74	.06	126.38	.05	189.25	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	126.38	189.25		634	962	1160	.1
							.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 10674

INPUT

Description:

Station Elevation Data num= 151

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-993	7.072	-976.105	7.168	-945.381	7.044	-913.787	6.634	-890.205	6.234
-867.274	6.118	-835.029	5.887	-809.264	5.793	-779.854	5.754	-758.444	5.794
-724.678	5.797	-689.954	5.688	-669.502	5.603	-649.613	5.612	-626.197	5.592
-614.326	5.601	-578.038	5.704	-559.15	5.744	-540.782	5.913	-516.357	6.076
-503.974	6.13	-479.744	5.961	-448.798	6.097	-443.13	6.103	-431.951	6.147
-393.622	6.22	-354.206	6.359	-338.446	6.361	-323.121	6.334	-283.27	6.21

ExpandedLocal.rep

-260.064	6.276	-228.094	6.297	-223.45	6.284	-214.29	6.277	-172.918	6.231
-130.374	6.192	-117.743	6.178	-113.61	6.172	-110.634	6.173	-102.955	6.185
-74.67	6.198	-65.621	6.229	-48.059	6.287	-13.952	6.347	3.622	6.366
37.718	6.485	58.551	6.51	89.388	6.544	103.894	6.543	141.057	6.605
179.87	6.145	192.727	6.094	220.94	5.39	227.75	5.12	230.16	3.41
231.6	2.63	236.17	1.72	240.58	.76	242.19	.35	248.2	-1.78
253.42	-3.45	254.22	-3.57	260.23	-4.01	266.25	-4.49	273.81	-3.79
277.45	-3.2	281.38	-1.81	288.66	.34	288.94	.47	294.26	2.66
294.99	2.73	296.5	3.36	315.45	3.33	326.619	3.526	371.192	3.572
379.678	3.587	385.408	3.609	432.737	3.716	474.288	3.885	485.796	3.903
502.842	4.328	509.223	4.497	527.608	4.981	540.916	5.209	590.113	6.144
597.664	6.295	599.706	6.341	603.264	6.377	635.756	6.913	654.412	7.082
702.095	7.65	707.854	7.717	711.16	7.732	723.385	7.729	767.909	7.622
800.926	7.568	824.657	7.518	856.657	7.369	866.691	7.326	881.947	7.261
896.729	7.188	923.344	7.04	940.787	6.923	986.509	6.53	999.627	6.393
1024.574	5.971	1058.466	5.485	1076.288	4.897	1117.306	4.001	1166.068	3.962
1172.156	3.945	1176.146	3.926	1195.311	3.867	1209.8	3.27	1211.4	2.59
1216.48	1.73	1221.38	.78	1223.16	.39	1229.84	-1.98	1235.62	-3.78
1236.52	-3.95	1243.2	-4.46	1257.84	-4.06	1261.68	-3.21	1265.81	-1.66
1273.49	.56	1273.78	.68	1279.39	2.63	1280.16	2.7	1281.75	3.6
1293.825	3.671	1345.628	3.741	1349.879	3.746	1352.665	3.756	1366.048	3.811
1411.505	3.987	1420.968	4.043	1435.407	4.109	1466.896	4.258	1469.896	4.273
1496.227	4.892	1503.296	5.032	1523.502	5.426	1544.485	6.021	1567.296	6.766
1581.664	7.235	1636.82	8.741	1639.826	8.812	1644.941	8.828	1697.987	8.98
1729.156	9.113								

Manning's n Values num= 5

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
-993	.06	227.75	.05	296.5	.06	1166.068	.05	1293.825	.06

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	227.75	296.5		1244	963	627		.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 9711

INPUT

Description:

Station Elevation Data num= 111

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
156.745	9.336	175.278	9.231	188.165	9.063	242.946	7.457	248.106	7.313
281.345	6.4	308.046	5.727	319.28	5.42	329.12	5.03	331.8	3.27
333.4	2.59	338.48	1.73	343.38	.78	345.16	.39	351.84	-1.98

ExpandedLocal.rep

357.62	-3.78	358.52	-3.95	365.2	-4.46	371.88	-5.04	379.84	-4.06
383.68	-3.21	387.81	-1.66	395.49	.56	395.78	.68	401.39	2.63
402.16	2.7	403.75	3.6	419.68	3.59	528.867	5.355	560.866	6.123
570.181	6.308	587.15	6.638	606.425	7.145	617.007	7.098	653.355	7.057
667.334	7.036	673.141	7.027	678.92	7.02	689.51	6.998	729.204	6.919
776.886	6.696	785.267	6.663	792.245	6.624	824.001	6.43	841.331	6.125
894.979	5.611	897.394	5.581	900.296	5.527	953.458	4.487	997.713	4.154
1009.521	4.152	1023.705	4.127	1065.585	4.026	1077.893	4.001	11085.632	3.992
1096.125	3.983	1128	3.968	1209.8	3.27	1211.4	2.59	1216.48	1.73
1221.38	.78	1223.16	.39	1229.84	-1.98	1235.62	-3.78	1236.52	-3.95
1243.2	-4.46	1257.84	-4.06	1261.68	-3.21	1265.81	-1.66	1273.49	.56
1273.78	.68	1279.39	2.63	1280.16	2.7	1281.75	3.6	1297.68	3.59
1387.171	4.773	1395.803	4.871	1426.501	5.042	1459.933	5.781	1462.616	5.822
1492.746	6.344	1529.428	6.984	1532.694	7.037	1565.822	7.634	1596.24	7.683
1600.652	7.741	1605.456	7.749	1635.482	7.859	1663.053	7.887	1670.312	7.906
1678.217	7.911	1729.865	7.932	1733.222	7.932	1754.106	7.937	1775.392	7.942
1790.354	7.942	1810.716	7.942	1839.681	7.942	1850.509	7.944	1876.131	7.945
1910.664	7.947	1925.257	7.947	1952.011	7.949	1970.818	7.949	1987.335	7.945
2010.833	7.952	2022.659	7.952	2030.973	7.955	2057.983	7.943	2091.128	8.129
2093.307	8.129								

Manning's n Values num= 5

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
156.745	.06	329.12	.05	403.75	.06	1128	.05	1281.75	.06

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	329.12	403.75		962	962	962		.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 8749

INPUT

Description:

Station Elevation Data num= 43

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
129	7.693	138.747	7.734	141.802	7.742	146.361	7.755	197.988	7.872
234.761	7.961	257.23	8	283.685	8.029	316.471	8.401	323.161	8.396
375.712	7.918	411.561	7.24	417.63	5.45	430.5	4.95	433.44	3.14
435.2	2.55	440.78	1.74	446.17	.81	448.12	.43	455.47	-2.19
461.83	-4.11	462.81	-4.32	470.16	-4.91	477.5	-5.6	485.88	-4.33
489.91	-3.22	494.25	-1.51	502.31	.78	502.62	.9	508.52	2.6
509.33	2.68	511	3.85	523.9	3.85	656.116	5.947	665.841	6.203
667.49	6.242	708.516	6.935	717.406	7.245	751.191	7.59	767.322	7.778

ExpandedLocal.rep

793.866 7.96 817.238 8.436 836.541 8.493

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
129 .06 430.5 .05 511 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
430.5 511 685 962 1126 .1 .3

CROSS SECTION

RIVER: Doubloon
REACH: to Pearl RS: 7787

INPUT

Description:

Station Elevation Data num= 48
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
\*\*\*\*\*
129 7.693 138.747 7.734 141.802 7.742 146.361 7.755 197.988 7.872
234.761 7.961 257.23 8 283.685 8.029 316.471 8.401 323.161 8.396
375.712 7.918 411.561 7.24 425.568 6.92 434.954 6.747 482.479 5.91
494.195 5.695 499.962 5.591 515.97 5.49 531.88 4.86 535.08 3
537 2.52 543.09 1.75 548.96 .83 551.09 .47 559.1 -2.39
566.04 -4.44 567.11 -4.69 575.12 -5.36 583.12 -6.15 591.91 -4.6
596.13 -3.22 600.69 -1.36 609.14 .99 609.47 1.11 615.65 2.57
616.49 2.66 618.25 4.09 628.13 4.11 656.116 5.947 665.841 6.203
667.49 6.242 708.516 6.935 717.406 7.245 751.191 7.59 767.322 7.778
793.866 7.96 817.238 8.436 836.541 8.493

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
129 .06 531.88 .05 618.25 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
531.88 618.25 511 963 1504 .1 .3

CROSS SECTION

RIVER: Doubloon
REACH: to Pearl RS: 6824

INPUT

Description:

ExpandedLocal.rep

Station Elevation Data num= 91

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-756	9.553	748.539	9.639	715.276	10.148	699.069	10.677	679.163	10.288
-649.599	9.736	625.529	8.655	600.129	7.249	580.655	6.449	550.659	5.275
-535.781	4.911	501.189	4.153	458.701	4.087	451.719	4.091	403.586	4.035
-402.249	4.033	390.536	3.986	352.779	3.839	348.47	3.82	303.309	3.497
-266.54	3.619	253.839	3.615	221.666	3.712	204.369	3.773	176.986	3.931
-176.742	3.932	154.839	4.056	137.851	4.139	105.236	4.355	63.188	4.632
-55.632	4.682	-49.771	4.713	-6.028	4.905	-5.731	4.907	-3.38	4.93
43.575	5.403	82.348	5.683	93.179	5.745	126.388	5.94	142.783	5.958
170.428	6.259	192.386	6.36	214.468	6.695	241.99	7.195	258.507	7.24
291.594	7.482	293.726	7.49	300.697	7.505	310.981	7.536	359.129	7.739
381.907	7.802	405.111	7.898	427.469	7.841	452.832	7.904	474.72	7.851
495.81	7.601	509.524	7.492	523.757	7.69	544.329	7.578	564.15	6.862
579.133	6.143	594.683	5.644	633.25	4.77	636.72	2.86	638.8	2.48
645.39	1.77	651.75	.86	654.06	.51	662.73	-2.6	670.25	-4.77
671.41	-5.06	680.08	-5.81	688.75	-6.7	697.94	-4.87	702.36	-3.23
707.12	-1.21	715.97	1.21	716.31	1.32	722.78	2.55	723.66	2.64
725.5	4.33	732.36	4.37	734.793	4.635	798.856	7.877	800.208	7.929
801.443	7.965	835.042	8.412	868.094	8.122	869.876	8.114	871.828	8.101
905.511	7.904								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-756	.06	633.25	.05	725.5	.06

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
633.25	725.5	962	962	962	.1	.3	
Ineffective Flow	num=	1					
Sta L	Sta R	Elev	Permanent				
-756	405.11	7.9	F				

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 5862

INPUT

Description:

Station Elevation Data num= 65

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
106	8.382	118.683	8.372	139.495	8.298	172.577	8.246	189.967	8.218
200.907	8.197	240.439	8.134	242.019	8.13	248.96	8.118	290.911	8.05
324.243	8.036	341.382	8.058	368.626	7.977	391.854	7.922	433.976	7.747



ExpandedLocal.rep

442.326	7.719	470.653	7.66	492.798	7.576	529.803	7.174	543.269	7.068
570.915	6.955	593.741	6.751	630.025	6.408	712.66	5.56	734.62	4.68
738.36	2.73	740.6	2.44	747.7	1.78	754.54	.88	757.03	.55
766.37	-2.8	774.46	-5.11	775.7	-5.44	785.04	-6.26	794.38	-7.25
803.97	-5.14	808.59	-3.24	813.56	-1.06	822.8	1.43	823.16	1.53
829.91	2.52	830.83	2.61	832.75	4.57	836.58	4.63	951.25	6.92
965.102	7.118	977.302	6.842	995.213	6.994	1024.647	6.975	1070.023	6.984
1078.055	6.961	1083.936	6.955	1095.033	7.032	1120.34	7.136	1133.749	7.201
1156.744	7.347	1189.444	7.681	1200.141	7.762	1229.553	8.021	1245.138	8.05
1295.855	8.226	1300.833	8.248	1305.248	8.258	1338.766	8.311	1354.083	8.344

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
106	.06	734.62	.05	832.75	.06			

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
734.62	832.75	1319	962	465	.1	.3	

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 4900

INPUT

Description:

Station Elevation Data num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	4.38	27.367	4.638	54.325	4.439	79.048	4.45	93.457	4.416
130.729	4.2	132.589	4.19	138.389	4.164	177	5.59	202	4.59
206	2.59	216	1.79	226	.59	236	-3.01	246	-5.81
256	-6.71	266	-7.8	276	-5.41	286	-.91	296	1.74
304	2.59	306	4.81	337.454	3.845	355.349	3.853	389.135	3.901
406.513	3.901	440.816	3.901	460.702	3.901	486	0	548	0
563.04	4.759	595.859	4.953	609.094	4.923	635.378	5.093	647.306	5.077
669.409	4.982	698.671	4.933	742.686	4.706	750.037	4.674	767.269	4.595
801.402	4.46	822.019	4.358	833.05	4.305	852.826	4.119	872.459	4.086
904.29	3.912	936.641	3.864	944	1	1028	11109.376	4.15	
1109.765	4.154	1109.884	4.155	1160.321	5.441	1175.996	5.288	1210.877	5.473
1242.108	5.932	1261.434	6.019	1308.221	6.157	1311.99	6.169	1324.241	6.144
1333.181	6.135								

Manning's n Values num= 7

Sta	n	Val	Sta	n	Val	Sta	n	Val	Sta	n	Val
0	.06	202	.04	306	.06	460.702	.04	563.04	.1		

ExpandedLocal.rep

936.641 .041160.321 .1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	202	306		480	480		.1	.3
Ineffective Flow	num=		1					
Sta L	Sta R	Elev	Permanent					
635.381333.181		5.09	F					

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 4420

INPUT

Description: Interpolates Section

Station Elevation Data		num=		157					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
0	4.31	25.95	4.54	31.56	4.5	51.5	4.37	74.94	4.39
88.47	4.37	106.21	4.27	123.47	4.16	125.22	4.15	130.67	4.12
166.92	5.38	190.4	4.47	193.71	2.36	194.23	2.12	203.81	1.34
213.39	.21	222.97	-3.09	230.16	-5.02	232.54	-5.7	242.12	-6.7
251.7	-7.88	261.55	-5.44	271.4	-1.1	281.25	1.58	289.13	2.58
291.1	4.64	298.46	4.48	299.52	4.48	308.72	4.3	311.09	4.16
318.19	4.09	320.56	4.05	326.08	3.82	328.71	3.88	334.24	3.8
334.76	3.82	336.77	3.79	340.02	3.8	355.81	3.89	362.76	3.94
362.91	3.94	368.17	3.96	371.85	3.96	377.38	4.01	385	4.08
387.63	4.11	395.79	4.16	403.68	4.24	405.26	4.24	407.36	4.26
411.81	4.28	419.72	4.3	423.67	4.29	429.46	4.37	432.88	4.37
435.51	4.38	437.05	4.36	442.35	4.29	451.55	4.27	460.76	4.24
467.33	4.24	473.91	4.28	479.43	4.3	483.38	4.26	486.86	4.19
488.64	4.16	496	4.07	497.85	4.05	499.16	4.04	507.31	3.93
515.21	3.82	515.73	3.82	523.7	2.72	541.4	-.09	557.5	.14
579.8	.13	590.95	-.01	602.1	-.11	618.44	4.57	633.89	4.67
652.36	4.78	664.04	4.77	666.04	4.77	674.09	4.83	693.21	4.97
694.18	4.97	705.55	4.97	714.28	4.95	724.33	4.92	728.39	4.89
752.93	4.83	758.64	4.82	783.84	4.69	794.67	4.64	804.14	4.6
811.74	4.57	813.99	4.56	829.56	4.49	834.86	4.47	844.13	4.44
864.84	4.37	870.41	4.35	877.37	4.32	886.15	4.28	897.56	4.24
915.24	4.1	918	4.08	933.79	4.05	938.3	4.04	955.44	3.96
971.2	3.88	987.9	3.86	994.08	3.85	995.63	3.85	1004.64	3.84
1012.25	1.26	1023.46	1.26	1035.82	1.25	1053.6	1.23	1061.33	1.14
1078.33	.34	1093.79	.18	1099.08	.39	1101.52	.57	1111.57	1.28
1121.62	1.86	1123.94	2.02	1127.03	2.13	1157.17	3.24	1161.04	3.51
1183.21	4.29	1183.61	4.29	1183.73	4.3	1193.5	4.53	1195.05	4.57
1197.37	4.63	1215.92	5.06	1232.15	5.43	1233.7	5.46	1235.87	5.5
1252.07	5.32	1266.93	5.35	1271.57	5.38	1288.13	5.46	1302.49	5.65

ExpandedLocal.rep

1310.22	5.75	1320.42	5.89	1337.27	5.96	1340.4	5.98	1348.09	6
1372.82	6.08	1385.96	6.16	1388.76	6.17	1392.66	6.19	1405.32	6.21
1407.61	6.21	1414.56	6.2						

Manning's n Values num= 7

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	190.4	.04	291.1	.1	515.21	.04	618.44	.1
1004.64	.04	1161.04	.1						

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	190.4	291.1		480	480	480		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
705.55	1414.56	4.97	F

CROSS SECTION

RIVER: Doubloun  
 REACH: to Pearl RS: 3940

INPUT

Description: Interpolated Section

Station Elevation Data num= 157

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	4.25	24.52	4.44	29.83	4.41	48.68	4.31	70.84	4.34
83.49	4.31	100.08	4.23	116.22	4.12	117.85	4.11	122.94	4.08
156.85	5.18	178.8	4.34	181.97	1.87	182.46	1.64	191.62	.89
200.77	-.18	209.93	-3.17	216.81	-4.93	219.09	-5.59	228.24	-6.7
237.4	-7.96	247.1	-5.47	256.8	-1.28	266.5	1.42	274.26	2.57
276.2	4.46	285.86	4.3	287.24	4.32	299.31	4.15	302.41	3.94
311.73	3.95	314.83	3.91	325.52	3.74	332.77	3.7	333.46	3.76
336.09	3.74	340.36	3.76	361.05	3.93	370.16	4.02	370.36	4.02
377.26	4.06	382.09	4.05	389.33	4.15	399.34	4.28	402.79	4.34
413.48	4.43	423.83	4.59	425.9	4.59	425.9	4.6	428.65	4.62
434.49	4.65	444.87	4.7	450.04	4.68	457.63	4.83	462.11	4.85
465.56	4.85	467.58	4.81	474.53	4.68	486.6	4.63	498.67	4.58
507.3	4.59	515.92	4.66	523.16	4.7	528.34	4.62	532.9	4.48
535.23	4.41	544.89	4.24	547.31	4.2	549.03	4.17	559.72	3.95
570.07	3.74	570.76	3.74	578.84	2.75	596.8	-.18	612.56	.28
634.38	.26	645.29	-.02	656.2	-.22	673.83	4.38	689.8	4.49
708.87	4.62	720.92	4.62	722.99	4.62	731.3	4.69	751.05	4.84
752.05	4.84	763.78	4.86	772.8	4.85	783.18	4.83	787.38	4.81
812.71	4.72	818.62	4.7	844.64	4.58	855.81	4.53	865.6	4.49
873.45	4.46	875.77	4.45	891.84	4.39	897.32	4.37	906.9	4.34
928.28	4.28	934.03	4.26	941.22	4.24	950.29	4.21	962.06	4.17

ExpandedLocal.rep

980.33	4.06	983.17	4.04	999.48	4	1004.13	4	1021.83	3.92
1038.11	3.85	1055.36	3.83	1061.74	3.82	1063.34	3.82	1072.64	3.81
1080.5	1.52	1092.07	1.53	1104.84	1.51	1123.2	1.47	1131.18	1.28
1148.74	-.32	1164.71	-.64	1170.17	-.22	1172.69	.05	1183.06	1.09
1193.44	1.88	1195.83	2.12	1199.03	2.21	1230.16	3.31	1234.15	3.7
1257.04	4.43	1257.45	4.44	1257.58	4.44	1267.67	4.66	1269.27	4.71
1271.66	4.76	1290.82	5.17	1307.58	5.5	1309.17	5.54	1311.42	5.57
1328.15	5.36	1343.49	5.33	1348.28	5.37	1365.39	5.45	1380.21	5.62
1388.19	5.71	1398.73	5.84	1416.13	5.92	1419.36	5.94	1427.3	5.97
1452.84	6.04	1466.41	6.17	1469.3	6.19	1473.32	6.22	1486.4	6.27
1488.76	6.28	1495.94	6.26						

Manning's n Values num= 7

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	178.8	.04	276.2	.1	570.07	.04	673.83	.1
1072.64	.04	1234.15	.1						

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	178.8	276.2		480	480	480		.1	.3
Ineffective Flow			num=	1					
Sta L	Sta R	Elev	Permanent						
772.8	1495.94	4.85	F						

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 3460

INPUT

Description: Interpolated Section

Station Elevation Data num= 156

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	4.18	23.1	4.35	28.1	4.31	45.86	4.24	66.73	4.28
78.51	4.26	93.94	4.19	108.96	4.08	110.48	4.07	115.22	4.04
146.77	4.97	167.2	4.22	170.22	1.37	170.69	1.17	179.43	.45
188.16	-.56	196.9	-3.25	203.46	-4.84	205.63	-5.48	214.37	-6.69
223.1	-8.04	232.65	-5.49	242.2	-1.47	251.75	1.26	259.39	2.56
261.3	4.29	273.25	4.12	274.96	4.17	289.9	4.01	305.26	3.8
309.1	3.77	322.33	3.6	331.3	3.6	332.15	3.69	335.41	3.69
340.69	3.72	366.29	3.97	377.57	4.1	377.82	4.1	386.35	4.16
392.33	4.14	401.29	4.3	413.67	4.48	417.94	4.57	431.17	4.71
443.97	4.94	446.53	4.94	446.53	4.95	449.95	4.99	457.17	5.03
470.01	5.09	476.41	5.07	485.8	5.3	491.35	5.32	495.62	5.33
498.12	5.27	506.71	5.08	521.65	5	536.59	4.92	547.26	4.93
557.93	5.04	566.89	5.11	573.29	4.98	578.94	4.77	581.83	4.67

ExpandedLocal.rep

593.78	4.41	596.77	4.36	598.9	4.31	612.13	3.98	624.94	3.65
625.79	3.65	633.99	2.78	652.2	-.27	667.61	.42	688.96	.39
699.63	-.03	710.3	-.33	729.23	4.18	745.7	4.32	765.37	4.45
777.81	4.47	779.94	4.47	788.51	4.54	808.89	4.72	809.92	4.72
822.02	4.75	831.33	4.76	842.03	4.75	846.36	4.72	872.5	4.6
878.59	4.59	905.43	4.47	916.96	4.41	927.06	4.38	935.15	4.35
937.55	4.34	954.13	4.29	959.78	4.27	969.66	4.25	991.72	4.2
997.66	4.18	1005.07	4.16	1014.42	4.14	1026.57	4.11	1045.41	4.01
1048.35	3.99	1065.17	3.96	1069.97	3.95	1088.23	3.89	1105.02	3.82
1122.81	3.8	1129.4	3.8	1131.05	3.79	1140.65	3.79	1148.75	1.79
1160.69	1.79	1173.86	1.76	1192.8	1.7	1201.03	1.42	1219.15	-.98
1235.62	-1.46	1241.25	-.83	1243.85	-.47	1254.56	.9	1265.26	1.9
1267.73	2.21	1271.02	2.29	1303.14	3.38	1307.25	3.9	1330.87	4.57
1331.3	4.58	1331.43	4.58	1341.84	4.79	1343.48	4.84	1345.95	4.9
1365.71	5.28	1383.01	5.58	1384.65	5.61	1386.97	5.63	1404.23	5.39
1420.06	5.32	1425	5.36	1442.64	5.44	1457.93	5.59	1466.17	5.67
1477.03	5.8	1494.99	5.88	1498.32	5.9	1506.51	5.93	1532.86	6.01
1546.86	6.17	1549.84	6.2	1553.99	6.24	1567.48	6.33	1569.92	6.35
1577.33	6.32								

Manning's n Values num= 7

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	167.2	.04	261.3	.1	624.94	.04	729.23	.1
1140.65	.04	1307.25	.06						

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	167.2	261.3		480	480		.1	.3
Ineffective Flow			num=	1				
Sta L	Sta R	Elev	Permanent					
831.33	1577.33	4.76	F					

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 2980

INPUT

Description: Interpolated Section

Station Elevation Data num= 156

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	4.12	21.68	4.25	26.37	4.22	43.04	4.17	62.63	4.23
73.52	4.21	87.81	4.15	101.71	4.04	103.11	4.03	107.5	4
136.7	4.76	155.6	4.1	158.48	.87	158.93	.7	167.24	0
175.55	-.94	183.86	-3.32	190.11	-4.75	192.18	-5.36	200.49	-6.69
208.8	-8.12	218.2	-5.52	227.6	-1.65	237	1.1	244.52	2.55

ExpandedLocal.rep

246.4	4.11	260.64	3.94	262.68	4.01	280.48	3.87	298.8	3.66
303.37	3.63	319.14	3.47	329.83	3.51	330.84	3.63	334.73	3.63
341.02	3.68	371.54	4.01	384.98	4.18	385.27	4.19	395.45	4.27
402.57	4.24	413.25	4.44	428	4.68	433.09	4.8	448.86	4.98
464.12	5.28	467.17	5.28	467.17	5.3	471.24	5.35	479.85	5.4
495.15	5.49	502.78	5.46	513.97	5.76	520.58	5.8	525.67	5.8
528.65	5.73	538.9	5.47	556.7	5.36	574.51	5.26	587.22	5.27
599.94	5.42	610.62	5.51	618.25	5.34	624.98	5.07	628.43	4.92
642.67	4.58	646.23	4.51	648.77	4.44	664.54	4	679.8	3.57
680.82	3.57	689.13	2.81	707.6	-.36	722.67	.56	743.53	.52
753.97	-.04	764.4	-.44	784.62	3.99	801.6	4.14	821.87	4.28
834.69	4.31	836.89	4.32	845.73	4.4	866.73	4.59	867.79	4.6
880.26	4.64	889.85	4.66	900.89	4.66	905.35	4.63	932.28	4.49
938.56	4.47	966.23	4.35	978.11	4.3	988.52	4.27	996.86	4.24
999.33	4.23	1016.42	4.18	1022.24	4.17	1032.42	4.15	1055.16	4.11
1061.28	4.1	1068.91	4.08	1078.56	4.06	1091.08	4.04	1110.5	3.97
1113.52	3.95	1130.86	3.91	1135.8	3.91	1154.62	3.85	1171.93	3.8
1190.27	3.78	1197.06	3.77	1198.75	3.77	1208.65	3.76	1217	2.05
1229.3	2.06	1242.88	2.02	1262.4	1.94	1270.89	1.56	1289.56	-1.64
1306.53	-2.28	1312.34	-1.44	1315.02	-.99	1326.05	.72	1337.08	1.91
1339.63	2.31	1343.02	2.38	1376.12	3.45	1380.36	4.09	1404.7	4.71
1405.14	4.72	1405.27	4.72	1416	4.92	1417.7	4.98	1420.24	5.03
1440.61	5.4	1458.43	5.66	1460.13	5.69	1462.52	5.7	1480.31	5.42
1496.62	5.3	1501.71	5.35	1519.9	5.42	1535.66	5.56	1544.14	5.63
1555.34	5.75	1573.85	5.84	1577.28	5.86	1585.73	5.9	1612.88	5.97
1627.31	6.18	1630.38	6.22	1634.66	6.27	1648.56	6.39	1651.07	6.41
1658.71	6.38								

Manning's n Values num= 7

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	155.6	.04	246.4	.1	679.8	.04	784.62	.1
1208.65	.04	1380.36	.06						

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	155.6	246.4		480	480	480		.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 2500

INPUT

Description: Interpolated Section

Station Elevation Data num= 154

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									

ExpandedLocal.rep

0	4.05	20.26	4.15	24.64	4.13	40.22	4.1	58.52	4.18
68.54	4.16	81.67	4.11	94.45	4	95.75	3.99	99.78	3.96
126.62	4.55	144	3.97	146.73	.38	147.16	.23	155.05	-.45
162.94	-1.33	170.83	-3.4	176.76	-4.66	178.72	-5.25	186.61	-6.68
194.5	-8.2	203.75	-5.55	213	-1.84	222.25	.95	229.65	2.54
231.5	3.94	248.04	3.76	250.4	3.86	271.07	3.73	292.33	3.51
297.64	3.49	329.54	3.56	334.04	3.58	341.35	3.64	376.78	4.05
392.38	4.27	392.73	4.27	404.54	4.37	412.81	4.33	425.21	4.58
442.34	4.89	448.24	5.03	466.55	5.25	484.27	5.63	487.81	5.63
487.81	5.66	492.53	5.71	502.53	5.78	520.29	5.89	529.15	5.85
542.14	6.23	549.82	6.27	555.73	6.28	559.19	6.19	571.08	5.86
591.75	5.73	612.42	5.6	627.19	5.62	641.95	5.81	654.35	5.91
663.21	5.7	671.02	5.36	675.02	5.18	691.56	4.75	695.69	4.66
698.64	4.58	716.95	4.03	734.67	3.49	735.85	3.49	744.28	2.85
763	-.46	777.72	.69	798.11	.65	808.31	-.05	818.5	-.56
840.02	3.8	857.5	3.96	878.38	4.11	891.58	4.16	893.84	4.17
902.94	4.26	924.56	4.46	925.66	4.47	938.5	4.53	948.38	4.57
959.74	4.58	964.33	4.55	992.07	4.38	998.53	4.36	1027.02	4.24
1039.26	4.19	1049.97	4.16	1058.56	4.13	1061.11	4.13	1078.7	4.08
1084.7	4.07	1095.19	4.05	1118.6	4.02	1124.9	4.01	1132.76	4
1142.69	3.99	1155.58	3.98	1175.58	3.93	1178.7	3.91	1196.55	3.87
1201.64	3.86	1221.02	3.81	1238.84	3.77	1257.72	3.75	1264.71	3.74
1266.46	3.74	1276.65	3.74	1285.25	2.31	1297.92	2.32	1311.9	2.28
1332	2.17	1340.74	1.7	1359.96	-2.31	1377.44	-3.11	1383.42	-2.04
1386.18	-1.51	1397.54	.53	1408.9	1.93	1411.52	2.4	1415.02	2.46
1449.1	3.52	1453.47	4.28	1478.53	4.85	1478.98	4.86	1479.12	4.86
1490.17	5.05	1491.92	5.12	1494.54	5.17	1515.51	5.51	1533.86	5.74
1535.61	5.76	1538.07	5.76	1556.39	5.46	1573.18	5.29	1578.43	5.34
1597.15	5.41	1613.38	5.53	1622.12	5.59	1633.65	5.7	1652.71	5.8
1656.24	5.82	1664.94	5.86	1692.9	5.94	1707.76	6.19	1710.92	6.23
1715.32	6.29	1729.64	6.45	1732.23	6.48	1740.09	6.44		

Manning's n Values num= 7

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	144	.04	231.5	.1	734.67	.04	840.02	.1
1276.65	.04	1449.1	.06						

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 144 231.5 480 480 480 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 2020

INPUT



ExpandedLocal.rep

Description: Interpolated Section

Station Elevation Data num= 152									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	3.98	18.84	4.06	22.91	4.03	37.4	4.04	54.42	4.12
63.56	4.11	75.54	4.07	87.2	3.96	88.38	3.95	92.06	3.92
116.54	4.35	132.4	3.85	134.98	-.12	135.39	-.25	142.86	-.9
150.32	-1.71	157.79	-3.48	163.41	-4.57	165.26	-5.14	172.73	-6.68
180.2	-8.29	189.3	-5.58	198.4	-2.03	207.5	.79	214.78	2.53
216.6	3.77	235.43	3.58	238.12	3.7	261.65	3.59	328.23	3.5
333.36	3.53	341.68	3.6	382.03	4.08	399.79	4.35	400.18	4.36
413.63	4.47	423.05	4.42	437.17	4.73	456.67	5.09	463.39	5.26
484.24	5.53	504.41	5.98	508.45	5.98	508.45	6.01	513.83	6.08
525.21	6.15	545.43	6.29	555.52	6.24	570.31	6.69	579.06	6.74
585.78	6.76	589.72	6.64	603.26	6.25	626.8	6.1	650.34	5.94
667.15	5.96	683.96	6.19	698.08	6.31	708.17	6.06	717.06	5.65
721.62	5.44	740.45	4.91	745.15	4.81	748.52	4.71	769.36	4.05
789.54	3.41	790.88	3.41	799.42	2.88	818.4	-.55	832.78	.83
852.69	.78	862.64	-.07	872.6	-.67	895.42	3.61	913.4	3.79
934.88	3.94	948.46	4	950.79	4.02	960.15	4.11	982.4	4.34
983.53	4.35	996.74	4.42	1006.9	4.47	1018.59	4.5	1023.32	4.46
1051.86	4.26	1058.51	4.24	1087.82	4.12	1100.41	4.07	1111.43	4.05
1120.27	4.03	1122.88	4.02	1140.99	3.98	1147.16	3.97	1157.95	3.95
1182.03	3.93	1188.52	3.93	1196.61	3.91	1206.83	3.91	1220.09	3.91
1240.66	3.88	1243.87	3.87	1262.24	3.82	1267.48	3.82	1287.42	3.78
1305.75	3.74	1325.18	3.72	1332.37	3.71	1334.17	3.71	1344.65	3.71
1353.5	2.57	1366.54	2.58	1380.92	2.53	1401.6	2.4	1410.59	1.83
1430.37	-2.97	1448.35	-3.93	1454.51	-2.65	1457.34	-2.03	1469.03	.34
1480.72	1.95	1483.42	2.49	1487.01	2.54	1522.08	3.59	1526.57	4.47
1552.36	4.99	1552.83	5	1552.97	5	1564.33	5.18	1566.13	5.25
1568.83	5.31	1590.41	5.62	1609.29	5.82	1611.09	5.84	1613.62	5.82
1632.47	5.49	1649.75	5.27	1655.14	5.34	1674.41	5.4	1691.11	5.5
1700.1	5.55	1711.96	5.66	1731.56	5.76	1735.2	5.78	1744.15	5.82
1772.92	5.91	1788.21	6.2	1791.46	6.25	1795.99	6.32	1810.72	6.51
1813.38	6.55	1821.47	6.5						

Manning's n Values num= 7									
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	132.4	.04	216.6	.1	789.54	.04	872.6	.1
1344.65	.04	1487.01	.06						

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 132.4 216.6 480 480 480 .1 .3

CROSS SECTION

ExpandedLocal.rep

RIVER: Doubloon  
 REACH: to Pearl

RS: 1540

INPUT

Description: Interpolated Section

Station Elevation Data

num= 159

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	3.92	17.42	3.96	21.19	3.94	34.58	3.97	50.31	4.07
58.57	4.06	69.4	4.04	79.94	3.92	81.01	3.91	84.33	3.88
106.47	4.14	120.8	3.73	123.24	-.62	123.62	-.72	130.67	-1.35
137.71	-2.09	144.76	-3.56	150.05	-4.48	151.81	-5.03	158.85	-6.67
165.9	-8.37	174.85	-5.61	183.8	-2.21	192.75	.63	199.91	2.52
201.7	3.59	222.82	3.41	225.84	3.55	252.24	3.45	259.03	2.82
265.82	.87	279.4	3.22	286.19	3.21	302.03	2.33	309.57	3.05
325.41	3.21	326.92	3.43	332.68	3.47	342.01	3.55	387.27	4.12
407.2	4.43	407.64	4.44	422.72	4.57	433.28	4.52	449.13	4.87
471	5.29	478.54	5.49	501.93	5.8	524.56	6.33	529.09	6.33
529.09	6.36	535.12	6.44	547.89	6.53	570.57	6.69	581.89	6.63
598.49	7.16	608.29	7.22	615.84	7.23	620.26	7.1	635.45	6.64
661.85	6.46	688.25	6.28	707.11	6.3	725.97	6.57	741.81	6.71
753.13	6.42	763.1	5.94	768.21	5.69	789.33	5.08	794.62	4.96
798.39	4.85	821.77	4.08	844.4	3.33	845.91	3.33	854.57	2.91
873.8	-.64	887.83	.97	907.27	.91	916.98	-.08	926.7	-.78
950.81	3.42	969.3	3.61	991.38	3.77	1005.35	3.85	1007.74	3.87
1017.36	3.97	1040.24	4.21	1041.39	4.22	1054.98	4.31	1065.43	4.38
1077.44	4.41	1082.3	4.37	1111.64	4.15	1118.48	4.13	1148.61	4.01
1161.56	3.96	1172.89	3.94	1181.98	3.92	1184.66	3.91	1203.28	3.88
1209.62	3.86	1220.71	3.85	1245.47	3.85	1252.14	3.84	1260.46	3.83
1270.96	3.84	1284.6	3.85	1305.75	3.84	1309.04	3.83	1327.93	3.78
1333.31	3.77	1353.81	3.74	1372.66	3.71	1392.63	3.69	1400.03	3.68
1401.88	3.68	1412.65	3.69	1421.75	2.84	1435.15	2.85	1449.94	2.78
1471.2	2.64	1480.44	1.97	1500.78	-3.63	1519.26	-4.75	1525.59	-3.26
1528.51	-2.55	1540.52	.15	1552.54	1.97	1555.31	2.59	1559.01	2.62
1595.06	3.65	1599.68	4.66	1626.19	5.13	1626.67	5.14	1626.82	5.14
1638.5	5.31	1640.35	5.39	1643.12	5.44	1665.31	5.73	1684.72	5.9
1686.57	5.91	1689.17	5.89	1708.54	5.52	1726.31	5.26	1731.86	5.33
1751.66	5.39	1768.83	5.48	1778.07	5.52	1790.27	5.61	1810.42	5.72
1814.16	5.74	1823.36	5.79	1852.94	5.87	1868.65	6.21	1872	6.26
1876.66	6.34	1891.8	6.57	1894.54	6.62	1902.85	6.56		

Manning's n Values

num= 9

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	120.8	.04	201.7	.1	252.24	.04	326.92	.1
844.4	.04	950.81	.06	1412.65	.04	1595.06	.06		

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

ExpandedLocal.rep

120.8 201.7 480 480 480 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 252.24 326.92 3.59 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 1060

INPUT

Description: Interpolated Section

Station Elevation Data num= 159

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	3.85	16	3.86	19.46	3.85	31.76	3.9	46.21	4.01
53.59	4.01	63.27	4	72.69	3.88	73.64	3.87	76.61	3.84
96.39	3.93	109.2	3.61	111.49	-1.12	111.85	-1.19	118.47	-1.8
125.1	-2.48	131.73	-3.64	136.7	-4.39	138.35	-4.92	144.98	-6.66
151.6	-8.45	160.4	-5.63	169.2	-2.4	178	.47	185.04	2.51
186.8	3.42	210.21	3.23	213.56	3.39	242.83	3.3	250.35	2.6
257.88	.38	272.93	3.08	280.46	3.07	298.02	2.09	306.38	2.92
323.94	3.12	325.61	3.37	332	3.42	342.34	3.51	392.51	4.16
414.61	4.51	415.09	4.52	431.82	4.68	443.52	4.61	461.08	5.01
485.33	5.49	493.7	5.72	519.62	6.07	544.71	6.67	549.72	6.67
549.72	6.71	556.41	6.8	570.57	6.91	595.72	7.08	608.26	7.02
626.66	7.62	637.53	7.69	645.89	7.71	650.79	7.56	667.63	7.04
696.9	6.83	726.17	6.62	747.07	6.64	767.98	6.95	785.54	7.12
798.08	6.78	809.14	6.23	814.81	5.95	838.22	5.25	844.08	5.12
848.26	4.98	874.18	4.1	899.27	3.24	900.94	3.24	909.71	2.94
929.2	-.73	942.89	1.11	961.84	1.04	971.32	-.09	980.8	-.89
1006.21	3.22	1025.2	3.43	1047.89	3.61	1062.23	3.7	1064.69	3.72
1074.58	3.83	1098.07	4.09	1099.26	4.1	1113.22	4.2	1123.95	4.28
1136.3	4.33	1141.29	4.28	1171.43	4.04	1178.45	4.01	1209.41	3.9
1222.7	3.85	1234.35	3.83	1243.68	3.81	1246.44	3.8	1265.57	3.77
1272.08	3.76	1283.47	3.76	1308.91	3.76	1315.76	3.76	1324.3	3.75
1335.09	3.77	1349.1	3.78	1370.83	3.8	1374.22	3.78	1393.62	3.73
1399.15	3.73	1420.21	3.7	1439.57	3.68	1460.09	3.67	1467.69	3.66
1469.58	3.66	1480.66	3.66	1490	3.1	1503.77	3.11	1518.96	3.04
1540.8	2.87	1550.3	2.11	1571.19	-4.29	1590.18	-5.57	1596.68	-3.87
1599.67	-3.07	1612.02	-.03	1624.36	1.98	1627.21	2.68	1631.01	2.71
1668.04	3.72	1672.79	4.86	1700.02	5.27	1700.51	5.28	1700.66	5.28
1712.67	5.44	1714.57	5.53	1717.41	5.58	1740.2	5.85	1760.14	5.97
1762.04	5.99	1764.72	5.95	1784.62	5.56	1802.87	5.24	1808.57	5.32
1828.92	5.37	1846.55	5.45	1856.05	5.48	1868.58	5.57	1889.28	5.68
1893.12	5.7	1902.58	5.75	1932.96	5.84	1949.1	6.21	1952.54	6.28
1957.32	6.36	1972.88	6.63	1975.69	6.68	1984.24	6.62		

ExpandedLocal.rep

Manning's n Values		num= 9							
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	109.2	.04	186.8	.1	242.83	.04	323.94	.1
899.27	.04	1006.21	.06	1540.8	.04	1627.21	.06		

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	109.2	186.8		480	480		.1	.3
Ineffective Flow			num=	1				
Sta L	Sta R	Elev	Permanent					
242.83	325.61	3.42	F					

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 580

INPUT

Description: Interpolated Section

Station Elevation Data		num= 159							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	3.79	14.58	3.77	17.73	3.75	28.94	3.84	42.1	3.96
48.61	3.96	57.13	3.96	65.43	3.84	66.27	3.83	68.89	3.8
86.32	3.72	97.6	3.48	99.75	-1.61	100.08	-1.67	106.28	-2.24
112.49	-2.86	118.69	-3.72	123.35	-4.3	124.89	-4.81	131.1	-6.66
137.3	-8.53	145.95	-5.66	154.6	-2.58	163.25	.31	170.17	2.5
171.9	3.24	197.61	3.05	201.28	3.24	233.41	3.16	241.68	2.37
249.94	-.12	266.47	2.93	274.73	2.93	294.01	1.84	303.19	2.78
322.47	3.02	324.31	3.3	331.32	3.37	342.67	3.47	397.76	4.2
422.01	4.6	422.55	4.61	440.91	4.78	453.76	4.71	473.04	5.16
499.67	5.7	508.85	5.95	537.31	6.35	564.85	7.02	570.36	7.02
570.36	7.07	577.71	7.17	593.25	7.28	620.86	7.48	634.63	7.41
654.83	8.09	666.76	8.17	675.95	8.18	681.33	8.01	699.82	7.43
731.95	7.19	764.08	6.96	787.04	6.99	809.99	7.33	829.27	7.52
843.04	7.14	855.18	6.52	861.4	6.2	887.11	5.42	893.54	5.27
898.13	5.12	926.59	4.13	954.13	3.16	955.97	3.16	964.86	2.97
984.6	-.82	997.94	1.25	1016.42	1.17	1025.66	-.1	1034.9	-1
1061.6	3.03	1081.1	3.26	1104.39	3.44	1119.12	3.54	1121.64	3.57
1131.79	3.68	1155.91	3.96	1157.13	3.97	1171.46	4.09	1182.48	4.19
1195.15	4.24	1200.27	4.2	1231.21	3.92	1238.42	3.9	1270.2	3.78
1283.85	3.73	1295.8	3.72	1305.39	3.7	1308.22	3.7	1327.85	3.67
1334.54	3.66	1346.24	3.66	1372.35	3.67	1379.38	3.67	1388.15	3.67
1399.23	3.69	1413.61	3.72	1435.92	3.75	1439.39	3.74	1459.31	3.69
1464.99	3.68	1486.6	3.67	1506.48	3.65	1527.54	3.64	1535.34	3.63
1537.29	3.63	1548.66	3.64	1558.25	3.36	1572.38	3.38	1587.98	3.3

ExpandedLocal.rep

1610.4	3.11	1620.15	2.25	1641.59	-4.95	1661.09	-6.39	1667.76	-4.48
1670.84	-3.59	1683.51	-.22	1696.18	2	1699.1	2.78	1703	2.79
1741.02	3.79	1745.89	5.05	1773.85	5.41	1774.36	5.42	1774.51	5.42
1786.83	5.57	1788.78	5.66	1791.71	5.71	1815.1	5.96	1835.57	6.05
1837.52	6.06	1840.26	6.02	1860.7	5.59	1879.44	5.23	1885.29	5.31
1906.17	5.36	1924.28	5.42	1934.02	5.44	1946.89	5.52	1968.14	5.64
1972.08	5.66	1981.79	5.72	2012.98	5.8	2029.55	6.22	2033.08	6.29
2037.99	6.39	2053.96	6.7	2056.85	6.75	2065.62	6.68		

Manning's n Values

num= 10

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	97.6	.04	171.9	.1	233.41	.04	303.19	.1
954.13	.04	1061.6	.06	1610.4	.04	1699.1	.06	2065.62	.06

Bank Sta: Left 97.6 Right 171.9 Lengths: Left Channel 480 Right 480 Coeff Contr. .1 Expan. .3

Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 233.41 324.31 3.24 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 100

INPUT

Description: 100' US Confluence with West Pearl River

Station Elevation Data num= 108

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	3.72	16	3.66	38	3.9	51	3.92	86	3.36
88	-2.11	110	-4.21	123	-8.61	157	3.07	185	2.87
189	3.08	224	3.02	233	2.15	242	-.61	260	2.79
269	2.79	290	1.59	300	2.64	321	2.92	323	3.24
343	3.43	403	4.24	430	4.69	450	4.88	464	4.8
485	5.3	514	5.9	524	6.18	555	6.62	585	7.37
591	7.37	591	7.42	599	7.53	646	7.88	661	7.8
683	8.55	696	8.64	706	8.66	732	7.82	767	7.56
802	7.3	827	7.33	852	7.71	873	7.92	888	7.5
908	6.46	936	5.59	943	5.42	948	5.25	979	4.15
1009	3.08	1011	3.08	1020	3	1040	-.91	1053	1.39
1071	1.3	1080	-.11	1089	-1.11	1117	2.84	1137	3.08
1176	3.39	1189	3.54	1215	3.85	1241	4.09	1254	4.16
1291	3.81	1331	3.67	1345	3.62	1370	3.59	1397	3.56
1409	3.56	1443	3.59	1452	3.59	1501	3.71	1525	3.64
1553	3.63	1595	3.61	1603	3.6	1605	3.6	1641	3.64

ExpandedLocal.rep

1657	3.55	1680	3.34	1690	2.39	1712	-5.61	1732	-7.21
1742	-4.11	1755	-.41	1768	2.02	1771	2.87	1775	2.87
1814	3.86	1819	5.24	1861	5.7	1863	5.8	1866	5.85
1890	6.07	1911	6.13	1913	6.14	1956	5.21	1962	5.3
2002	5.39	2012	5.4	2047	5.6	2061	5.68	2093	5.77
2110	6.23	2138	6.82	2147	6.74				

Manning's n Values

num= 9

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	86	.04	157	.1	224	.04	260	.1
1009	.04	1137	.06	1680	.04	1775	.06		

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	86	157		0	0	0		.1	.3
Ineffective Flow		num=	1						
Sta L	Sta R	Elev	Permanent						
224	300	3.07	F						

CROSS SECTION

RIVER: Gum Bayou

REACH: Upper

RS: 16105

INPUT

Description: Data from Land Survey

Station Elevation Data num= 300

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3358	15.646	-3341.8	15.49	-3340.75	15.483	-3339.85	15.471	-3277.59	14.308
-3252.91	13.748	-3247.73	13.658	-3241.77	13.569	-3224.47	13.211	-3209.44	13.365
-3201.22	13.451	-3167.81	14.195	-3134.72	14.815	-3122.5	14.757	-3108.2	14.589
-3091.73	14.671	-3079.03	14.564	-3041.72	13.552	-3023.6	13.037	-3007.13	12.965
-2992.1	12.885	-2968.66	12.536	-2948.63	12.43	-2941.7	12.44	-2905.16	12.905
-2895.42	13.097	-2891.68	13.191	-2848.98	14.142	-2841.67	14.268	-2818.22	14.615
-2805.87	14.76	-2791.66	14.749	-2782.62	14.739	-2774.76	14.752	-2741.65	14.31
-2736.1	14.159	-2723.33	13.768	-2666.34	11.875	-2644.35	12.002	-2641.62	12.069
-2600.88	13.196	-2591.61	13.373	-2557.41	13.958	-2550.06	14.031	-2513.95	14.216
-2507.17	14.22	-2491.58	14.242	-2468	14.237	-2441.57	14.261	-2436.25	14.252
-2427.01	14.254	-2396.1	14.241	-2387.23	14.237	-2383.98	14.241	-2338.63	14.204
-2317.19	14.178	-2300.12	14.138	-2285.94	13.942	-2258.19	12.973	-2223.79	11.657
-2216.26	11.538	-2200.44	11.402	-2180.57	11.419	-2177.1	11.436	-2174.33	11.429
-2149.98	11.785	-2130.4	12.025	-2127.89	12.066	-2101.12	12.662	-2090.47	12.753
-2060.35	13.221	-2048.54	13.318	-2037.01	13.415	-2022.52	13.497	-2006.61	13.571
-1969.83	13.667	-1966.96	13.673	-1964.67	13.672	-1943.61	13.653	-1891.62	13.439
-1873.57	13.424	-1838.88	13.364	-1831.17	13.352	-1822.24	13.326	-1811.78	13.305
-1765.98	13.203	-1756.83	13.182	-1755.02	13.182	-1739.13	13.107	-1711.19	12.984

ExpandedLocal.rep

-1706.41	12.964-1686.78	12.912-1671.16	12.874-1663.43	12.861-1624.27	13.001
-1601.04	13.039-1593.39	13.128 -1587.3	13.147-1570.04	13.163-1508.57	13.233
-1503.43	13.242-1499.99	13.248-1495.67	13.255 -1461.5	13.19-1429.95	13.212
-1404.1	13.231-1377.64	13.178 -1359.9	13.189-1337.62	13.248-1336.56	13.247
-1328.28	13.229-1293.78	13.148-1289.86	13.126-1284.93	13.101-1266.51	12.926
-1251.85	12.745-1207.45	12.588-1179.56	12.293-1173.12	12.324-1167.99	12.274
-1160.34	12.286-1103.07	11.546-1084.13	11.711-1079.72	11.848-1057.41	11.965
-1021.51	12.156-1009.68	12.179-1000.26	12.232-986.335	12.271-968.828	12.31
-962.987	12.308-958.337	12.305-917.429	12.145-916.406	12.141 -916.29	12.14
-915.7	12.136-905.893	12.055-874.817	11.809-845.006	11.527-798.973	11.251
-797.651	11.243 -797.2	11.241-796.837	11.24-762.717	11.061-734.493	10.989
-725.84	10.988-697.739	10.862-678.173	10.804-643.319	10.602-635.399	10.564
-609.805	10.312-604.736	10.279 -582.84	10.145-566.153	10.082-559.007	10.045
-547.461	10.003 -527.57	9.981-511.341	9.935-488.987	9.806-462.785	9.621
-439.841	9.453-411.821	9.217-392.175	8.708-373.238	8.909-368.341	8.985
-360.43	9.22-340.746	9.3-334.655	9.057-296.842	8.869-292.801	8.901
-257.489	8.945 -245.46	8.853-235.742	8.82-210.976	8.64-180.323	8.708
-177.676	8.702 -141.74	9.07-134.488	9.091-111.054	8.829-106.176	8.753
-103.157	8.735 -82.343	8.539 -64.574	8.275 -48.711	8.038 -34.676	7.789
0	7.6 26	7.8 51	6.9 72	6.6 95	6.2
100	6.1 105	6 111	6 118	6.7 141	7.3
164	7.4 195.011	6.307 202.829	6.308 205.508	6.309 237.313	6.315
263.008	6.323 271.796	6.327 282.674	6.335 306.28	6.361 325.352	6.414
359.84	6.588 370.489	6.646 387.696	6.769 394.322	6.819 398.423	7.007
418.155	7.389 437.006	8.516 441.989	8.868 475.589	12.513 489.655	14.676
514.172	16.33 528.482	16.947 552.755	17.989 574.728	18.626 591.338	19.018
608.821	19.218 637.071	19.474 668.504	19.965 699.415	19.928 704.154	19.967
707.087	20.076 727.987	21.083 745.67	21.342 751.821	21.506 761.759	21.586
784.253	21.657 799.487	21.571 822.836	21.477 837.868	21.539 861.419	21.807
867.333	21.81 875.262	21.89 886.447	21.831 909.746	21.376 938.585	21.753
942.486	21.802 948.79	21.847 970.462	22.017 977.168	22.073 999.927	22.347
1015.751	22.4941037.819	22.7941038.056	22.7951056.887	23.081074.431	23.307
1123.174	23.9531124.739	23.9691156.317	24.3451175.761	24.55 1189.46	24.689
1229.005	25.0171255.747	25.2071269.691	25.264 1314.51	25.3411322.033	25.355
1332.053	25.326 1388.32	25.2861414.642	25.2591421.463	25.2311443.632	25.103
1454.606	25.0211486.627	24.6841510.609	24.328 1546.62	23.9461554.036	23.867
1585.305	23.4111587.179	23.3881588.584	23.371598.388	23.2491617.574	23.015
1620.323	22.9861683.273	22.5581719.752	22.3421733.535	22.3011752.896	22.25
1778.73	22.2551788.961	22.2831819.182	22.2461819.889	22.2421829.749	22.217
1849.497	22.1861852.326	22.1851878.487	22.2131889.768	22.2461907.843	22.338
1943.318	22.5361951.755	22.5951965.458	22.8851984.899	22.9882001.871	23.955
2051.185	27.3182081.419	24.592084.328	24.339 2088.21	24.6552131.102	26.488

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -3358 .1 26 .05 141 .1



ExpandedLocal.rep

Bank Sta: Left    Right    Lengths: Left Channel    Right    Coeff Contr.    Expan.  
                  26       141                    858       858       858                    .1       .3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper                    RS: 15247

INPUT

Description: Data from Land Survey

Station Elevation Data    num=    350

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3667	14.223-3642.99	14.277-3636.97	14.271-3633.69	14.275-3607.27	14.294				
-3599.25	14.315-3577.57	14.245-3537.88	14.334-3530.37	14.386-3508.93	14.368				
-3495.93	14.353-3470.76	14.104-3461.49	14.042-3458.78	14.035-3441.74	13.928				
-3427.06	13.836 -3404.5	13.853-3392.62	13.864-3369.71	14.084-3333.82	14.81				
-3323.74	14.962-3300.07	14.235 -3289.3	14.068-3265.73	14.158-3254.86	14.097				
-3221.75	14.069-3219.39	14.066-3210.76	14.065-3151.55	14.082-3138.47	14.03				
-3117.99	13.922-3096.43	13.823-3082.67	13.774-3065.11	13.764-3048.23	13.745				
-3015.54	13.774-3012.89	13.774-3010.07	13.772-2953.88	13.762-2914.38	13.788				
-2910.48	13.791-2908.47	13.793-2902.16	13.825 -2841.6	14.057-2813.22	14.058				
-2805.2	14.056 -2804.1	14.056-2797.48	14.035 -2779.5	13.948-2762.56	13.806				
-2734.54	13.583-2705.69	13.42-2681.99	13.288-2645.35	13.192-2635.18	13.156				
-2631.89	13.153-2619.19	13.173-2589.08	13.283 -2571.4	13.312-2533.48	13.499				
-2516.35	13.576-2497.22	13.601-2479.99	13.627-2459.67	13.56-2443.62	13.567				
-2430.69	13.555-2417.17	13.538-2385.86	13.578-2356.35	13.322-2321.12	13.056				
-2298.16	12.895-2265.05	12.16-2261.79	12.116-2260.77	12.127-2190.73	13.493				
-2189.06	13.526-2189.04	13.526-2188.99	13.526-2164.44	13.568-2119.45	13.382				
-2116.33	13.368-2115.23	13.363-2112.93	13.358-2090.63	13.316-2079.97	13.313				
-2058.9	13.389-2027.63	13.456-2007.24	13.411-1998.28	13.411 -1960.8	13.293				
-1943.01	13.296-1934.51	13.294-1918.41	13.264-1884.74	13.219-1868.59	13.192				
-1862.27	13.183-1842.09	13.185-1828.51	13.169-1806.27	13.216-1794.76	13.233				
-1761.32	13.316-1760.55	13.315-1727.25	13.429-1715.58	13.435-1693.49	13.45				
-1685.47	13.398-1669.26	13.413-1625.98	13.388-1619.16	13.379-1592.23	13.324				
-1570.3	13.179-1558.47	13.097-1543.12	12.969-1524.72	12.643-1494.58	11.963				
-1490.96	11.902-1487.27	11.938-1479.64	12.053 -1434.4	12.746-1423.45	12.911				
-1407.22	12.969 -1389.7	13.086 -1361	13.074-1355.94	13.071-1352.86	13.062				
-1340.11	13.037-1305.28	12.968-1288.44	12.929-1271.32	12.899-1254.68	12.88				
-1227.42	12.869-1216.96	12.85-1187.17	12.737-1173.56	12.732-1146.05	12.726				
-1119.66	12.663-1108.24	12.635-1085.91	12.54-1068.17	12.488-1052.15	12.426				
-1026.71	12.4-1004.79	12.349-977.836	12.299-950.892	12.278-947.724	12.283				
-921.528	12.273-890.813	12.272-883.383	12.271-863.634	12.284-849.628	12.377				
-839.734	12.393 -782.23	12.453-782.119	12.453-782.106	12.453 -782	12.453				
-754.916	12.476-754.356	12.477 -748.47	12.488-743.486	12.497-697.907	12.688				
-682.16	12.706-656.677	12.679-638.714	12.67 -615.85	12.713 -599.9	12.71				
-569.867	12.848-522.273	13.158-516.384	13.171-483.459	13.161-483.229	13.161				

ExpandedLocal.rep

-481.882	13.153	-450.074	12.965	-444.645	12.921	-416.919	12.652	-396.248	12.441
-367.017	12.15	-350.608	11.972	-338.375	11.846	-304.524	11.393	-284.298	11.226
-262.207	11.026	-251.731	10.932	-251.105	10.926	-250.706	10.921	-248.905	10.903
-184.571	10.077	-148.753	10.845	-123.605	11.398	-109.3	11.527	-84.769	11.532
-57.243	11.6	-51.502	11.609	-23.841	11.53	-18.235	11.519	0	6.5
10	6.4	32	6.5	39	5.5	50	6.1	58	6.2
73	6.1	86	6.5	107	6.6	126	6.9	137	7.1
144	6.3	151	6.2	163	6.9	178	6.2	186	6.8
193	7.1	200	5.6	207	5.7	214	6.6	224	6.8
246	6.8	267.52	7.231	279.733	6.65	288.838	6.502	312.56	6.381
334.276	6.385	345.386	6.344	367.654	6.349	388.427	6.353	411.038	6.358
430.091	6.306	443.865	6.311	458.579	6.316	476.691	6.322	492.527	6.328
509.517	6.334	526.476	6.34	542.343	6.347	560.424	6.353	575.169	6.363
594.372	6.369	607.996	6.422	634.676	6.427	640.822	6.46	652.524	6.596
673.648	6.59	694.291	6.76	727.499	7.834	739.301	8.096	751.499	8.337
772.127	8.664	784.876	8.504	825.832	9.462	843.18	9.865	870.606	10.556
899.906	11.443	906.732	11.665	936.258	12.65	940.619	12.827	985.84	14.353
1032.991	16.683	1034.737	16.757	1065.612	17.685	1067.563	17.743	1068.588	17.792
1100.389	18.643	1101.966	18.687	1133.216	19.444	1135.343	19.479	1166.042	20.109
1168.721	20.153	1198.868	20.644	1228.035	21.049	1232.371	21.087	1237.857	21.123
1265.787	21.137	1279.935	20.979	1299.907	21.245	1317.481	20.468	1346.432	19.589
1384.434	19.648	1402.265	20.264	1414.291	20.611	1436.385	20.952	1450.188	21.12
1470.504	21.311	1476.729	21.335	1498.531	21.436	1524.127	21.531	1538.743	21.623
1556.353	21.756	1602.567	22.313	1609.436	22.389	1618.029	22.461	1654.433	22.786
1668.076	22.873	1698.076	23.123	1709.34	23.222	1737.527	23.593	1763.021	23.925
1777.579	24.084	1795.225	24.289	1841.34	24.704	1845.818	24.742	1848.307	24.754
1857.025	24.803	1879.938	24.907	1889.094	24.917	1914.057	24.921	1943.456	25.299
1954.472	25.344	1976.523	25.275	1981.014	25.271	1982.296	25.257	1984.603	25.198
2016.415	24.573	2045.35	24.162	2084.654	23.579	2113.72	22.822	2118.774	22.754
2140.261	22.574	2152.893	22.527	2162.365	22.498	2187.013	22.403	2205.502	22.346
2240.809	22.138	2255.252	22.055	2272.968	22.051	2289.371	22.092	2305.962	22.166
2335.016	22.377	2349.398	22.483	2357.61	22.543	2379.133	22.598	2391.73	22.682
2405.674	22.782	2425.849	22.982	2436.268	23.085	2474.216	23.499	2494.088	23.726
2520.579	24.036	2533.93	24.185	2562.327	24.333	2574.012	24.348	2591.464	24.37
2596.446	24.362	2626.312	24.262	2659.885	24.153	2664.685	24.144	2675.162	24.628
2693.51	25.313	2724.17	26.798	2748.675	25.942	2767.044	24.852	2791.276	26.7

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****					
-3667	.1	193	.05	214	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	193	214		42	42		.1	.3
Ineffective Flow			num=	2				
Sta L	Sta R	Elev	Permanent					
-3667	18.28	10.5	F					
215.362	791.276	10.5	F					

ExpandedLocal.rep

CROSS SECTION

RIVER: Gum Bayou

REACH: Upper

RS: 15205

INPUT

Description: Data from Land Survey

Station Elevation Data num= 347

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3667	14.223-3642.99	14.277-3636.97	14.271-3633.69	14.275-3607.27	14.294				
-3599.25	14.315-3577.57	14.245-3537.88	14.334-3530.37	14.386-3508.93	14.368				
-3495.93	14.353-3470.76	14.104-3461.49	14.042-3458.78	14.035-3441.74	13.928				
-3427.06	13.836 -3404.5	13.853-3392.62	13.864-3369.71	14.084-3333.82	14.81				
-3323.74	14.962-3300.07	14.235 -3289.3	14.068-3265.73	14.158-3254.86	14.097				
-3221.75	14.069-3219.39	14.066-3210.76	14.065-3151.55	14.082-3138.47	14.03				
-3117.99	13.922-3096.43	13.823-3082.67	13.774-3065.11	13.764-3048.23	13.745				
-3015.54	13.774-3012.89	13.774-3010.07	13.772-2953.88	13.762-2914.38	13.788				
-2910.48	13.791-2908.47	13.793-2902.16	13.825 -2841.6	14.057-2813.22	14.058				
-2805.2	14.056 -2804.1	14.056-2797.48	14.035 -2779.5	13.948-2762.56	13.806				
-2734.54	13.583-2705.69	13.42-2681.99	13.288-2645.35	13.192-2635.18	13.156				
-2631.89	13.153-2619.19	13.173-2589.08	13.283 -2571.4	13.312-2533.48	13.499				
-2516.35	13.576-2497.22	13.601-2479.99	13.627-2459.67	13.56-2443.62	13.567				
-2430.69	13.555-2417.17	13.538-2385.86	13.578-2356.35	13.322-2321.12	13.056				
-2298.16	12.895-2265.05	12.16-2261.79	12.116-2260.77	12.127-2190.73	13.493				
-2189.06	13.526-2189.04	13.526-2188.99	13.526-2164.44	13.568-2119.45	13.382				
-2116.33	13.368-2115.23	13.363-2112.93	13.358-2090.63	13.316-2079.97	13.313				
-2058.9	13.389-2027.63	13.456-2007.24	13.411-1998.28	13.411 -1960.8	13.293				
-1943.01	13.296-1934.51	13.294-1918.41	13.264-1884.74	13.219-1868.59	13.192				
-1862.27	13.183-1842.09	13.185-1828.51	13.169-1806.27	13.216-1794.76	13.233				
-1761.32	13.316-1760.55	13.315-1727.25	13.429-1715.58	13.435-1693.49	13.45				
-1685.47	13.398-1669.26	13.413-1625.98	13.388-1619.16	13.379-1592.23	13.324				
-1570.3	13.179-1558.47	13.097-1543.12	12.969-1524.72	12.643-1494.58	11.963				
-1490.96	11.902-1487.27	11.938-1479.64	12.053 -1434.4	12.746-1423.45	12.911				
-1407.22	12.969 -1389.7	13.086 -1361	13.074-1355.94	13.071-1352.86	13.062				
-1340.11	13.037-1305.28	12.968-1288.44	12.929-1271.32	12.899-1254.68	12.88				
-1227.42	12.869-1216.96	12.85-1187.17	12.737-1173.56	12.732-1146.05	12.726				
-1119.66	12.663-1108.24	12.635-1085.91	12.54-1068.17	12.488-1052.15	12.426				
-1026.71	12.4-1004.79	12.349-977.836	12.299-950.892	12.278-947.724	12.283				
-921.528	12.273-890.813	12.272-883.383	12.271-863.634	12.284-849.628	12.377				
-839.734	12.393 -782.23	12.453-782.119	12.453-782.106	12.453 -782	12.453				
-754.916	12.476-754.356	12.477 -748.47	12.488-743.486	12.497-697.907	12.688				
-682.16	12.706-656.677	12.679-638.714	12.67 -615.85	12.713 -599.9	12.71				
-569.867	12.848-522.273	13.158-516.384	13.171-483.459	13.161-483.229	13.161				
-481.882	13.153-450.074	12.965-444.645	12.921-416.919	12.652-396.248	12.441				
-367.017	12.15-350.608	11.972-338.375	11.846-304.524	11.393-284.298	11.226				

ExpandedLocal.rep

-262.207	11.026	-251.731	10.932	-251.105	10.926	-250.706	10.921	-248.905	10.903
-184.571	10.077	-148.753	10.845	-123.605	11.398	-109.3	11.527	-84.769	11.532
-57.243	11.6	-51.502	11.609	-23.841	11.53	-18.235	11.519	0	8.9
29	9	53	8.7	74	8.4	81	6.8	84	6.5
91	5.5	99	6.4	103	7.6	127	8.7	148	8.8
164	7.9	169	6.4	174	6.3	180	3.3	188	6.6
190	7.1	198	8.4	220	8.9	226	8.7	286	8.6
288.838	6.502	312.56	6.381	334.276	6.385	345.386	6.344	367.654	6.349
388.427	6.353	411.038	6.358	430.091	6.306	443.865	6.311	458.579	6.316
476.691	6.322	492.527	6.328	509.517	6.334	526.476	6.34	542.343	6.347
560.424	6.353	575.169	6.363	594.372	6.369	607.996	6.422	634.676	6.427
640.822	6.46	652.524	6.596	673.648	6.59	694.291	6.76	727.499	7.834
739.301	8.096	751.499	8.337	772.127	8.664	784.876	8.504	825.832	9.462
843.18	9.865	870.606	10.556	899.906	11.443	906.732	11.665	936.258	12.65
940.619	12.827	985.84	14.353	1032.991	16.683	1034.737	16.757	1065.612	17.685
1067.563	17.743	1068.588	17.792	1100.389	18.643	1101.966	18.687	1133.216	19.444
1135.343	19.479	1166.042	20.109	1168.721	20.153	1198.868	20.644	1228.035	21.049
1232.371	21.087	1237.857	21.123	1265.787	21.137	1279.935	20.979	1299.907	21.245
1317.481	20.468	1346.432	19.589	1384.434	19.648	1402.265	20.264	1414.291	20.611
1436.385	20.952	1450.188	21.121	1470.504	21.311	1476.729	21.335	1498.531	21.436
1524.127	21.531	1538.743	21.623	1556.353	21.756	1602.567	22.313	1609.436	22.389
1618.029	22.461	1654.433	22.786	1668.076	22.873	1698.076	23.123	1709.34	23.222
1737.527	23.593	1763.021	23.925	1777.579	24.084	1795.225	24.289	1841.34	24.704
1845.818	24.742	1848.307	24.754	1857.025	24.803	1879.938	24.907	1889.094	24.917
1914.057	24.921	1943.456	25.299	1954.472	25.344	1976.523	25.275	1981.014	25.27
1982.296	25.257	1984.603	25.198	2016.415	24.573	2045.35	24.162	2084.654	23.579
2113.72	22.822	2118.774	22.754	2140.261	22.574	2152.893	22.527	2162.365	22.498
2187.013	22.403	2205.502	22.346	2240.809	22.138	2255.252	22.055	2272.968	22.051
2289.371	22.092	2305.962	22.166	2335.016	22.377	2349.398	22.483	2357.61	22.543
2379.133	22.598	2391.73	22.682	2405.674	22.782	2425.849	22.982	2436.268	23.085
2474.216	23.499	2494.088	23.726	2520.579	24.036	2533.93	24.185	2562.327	24.333
2574.012	24.348	2591.464	24.372	2596.446	24.362	2626.312	24.262	2659.885	24.153
2664.685	24.144	2675.162	24.628	2693.51	25.313	2724.17	26.798	2748.675	25.942
2767.044	24.852	2791.276	26.7						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3667	.1	74	.05	220	.1

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	74	220		46	46	.1	.3
Ineffective Flow			num=	3			
	Sta L	Sta R	Elev	Permanent			
	-217.61	77.46	10.5	F			
	102.51	163.46	10.5	F			
	190.54	869.39	10.5	F			

ExpandedLocal.rep

CULVERT

RIVER: Gum Bayou  
 REACH: Upper RS: 15182

INPUT

Description: Gum #49  
 Distance from Upstream XS = 2.5  
 Deck/Roadway Width = 41  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 11			
Sta	Hi	Cord	Lo Cord
-11.79	10.6	0	10.6
60	10.9	91	11.1
186	11.1	238	10.7
344	11	886.28	11

Upstream Bridge Cross Section Data

Station Elevation Data num= 347									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3667	14.223-3642.99	14.277-3636.97	14.271-3633.69	14.275-3607.27	14.294				
-3599.25	14.315-3577.57	14.245-3537.88	14.334-3530.37	14.386-3508.93	14.368				
-3495.93	14.353-3470.76	14.104-3461.49	14.042-3458.78	14.035-3441.74	13.928				
-3427.06	13.836 -3404.5	13.853-3392.62	13.864-3369.71	14.084-3333.82	14.81				
-3323.74	14.962-3300.07	14.235 -3289.3	14.068-3265.73	14.158-3254.86	14.097				
-3221.75	14.069-3219.39	14.066-3210.76	14.065-3151.55	14.082-3138.47	14.03				
-3117.99	13.922-3096.43	13.823-3082.67	13.774-3065.11	13.764-3048.23	13.745				
-3015.54	13.774-3012.89	13.774-3010.07	13.772-2953.88	13.762-2914.38	13.788				
-2910.48	13.791-2908.47	13.793-2902.16	13.825 -2841.6	14.057-2813.22	14.058				
-2805.2	14.056 -2804.1	14.056-2797.48	14.035 -2779.5	13.948-2762.56	13.806				
-2734.54	13.583-2705.69	13.42-2681.99	13.288-2645.35	13.192-2635.18	13.156				
-2631.89	13.153-2619.19	13.173-2589.08	13.283 -2571.4	13.312-2533.48	13.499				
-2516.35	13.576-2497.22	13.601-2479.99	13.627-2459.67	13.56-2443.62	13.567				
-2430.69	13.555-2417.17	13.538-2385.86	13.578-2356.35	13.322-2321.12	13.056				
-2298.16	12.895-2265.05	12.16-2261.79	12.116-2260.77	12.127-2190.73	13.493				
-2189.06	13.526-2189.04	13.526-2188.99	13.526-2164.44	13.568-2119.45	13.382				
-2116.33	13.368-2115.23	13.363-2112.93	13.358-2090.63	13.316-2079.97	13.313				
-2058.9	13.389-2027.63	13.456-2007.24	13.411-1998.28	13.411 -1960.8	13.293				
-1943.01	13.296-1934.51	13.294-1918.41	13.264-1884.74	13.219-1868.59	13.192				
-1862.27	13.183-1842.09	13.185-1828.51	13.169-1806.27	13.216-1794.76	13.233				
-1761.32	13.316-1760.55	13.315-1727.25	13.429-1715.58	13.435-1693.49	13.45				
-1685.47	13.398-1669.26	13.413-1625.98	13.388-1619.16	13.379-1592.23	13.324				
-1570.3	13.179-1558.47	13.097-1543.12	12.969-1524.72	12.643-1494.58	11.963				
-1490.96	11.902-1487.27	11.938-1479.64	12.053 -1434.4	12.746-1423.45	12.911				

ExpandedLocal.rep

-1407.22	12.969	-1389.7	13.086	-1361	13.074-1355.94	13.071-1352.86	13.062
-1340.11	13.037-1305.28	12.968-1288.44	12.929-1271.32	12.899-1254.68	12.88		
-1227.42	12.869-1216.96	12.85-1187.17	12.737-1173.56	12.732-1146.05	12.726		
-1119.66	12.663-1108.24	12.635-1085.91	12.54-1068.17	12.488-1052.15	12.426		
-1026.71	12.4-1004.79	12.349-977.836	12.299-950.892	12.278-947.724	12.283		
-921.528	12.273-890.813	12.272-883.383	12.271-863.634	12.284-849.628	12.377		
-839.734	12.393 -782.23	12.453-782.119	12.453-782.106	12.453 -782	12.453		
-754.916	12.476-754.356	12.477 -748.47	12.488-743.486	12.497-697.907	12.688		
-682.16	12.706-656.677	12.679-638.714	12.67 -615.85	12.713 -599.9	12.71		
-569.867	12.848-522.273	13.158-516.384	13.171-483.459	13.161-483.229	13.161		
-481.882	13.153-450.074	12.965-444.645	12.921-416.919	12.652-396.248	12.441		
-367.017	12.15-350.608	11.972-338.375	11.846-304.524	11.393-284.298	11.226		
-262.207	11.026-251.731	10.932-251.105	10.926-250.706	10.921-248.905	10.903		
-184.571	10.077-148.753	10.845-123.605	11.398 -109.3	11.527 -84.769	11.532		
-57.243	11.6 -51.502	11.609 -23.841	11.53 -18.235	11.519 0	8.9		
29	9 53	8.7 74	8.4 81	6.8 84	6.5		
91	5.5 99	6.4 103	7.6 127	8.7 148	8.8		
164	7.9 168	6.4 174	6.3 180	3.3 188	6.6		
190	7.1 198	8.4 220	8.9 226	8.7 286	8.6		
288.838	6.502 312.56	6.381 334.276	6.385 345.386	6.344 367.654	6.349		
388.427	6.353 411.038	6.358 430.091	6.306 443.865	6.311 458.579	6.316		
476.691	6.322 492.527	6.328 509.517	6.334 526.476	6.34 542.343	6.347		
560.424	6.353 575.169	6.363 594.372	6.369 607.996	6.422 634.676	6.427		
640.822	6.46 652.524	6.596 673.648	6.59 694.291	6.76 727.499	7.834		
739.301	8.096 751.499	8.337 772.127	8.664 784.876	8.504 825.832	9.462		
843.18	9.865 870.606	10.556 899.906	11.443 906.732	11.665 936.258	12.65		
940.619	12.827 985.84	14.3531032.991	16.6831034.737	16.7571065.612	17.685		
1067.563	17.7431068.588	17.7921100.389	18.6431101.966	18.6871133.216	19.444		
1135.343	19.4791166.042	20.1091168.721	20.1531198.868	20.6441228.035	21.049		
1232.371	21.0871237.857	21.1231265.787	21.1371279.935	20.9791299.907	21.245		
1317.481	20.4681346.432	19.5891384.434	19.6481402.265	20.2641414.291	20.611		
1436.385	20.9521450.188	21.121470.504	21.311476.729	21.3351498.531	21.436		
1524.127	21.5311538.743	21.6231556.353	21.7561602.567	22.3131609.436	22.389		
1618.029	22.4611654.433	22.7861668.076	22.8731698.076	23.123 1709.34	23.222		
1737.527	23.5931763.021	23.9251777.579	24.0841795.225	24.289 1841.34	24.704		
1845.818	24.7421848.307	24.7541857.025	24.8031879.938	24.9071889.094	24.917		
1914.057	24.921943.456	25.2991954.472	25.3441976.523	25.2751981.014	25.27		
1982.296	25.2571984.603	25.1982016.415	24.573 2045.35	24.1622084.654	23.579		
2113.72	22.822118.774	22.7542140.261	22.5742152.893	22.5272162.365	22.498		
2187.013	22.4032205.502	22.3462240.809	22.1382255.252	22.0552272.968	22.051		
2289.371	22.092305.962	22.1662335.016	22.3772349.398	22.483 2357.61	22.543		
2379.133	22.598 2391.73	22.6822405.674	22.782425.849	22.982436.268	23.085		
2474.216	23.4992494.088	23.7262520.579	24.036 2533.93	24.1852562.327	24.333		
2574.012	24.3482591.464	24.372596.446	24.3622626.312	24.262659.885	24.153		
2664.685	24.1442675.162	24.628 2693.51	25.313 2724.17	26.7982748.675	25.942		
2767.044	24.852791.276	26.7					

Manning's n Values

num= 3

ExpandedLocal.rep

Sta	n Val	Sta	n Val	Sta	n Val
-3667	.1	148	.05	198	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	74	220		.1	.3

Ineffective Flow	num=	3	
Sta L	Sta R	Elev	Permanent
-217.61	77.46	10.5	F
102.51	163.46	10.5	F
190.54	869.39	10.5	F

Downstream Deck/Roadway Coordinates

num=	13													
Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-11.79	42	124	271	886.28	0	68	171	323	19	93	219	378	11	
10.6	10.6	10.8	10.7	11	10.6	10.5	10.9	10.5	10.6	10.7	11.1	11		

Downstream Bridge Cross Section Data

Station	Elevation	num=	346						
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3667	14.223-3642.99	14.277-3636.97	14.271-3633.69	14.275-3607.27	14.294				
-3599.25	14.315-3577.57	14.245-3537.88	14.334-3530.37	14.386-3508.93	14.368				
-3495.93	14.353-3470.76	14.104-3461.49	14.042-3458.78	14.035-3441.74	13.928				
-3427.06	13.836 -3404.5	13.853-3392.62	13.864-3369.71	14.084-3333.82	14.81				
-3323.74	14.962-3300.07	14.235 -3289.3	14.068-3265.73	14.158-3254.86	14.097				
-3221.75	14.069-3219.39	14.066-3210.76	14.065-3151.55	14.082-3138.47	14.03				
-3117.99	13.922-3096.43	13.823-3082.67	13.774-3065.11	13.764-3048.23	13.745				
-3015.54	13.774-3012.89	13.774-3010.07	13.772-2953.88	13.762-2914.38	13.788				
-2910.48	13.791-2908.47	13.793-2902.16	13.825 -2841.6	14.057-2813.22	14.058				
-2805.2	14.056 -2804.1	14.056-2797.48	14.035 -2779.5	13.948-2762.56	13.806				
-2734.54	13.583-2705.69	13.42-2681.99	13.288-2645.35	13.192-2635.18	13.156				
-2631.89	13.153-2619.19	13.173-2589.08	13.283 -2571.4	13.312-2533.48	13.499				
-2516.35	13.576-2497.22	13.601-2479.99	13.627-2459.67	13.56-2443.62	13.567				
-2430.69	13.555-2417.17	13.538-2385.86	13.578-2356.35	13.322-2321.12	13.056				
-2298.16	12.895-2265.05	12.16-2261.79	12.116-2260.77	12.127-2190.73	13.493				
-2189.06	13.526-2189.04	13.526-2188.99	13.526-2164.44	13.568-2119.45	13.382				
-2116.33	13.368-2115.23	13.363-2112.93	13.358-2090.63	13.316-2079.97	13.313				
-2058.9	13.389-2027.63	13.456-2007.24	13.411-1998.28	13.411 -1960.8	13.293				
-1943.01	13.296-1934.51	13.294-1918.41	13.264-1884.74	13.219-1868.59	13.192				
-1862.27	13.183-1842.09	13.185-1828.51	13.169-1806.27	13.216-1794.76	13.233				
-1761.32	13.316-1760.55	13.315-1727.25	13.429-1715.58	13.435-1693.49	13.45				
-1685.47	13.398-1669.26	13.413-1625.98	13.388-1619.16	13.379-1592.23	13.324				



ExpandedLocal.rep

-1570.3	13.179-1558.47	13.097-1543.12	12.969-1524.72	12.643-1494.58	11.963
-1490.96	11.902-1487.27	11.938-1479.64	12.053 -1434.4	12.746-1423.45	12.911
-1407.22	12.969 -1389.7	13.086 -1361	13.074-1355.94	13.071-1352.86	13.062
-1340.11	13.037-1305.28	12.968-1288.44	12.929-1271.32	12.899-1254.68	12.88
-1227.42	12.869-1216.96	12.85-1187.17	12.737-1173.56	12.732-1146.05	12.726
-1119.66	12.663-1108.24	12.635-1085.91	12.54-1068.17	12.488-1052.15	12.426
-1026.71	12.4-1004.79	12.349-977.836	12.299-950.892	12.278-947.724	12.283
-921.528	12.273-890.813	12.272-883.383	12.271-863.634	12.284-849.628	12.377
-839.734	12.393 -782.23	12.453-782.119	12.453-782.106	12.453 -782	12.453
-754.916	12.476-754.356	12.477 -748.47	12.488-743.486	12.497-697.907	12.688
-682.16	12.706-656.677	12.679-638.714	12.67 -615.85	12.713 -599.9	12.71
-569.867	12.848-522.273	13.158-516.384	13.171-483.459	13.161-483.229	13.161
-481.882	13.153-450.074	12.965-444.645	12.921-416.919	12.652-396.248	12.441
-367.017	12.15-350.608	11.972-338.375	11.846-304.524	11.393-284.298	11.226
-262.207	11.026-251.731	10.932-251.105	10.926-250.706	10.921-248.905	10.903
-184.571	10.077-148.753	10.845-123.605	11.398 -109.3	11.527 -84.769	11.532
-57.243	11.6 -51.502	11.609 -23.841	11.53 -18.235	11.519 0	9
28	8.6 56	8.8 82	8.7 110	7.3 111	6.4
116	5 122	5.1 130	5 133	6 135	7.8
160	8.9 185	9 202	7.8 204	5.8 214	5.2
222	6.2 228	8.1 240	8.3 268	8.8 301	8.7
312.56	6.381 334.276	6.385 345.386	6.344 367.654	6.349 388.427	6.353
411.038	6.358 430.091	6.306 443.865	6.311 458.579	6.316 476.691	6.322
492.527	6.328 509.517	6.334 526.476	6.34 542.343	6.347 560.424	6.353
575.169	6.363 594.372	6.369 607.996	6.422 634.676	6.427 640.822	6.46
652.524	6.596 673.648	6.59 694.291	6.76 727.499	7.834 739.301	8.096
751.499	8.337 772.127	8.664 784.876	8.504 825.832	9.462 843.18	9.865
870.606	10.556 899.906	11.443 906.732	11.665 936.258	12.65 940.619	12.827
985.84	14.3531032.991	16.6831034.737	16.7571065.612	17.6851067.563	17.743
1068.588	17.7921100.389	18.6431101.966	18.6871133.216	19.4441135.343	19.479
1166.042	20.1091168.721	20.1531198.868	20.6441228.035	21.0491232.371	21.087
1237.857	21.1231265.787	21.1371279.935	20.9791299.907	21.2451317.481	20.468
1346.432	19.5891384.434	19.6481402.265	20.2641414.291	20.6111436.385	20.952
1450.188	21.121470.504	21.311476.729	21.3351498.531	21.4361524.127	21.531
1538.743	21.6231556.353	21.7561602.567	22.3131609.436	22.3891618.029	22.461
1654.433	22.7861668.076	22.8731698.076	23.123 1709.34	23.2221737.527	23.593
1763.021	23.9251777.579	24.0841795.225	24.289 1841.34	24.7041845.818	24.742
1848.307	24.7541857.025	24.8031879.938	24.9071889.094	24.9171914.057	24.92
1943.456	25.2991954.472	25.3441976.523	25.2751981.014	25.271982.296	25.257
1984.603	25.1982016.415	24.573 2045.35	24.1622084.654	23.579 2113.72	22.82
2118.774	22.7542140.261	22.5742152.893	22.5272162.365	22.4982187.013	22.403
2205.502	22.3462240.809	22.1382255.252	22.0552272.968	22.0512289.371	22.09
2305.962	22.1662335.016	22.3772349.398	22.483 2357.61	22.5432379.133	22.598
2391.73	22.6822405.674	22.782425.849	22.982436.268	23.0852474.216	23.499
2494.088	23.7262520.579	24.036 2533.93	24.1852562.327	24.3332574.012	24.348
2591.464	24.372596.446	24.3622626.312	24.262659.885	24.1532664.685	24.144
2675.162	24.628 2693.51	25.313 2724.17	26.7982748.675	25.9422767.044	24.85
2791.276	26.7				

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -3667 .1 82 .05 160 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 82 268 .1 .3

Ineffective Flow num= 3  
 Sta L Sta R Elev Permanent  
 -217.61 110.71 10.5 F  
 134.26 202.24 10.5 F  
 223.79 868.81 10.5 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 6

Culvert Name Shape Rise Span  
 Culvert #6 Pipe Arch 4.5 6.08  
 FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
 FHWA Scale # 1 - 90 Degree headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 1 2.5 41 .012 .012 0 .7  
 Upstream Elevation = 6.6  
 Centerline Station = 83  
 Downstream Elevation = 6.2  
 Centerline Station = 115

Culvert Name Shape Rise Span  
 Culvert #5 Pipe Arch 4.5 6.08  
 FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
 FHWA Scale # 1 - 90 Degree headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 1 2.5 41 .012 .012 0 .7  
 Upstream Elevation = 6.1

Centerline Station = 90.25  
Downstream Elevation = 5.8  
Centerline Station = 123

Culvert Name      Shape          Rise      Span  
Culvert #4      Pipe Arch      4.5      6.08  
FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
FHWA Scale # 1 - 90 Degree headwall  
Solution Criteria = Highest U.S. EG  
Culvert Upstrm Dist   Length      Top n    Bottom n    Depth Blocked    Entrance Loss Coef  
Exit Loss Coef  
                         2.5      41      .012      .012      0                   .7  
1  
Upstream    Elevation = 6.3  
                         Centerline Station = 97  
Downstream Elevation = 6  
                         Centerline Station = 130

Culvert Name      Shape          Rise      Span  
Culvert #3      Pipe Arch      4.5      6.08  
FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
FHWA Scale # 1 - 90 Degree headwall  
Solution Criteria = Highest U.S. EG  
Culvert Upstrm Dist   Length      Top n    Bottom n    Depth Blocked    Entrance Loss Coef  
Exit Loss Coef  
                         2.5      41      .012      .012      0                   .7  
1  
Upstream    Elevation = 6.4  
                         Centerline Station = 169  
Downstream Elevation = 5.7  
                         Centerline Station = 206.5

Culvert Name      Shape          Rise      Span  
Culvert #2      Pipe Arch      4.5      6.08  
FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
FHWA Scale # 1 - 90 Degree headwall  
Solution Criteria = Highest U.S. EG  
Culvert Upstrm Dist   Length      Top n    Bottom n    Depth Blocked    Entrance Loss Coef  
Exit Loss Coef  
                         2.5      41      .012      .012      0                   .7  
1  
Upstream    Elevation = 6.4  
                         Centerline Station = 177  
Downstream Elevation = 5.8  
                         Centerline Station = 213

Culvert Name      Shape          Rise      Span  
Culvert #1      Pipe Arch      4.5      6.08

ExpandedLocal.rep

FHWA Chart # 34- 18 inch corner radius; Corrugated metal

FHWA Scale # 1 - 90 Degree headwall

Solution Criteria = Highest U.S. EG

Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
Exit Loss Coef

2.5 41 .012 .012 0 .7

1

Upstream Elevation = 6.5  
Centerline Station = 185  
Downstream Elevation = 6  
Centerline Station = 219.5

CROSS SECTION

RIVER: Gum Bayou  
REACH: Upper RS: 15159

INPUT

Description: Data from Land Survey

Station Elevation Data num= 346

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3667	14.223-3642.99	14.277-3636.97	14.271-3633.69	14.275-3607.27	14.294				
-3599.25	14.315-3577.57	14.245-3537.88	14.334-3530.37	14.386-3508.93	14.368				
-3495.93	14.353-3470.76	14.104-3461.49	14.042-3458.78	14.035-3441.74	13.928				
-3427.06	13.836 -3404.5	13.853-3392.62	13.864-3369.71	14.084-3333.82	14.81				
-3323.74	14.962-3300.07	14.235 -3289.3	14.068-3265.73	14.158-3254.86	14.097				
-3221.75	14.069-3219.39	14.066-3210.76	14.065-3151.55	14.082-3138.47	14.03				
-3117.99	13.922-3096.43	13.823-3082.67	13.774-3065.11	13.764-3048.23	13.745				
-3015.54	13.774-3012.89	13.774-3010.07	13.772-2953.88	13.762-2914.38	13.788				
-2910.48	13.791-2908.47	13.793-2902.16	13.825 -2841.6	14.057-2813.22	14.058				
-2805.2	14.056 -2804.1	14.056-2797.48	14.035 -2779.5	13.948-2762.56	13.806				
-2734.54	13.583-2705.69	13.42-2681.99	13.288-2645.35	13.192-2635.18	13.156				
-2631.89	13.153-2619.19	13.173-2589.08	13.283 -2571.4	13.312-2533.48	13.499				
-2516.35	13.576-2497.22	13.601-2479.99	13.627-2459.67	13.56-2443.62	13.567				
-2430.69	13.555-2417.17	13.538-2385.86	13.578-2356.35	13.322-2321.12	13.056				
-2298.16	12.895-2265.05	12.16-2261.79	12.116-2260.77	12.127-2190.73	13.493				
-2189.06	13.526-2189.04	13.526-2188.99	13.526-2164.44	13.568-2119.45	13.382				
-2116.33	13.368-2115.23	13.363-2112.93	13.358-2090.63	13.316-2079.97	13.313				
-2058.9	13.389-2027.63	13.456-2007.24	13.411-1998.28	13.411 -1960.8	13.293				
-1943.01	13.296-1934.51	13.294-1918.41	13.264-1884.74	13.219-1868.59	13.192				
-1862.27	13.183-1842.09	13.185-1828.51	13.169-1806.27	13.216-1794.76	13.233				
-1761.32	13.316-1760.55	13.315-1727.25	13.429-1715.58	13.435-1693.49	13.45				
-1685.47	13.398-1669.26	13.413-1625.98	13.388-1619.16	13.379-1592.23	13.324				
-1570.3	13.179-1558.47	13.097-1543.12	12.969-1524.72	12.643-1494.58	11.963				
-1490.96	11.902-1487.27	11.938-1479.64	12.053 -1434.4	12.746-1423.45	12.911				
-1407.22	12.969 -1389.7	13.086 -1361	13.074-1355.94	13.071-1352.86	13.062				

ExpandedLocal.rep

-1340.11	13.037-1305.28	12.968-1288.44	12.929-1271.32	12.899-1254.68	12.88
-1227.42	12.869-1216.96	12.85-1187.17	12.737-1173.56	12.732-1146.05	12.726
-1119.66	12.663-1108.24	12.635-1085.91	12.54-1068.17	12.488-1052.15	12.426
-1026.71	12.4-1004.79	12.349-977.836	12.299-950.892	12.278-947.724	12.283
-921.528	12.273-890.813	12.272-883.383	12.271-863.634	12.284-849.628	12.377
-839.734	12.393 -782.23	12.453-782.119	12.453-782.106	12.453 -782	12.453
-754.916	12.476-754.356	12.477 -748.47	12.488-743.486	12.497-697.907	12.688
-682.16	12.706-656.677	12.679-638.714	12.67 -615.85	12.713 -599.9	12.71
-569.867	12.848-522.273	13.158-516.384	13.171-483.459	13.161-483.229	13.161
-481.882	13.153-450.074	12.965-444.645	12.921-416.919	12.652-396.248	12.441
-367.017	12.15-350.608	11.972-338.375	11.846-304.524	11.393-284.298	11.226
-262.207	11.026-251.731	10.932-251.105	10.926-250.706	10.921-248.905	10.903
-184.571	10.077-148.753	10.845-123.605	11.398 -109.3	11.527 -84.769	11.532
-57.243	11.6 -51.502	11.609 -23.841	11.53 -18.235	11.519 0	9
28	8.6 56	8.8 82	8.7 110	7.3 111	6.4
116	5 122	5.1 130	5 133	6 135	7.8
160	8.9 185	9 202	7.8 207	6 214	5.2
221	6.2 228	8.1 240	8.3 268	8.8 301	8.7
312.56	6.381 334.276	6.385 345.386	6.344 367.654	6.349 388.427	6.353
411.038	6.358 430.091	6.306 443.865	6.311 458.579	6.316 476.691	6.322
492.527	6.328 509.517	6.334 526.476	6.34 542.343	6.347 560.424	6.353
575.169	6.363 594.372	6.369 607.996	6.422 634.676	6.427 640.822	6.46
652.524	6.596 673.648	6.59 694.291	6.76 727.499	7.834 739.301	8.096
751.499	8.337 772.127	8.664 784.876	8.504 825.832	9.462 843.18	9.865
870.606	10.556 899.906	11.443 906.732	11.665 936.258	12.65 940.619	12.827
985.84	14.3531032.991	16.6831034.737	16.7571065.612	17.6851067.563	17.743
1068.588	17.7921100.389	18.6431101.966	18.6871133.216	19.4441135.343	19.479
1166.042	20.1091168.721	20.1531198.868	20.6441228.035	21.0491232.371	21.087
1237.857	21.1231265.787	21.1371279.935	20.9791299.907	21.2451317.481	20.468
1346.432	19.5891384.434	19.6481402.265	20.2641414.291	20.6111436.385	20.952
1450.188	21.121470.504	21.311476.729	21.3351498.531	21.4361524.127	21.531
1538.743	21.6231556.353	21.7561602.567	22.3131609.436	22.3891618.029	22.461
1654.433	22.7861668.076	22.8731698.076	23.123 1709.34	23.2221737.527	23.593
1763.021	23.9251777.579	24.0841795.225	24.289 1841.34	24.7041845.818	24.742
1848.307	24.7541857.025	24.8031879.938	24.9071889.094	24.9171914.057	24.92
1943.456	25.2991954.472	25.3441976.523	25.2751981.014	25.271982.296	25.257
1984.603	25.1982016.415	24.573 2045.35	24.1622084.654	23.579 2113.72	22.82
2118.774	22.7542140.261	22.5742152.893	22.5272162.365	22.4982187.013	22.403
2205.502	22.3462240.809	22.1382255.252	22.0552272.968	22.0512289.371	22.09
2305.962	22.1662335.016	22.3772349.398	22.483 2357.61	22.5432379.133	22.598
2391.73	22.6822405.674	22.782425.849	22.982436.268	23.0852474.216	23.499
2494.088	23.7262520.579	24.036 2533.93	24.1852562.327	24.3332574.012	24.348
2591.464	24.372596.446	24.3622626.312	24.262659.885	24.1532664.685	24.144
2675.162	24.628 2693.51	25.313 2724.17	26.7982748.675	25.9422767.044	24.85
2791.276	26.7				

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val

ExpandedLocal.rep

\*\*\*\*\*

-3667 .1 82 .05 268 .1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	82	268		43	43	43		.1	.3
Ineffective Flow		num=		3					
Sta L	Sta R	Elev	Permanent						
-217.61	110.71	10.5	F						
134.26	202.24	10.5	F						
223.79	868.81	10.5	F						

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper

RS: 15116

INPUT

Description: Data from Land Survey

Station Elevation Data num= 349

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3667	14.223	-3642.99	14.277	-3636.97	14.271	-3633.69	14.275	-3607.27	14.294
-3599.25	14.315	-3577.57	14.245	-3537.88	14.334	-3530.37	14.386	-3508.93	14.368
-3495.93	14.353	-3470.76	14.104	-3461.49	14.042	-3458.78	14.035	-3441.74	13.928
-3427.06	13.836	-3404.5	13.853	-3392.62	13.864	-3369.71	14.084	-3333.82	14.81
-3323.74	14.962	-3300.07	14.235	-3289.3	14.068	-3265.73	14.158	-3254.86	14.097
-3221.75	14.069	-3219.39	14.066	-3210.76	14.065	-3151.55	14.082	-3138.47	14.03
-3117.99	13.922	-3096.43	13.823	-3082.67	13.774	-3065.11	13.764	-3048.23	13.745
-3015.54	13.774	-3012.89	13.774	-3010.07	13.772	-2953.88	13.762	-2914.38	13.788
-2910.48	13.791	-2908.47	13.793	-2902.16	13.825	-2841.6	14.057	-2813.22	14.058
-2805.2	14.056	-2804.1	14.056	-2797.48	14.035	-2779.5	13.948	-2762.56	13.806
-2734.54	13.583	-2705.69	13.42	-2681.99	13.288	-2645.35	13.192	-2635.18	13.156
-2631.89	13.153	-2619.19	13.173	-2589.08	13.283	-2571.4	13.312	-2533.48	13.499
-2516.35	13.576	-2497.22	13.601	-2479.99	13.627	-2459.67	13.56	-2443.62	13.567
-2430.69	13.555	-2417.17	13.538	-2385.86	13.578	-2356.35	13.322	-2321.12	13.056
-2298.16	12.895	-2265.05	12.16	-2261.79	12.116	-2260.77	12.127	-2190.73	13.493
-2189.06	13.526	-2189.04	13.526	-2188.99	13.526	-2164.44	13.568	-2119.45	13.382
-2116.33	13.368	-2115.23	13.363	-2112.93	13.358	-2090.63	13.316	-2079.97	13.313
-2058.9	13.389	-2027.63	13.456	-2007.24	13.411	-1998.28	13.411	-1960.8	13.293
-1943.01	13.296	-1934.51	13.294	-1918.41	13.264	-1884.74	13.219	-1868.59	13.192
-1862.27	13.183	-1842.09	13.185	-1828.51	13.169	-1806.27	13.216	-1794.76	13.233
-1761.32	13.316	-1760.55	13.315	-1727.25	13.429	-1715.58	13.435	-1693.49	13.45
-1685.47	13.398	-1669.26	13.413	-1625.98	13.388	-1619.16	13.379	-1592.23	13.324
-1570.3	13.179	-1558.47	13.097	-1543.12	12.969	-1524.72	12.643	-1494.58	11.963
-1490.96	11.902	-1487.27	11.938	-1479.64	12.053	-1434.4	12.746	-1423.45	12.911
-1407.22	12.969	-1389.7	13.086	-1361	13.074	-1355.94	13.071	-1352.86	13.062
-1340.11	13.037	-1305.28	12.968	-1288.44	12.929	-1271.32	12.899	-1254.68	12.88

ExpandedLocal.rep

-1227.42	12.869-1216.96	12.85-1187.17	12.737-1173.56	12.732-1146.05	12.726
-1119.66	12.663-1108.24	12.635-1085.91	12.54-1068.17	12.488-1052.15	12.426
-1026.71	12.4-1004.79	12.349-977.836	12.299-950.892	12.278-947.724	12.283
-921.528	12.273-890.813	12.272-883.383	12.271-863.634	12.284-849.628	12.377
-839.734	12.393 -782.23	12.453-782.119	12.453-782.106	12.453 -782	12.453
-754.916	12.476-754.356	12.477 -748.47	12.488-743.486	12.497-697.907	12.688
-682.16	12.706-656.677	12.679-638.714	12.67 -615.85	12.713 -599.9	12.71
-569.867	12.848-522.273	13.158-516.384	13.171-483.459	13.161-483.229	13.161
-481.882	13.153-450.074	12.965-444.645	12.921-416.919	12.652-396.248	12.441
-367.017	12.15-350.608	11.972-338.375	11.846-304.524	11.393-284.298	11.226
-262.207	11.026-251.731	10.932-251.105	10.926-250.706	10.921-248.905	10.903
-184.571	10.077-148.753	10.845-123.605	11.398 -109.3	11.527 -84.769	11.532
-57.243	11.6 -51.502	11.609 -23.841	11.53 -18.235	11.519 0	6.8
14	7 24	6.8 39	5.9 46	5.9 51	6.8
56	6.1 62	6.3 72	6.9 88	6.8 103	6.7
137	6.6 146	6.5 153	5.6 158	6.5 163	6.8
168	6.4 179	6 183	6.6 218	7 238	6.3
267.52	7.231 279.733	6.65 288.838	6.502 312.56	6.381 334.276	6.385
345.386	6.344 367.654	6.349 388.427	6.353 411.038	6.358 430.091	6.306
443.865	6.311 458.579	6.316 476.691	6.322 492.527	6.328 509.517	6.334
526.476	6.34 542.343	6.347 560.424	6.353 575.169	6.363 594.372	6.369
607.996	6.422 634.676	6.427 640.822	6.46 652.524	6.596 673.648	6.59
694.291	6.76 727.499	7.834 739.301	8.096 751.499	8.337 772.127	8.664
784.876	8.504 825.832	9.462 843.18	9.865 870.606	10.556 899.906	11.443
906.732	11.665 936.258	12.65 940.619	12.827 985.84	14.3531032.991	16.683
1034.737	16.7571065.612	17.6851067.563	17.7431068.588	17.7921100.389	18.643
1101.966	18.6871133.216	19.4441135.343	19.4791166.042	20.1091168.721	20.153
1198.868	20.6441228.035	21.0491232.371	21.0871237.857	21.1231265.787	21.137
1279.935	20.9791299.907	21.2451317.481	20.4681346.432	19.5891384.434	19.648
1402.265	20.2641414.291	20.6111436.385	20.9521450.188	21.121470.504	21.31
1476.729	21.3351498.531	21.4361524.127	21.5311538.743	21.6231556.353	21.756
1602.567	22.3131609.436	22.3891618.029	22.4611654.433	22.7861668.076	22.873
1698.076	23.123 1709.34	23.2221737.527	23.5931763.021	23.9251777.579	24.084
1795.225	24.289 1841.34	24.7041845.818	24.7421848.307	24.7541857.025	24.803
1879.938	24.9071889.094	24.9171914.057	24.921943.456	25.2991954.472	25.344
1976.523	25.2751981.014	25.271982.296	25.2571984.603	25.1982016.415	24.573
2045.35	24.1622084.654	23.579 2113.72	22.822118.774	22.7542140.261	22.574
2152.893	22.5272162.365	22.4982187.013	22.4032205.502	22.3462240.809	22.138
2255.252	22.0552272.968	22.0512289.371	22.092305.962	22.1662335.016	22.377
2349.398	22.483 2357.61	22.5432379.133	22.598 2391.73	22.6822405.674	22.78
2425.849	22.982436.268	23.0852474.216	23.4992494.088	23.7262520.579	24.036
2533.93	24.1852562.327	24.3332574.012	24.3482591.464	24.372596.446	24.362
2626.312	24.262659.885	24.1532664.685	24.1442675.162	24.628 2693.51	25.313
2724.17	26.7982748.675	25.9422767.044	24.852791.276	26.7	

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*



ExpandedLocal.rep

-3667 .1 137 .05 163 .1

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
137	163	197	197	197	.1	.3	
Ineffective Flow	num=	2					
Sta L	Sta R	Elev	Permanent				
-3667	35.47	10.5	F				
191.552791.276		10.5	F				

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 14919

INPUT

Description: Data from COE 2.8255\*

Station Elevation Data num= 347

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-3667	14.223-3642.99	14.277-3636.97	14.271-3633.69	14.275-3607.27	14.294				
-3599.25	14.315-3577.57	14.245-3537.88	14.334-3530.37	14.386-3508.93	14.368				
-3495.93	14.353-3470.76	14.104-3461.49	14.042-3458.78	14.035-3441.74	13.928				
-3427.06	13.836 -3404.5	13.853-3392.62	13.864-3369.71	14.084-3333.82	14.81				
-3323.74	14.962-3300.07	14.235 -3289.3	14.068-3265.73	14.158-3254.86	14.097				
-3221.75	14.069-3219.39	14.066-3210.76	14.065-3151.55	14.082-3138.47	14.03				
-3117.99	13.922-3096.43	13.823-3082.67	13.774-3065.11	13.764-3048.23	13.745				
-3015.54	13.774-3012.89	13.774-3010.07	13.772-2953.88	13.762-2914.38	13.788				
-2910.48	13.791-2908.47	13.793-2902.16	13.825 -2841.6	14.057-2813.22	14.058				
-2805.2	14.056 -2804.1	14.056-2797.48	14.035 -2779.5	13.948-2762.56	13.806				
-2734.54	13.583-2705.69	13.42-2681.99	13.288-2645.35	13.192-2635.18	13.156				
-2631.89	13.153-2619.19	13.173-2589.08	13.283 -2571.4	13.312-2533.48	13.499				
-2516.35	13.576-2497.22	13.601-2479.99	13.627-2459.67	13.56-2443.62	13.567				
-2430.69	13.555-2417.17	13.538-2385.86	13.578-2356.35	13.322-2321.12	13.056				
-2298.16	12.895-2265.05	12.16-2261.79	12.116-2260.77	12.127-2190.73	13.493				
-2189.06	13.526-2189.04	13.526-2188.99	13.526-2164.44	13.568-2119.45	13.382				
-2116.33	13.368-2115.23	13.363-2112.93	13.358-2090.63	13.316-2079.97	13.313				
-2058.9	13.389-2027.63	13.456-2007.24	13.411-1998.28	13.411 -1960.8	13.293				
-1943.01	13.296-1934.51	13.294-1918.41	13.264-1884.74	13.219-1868.59	13.192				
-1862.27	13.183-1842.09	13.185-1828.51	13.169-1806.27	13.216-1794.76	13.233				
-1761.32	13.316-1760.55	13.315-1727.25	13.429-1715.58	13.435-1693.49	13.45				
-1685.47	13.398-1669.26	13.413-1625.98	13.388-1619.16	13.379-1592.23	13.324				
-1570.3	13.179-1558.47	13.097-1543.12	12.969-1524.72	12.643-1494.58	11.963				
-1490.96	11.902-1487.27	11.938-1479.64	12.053 -1434.4	12.746-1423.45	12.911				
-1407.22	12.969 -1389.7	13.086 -1361	13.074-1355.94	13.071-1352.86	13.062				
-1340.11	13.037-1305.28	12.968-1288.44	12.929-1271.32	12.899-1254.68	12.88				
-1227.42	12.869-1216.96	12.85-1187.17	12.737-1173.56	12.732-1146.05	12.726				
-1119.66	12.663-1108.24	12.635-1085.91	12.54-1068.17	12.488-1052.15	12.426				

ExpandedLocal.rep

-1026.71	12.4-1004.79	12.349-977.836	12.299-950.892	12.278-947.724	12.283
-921.528	12.273-890.813	12.272-883.383	12.271-863.634	12.284-849.628	12.377
-839.734	12.393 -782.23	12.453-782.119	12.453-782.106	12.453 -782	12.453
-754.916	12.476-754.356	12.477 -748.47	12.488-743.486	12.497-697.907	12.688
-682.16	12.706-656.677	12.679-638.714	12.67 -615.85	12.713 -599.9	12.71
-569.867	12.848-522.273	13.158-516.384	13.171-483.459	13.161-483.229	13.161
-481.882	13.153-450.074	12.965-444.645	12.921-416.919	12.652-396.248	12.441
-367.017	12.15-350.608	11.972-338.375	11.846-304.524	11.393-284.298	11.226
-262.207	11.026-251.731	10.932-251.105	10.926-250.706	10.921-248.905	10.903
-184.571	10.077-148.753	10.845-123.605	11.398 -109.3	11.527 -84.769	11.532
-57.243	11.6 -51.502	11.609 -23.841	11.53 -18.235	11.519 1.474	11.426
39.81	11.219 61.618	11.184 81.567	11.066 109.562	10.845 114.834	10.819
118.59	10.775 166.911	9.936 172.793	9.842 181.255	9.716 194.671	9.467
214.081	9.386 233.539	8.226 267.52	7.231 279.733	6.65 288.838	6.502
299.98	10.66 328.33	10.3 333.43	8.62 338.53	8.16 343.64	8.64
347.04	10.39 411.01	10.28 431.51	10.3 435.93	6.9 437.35	6.38
445.39	5.81 446.44	5.81 451.46	6.45 455.23	8.04 458.95	8.1
476.16	10.25 492.527	6.328 509.517	6.334 526.476	6.34 542.343	6.347
560.424	6.353 575.169	6.363 594.372	6.369 607.996	6.422 634.676	6.427
640.822	6.46 652.524	6.596 673.648	6.59 694.291	6.76 727.499	7.834
739.301	8.096 751.499	8.337 772.127	8.664 784.876	8.504 825.832	9.462
843.18	9.865 870.606	10.556 899.906	11.443 906.732	11.665 936.258	12.65
940.619	12.827 985.84	14.3531032.991	16.6831034.737	16.7571065.612	17.685
1067.563	17.7431068.588	17.7921100.389	18.6431101.966	18.6871133.216	19.444
1135.343	19.4791166.042	20.1091168.721	20.1531198.868	20.6441228.035	21.049
1232.371	21.0871237.857	21.1231265.787	21.1371279.935	20.9791299.907	21.245
1317.481	20.4681346.432	19.5891384.434	19.6481402.265	20.2641414.291	20.611
1436.385	20.9521450.188	21.121470.504	21.311476.729	21.3351498.531	21.436
1524.127	21.5311538.743	21.6231556.353	21.7561602.567	22.3131609.436	22.389
1618.029	22.4611654.433	22.7861668.076	22.8731698.076	23.123 1709.34	23.222
1737.527	23.5931763.021	23.9251777.579	24.0841795.225	24.289 1841.34	24.704
1845.818	24.7421848.307	24.7541857.025	24.8031879.938	24.9071889.094	24.917
1914.057	24.921943.456	25.2991954.472	25.3441976.523	25.2751981.014	25.27
1982.296	25.2571984.603	25.1982016.415	24.573 2045.35	24.1622084.654	23.579
2113.72	22.822118.774	22.7542140.261	22.5742152.893	22.5272162.365	22.498
2187.013	22.4032205.502	22.3462240.809	22.1382255.252	22.0552272.968	22.051
2289.371	22.092305.962	22.1662335.016	22.3772349.398	22.483 2357.61	22.543
2379.133	22.598 2391.73	22.6822405.674	22.782425.849	22.982436.268	23.085
2474.216	23.4992494.088	23.7262520.579	24.036 2533.93	24.1852562.327	24.333
2574.012	24.3482591.464	24.372596.446	24.3622626.312	24.262659.885	24.153
2664.685	24.1442675.162	24.628 2693.51	25.313 2724.17	26.7982748.675	25.942
2767.044	24.852791.276	26.7			

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -3667 .08 431.51 .05 476.16 .08

ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 431.51 476.16 386 386 386 .1 .3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 14533

INPUT

Description: Data from COE 2.7525\*

Station Elevation Data num= 345

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3667	14.223	-3642.99	14.277	-3636.97	14.271	-3633.69	14.275	-3607.27	14.294
-3599.25	14.315	-3577.57	14.245	-3537.88	14.334	-3530.37	14.386	-3508.93	14.368
-3495.93	14.353	-3470.76	14.104	-3461.49	14.042	-3458.78	14.035	-3441.74	13.928
-3427.06	13.836	-3404.5	13.853	-3392.62	13.864	-3369.71	14.084	-3333.82	14.81
-3323.74	14.962	-3300.07	14.235	-3289.3	14.068	-3265.73	14.158	-3254.86	14.097
-3221.75	14.069	-3219.39	14.066	-3210.76	14.065	-3151.55	14.082	-3138.47	14.03
-3117.99	13.922	-3096.43	13.823	-3082.67	13.774	-3065.11	13.764	-3048.23	13.745
-3015.54	13.774	-3012.89	13.774	-3010.07	13.772	-2953.88	13.762	-2914.38	13.788
-2910.48	13.791	-2908.47	13.793	-2902.16	13.825	-2841.6	14.057	-2813.22	14.058
-2805.2	14.056	-2804.1	14.056	-2797.48	14.035	-2779.5	13.948	-2762.56	13.806
-2734.54	13.583	-2705.69	13.42	-2681.99	13.288	-2645.35	13.192	-2635.18	13.156
-2631.89	13.153	-2619.19	13.173	-2589.08	13.283	-2571.4	13.312	-2533.48	13.499
-2516.35	13.576	-2497.22	13.601	-2479.99	13.627	-2459.67	13.56	-2443.62	13.567
-2430.69	13.555	-2417.17	13.538	-2385.86	13.578	-2356.35	13.322	-2321.12	13.056
-2298.16	12.895	-2265.05	12.16	-2261.79	12.116	-2260.77	12.127	-2190.73	13.493
-2189.06	13.526	-2189.04	13.526	-2188.99	13.526	-2164.44	13.568	-2119.45	13.382
-2116.33	13.368	-2115.23	13.363	-2112.93	13.358	-2090.63	13.316	-2079.97	13.313
-2058.9	13.389	-2027.63	13.456	-2007.24	13.411	-1998.28	13.411	-1960.8	13.293
-1943.01	13.296	-1934.51	13.294	-1918.41	13.264	-1884.74	13.219	-1868.59	13.192
-1862.27	13.183	-1842.09	13.185	-1828.51	13.169	-1806.27	13.216	-1794.76	13.233
-1761.32	13.316	-1760.55	13.315	-1727.25	13.429	-1715.58	13.435	-1693.49	13.45
-1685.47	13.398	-1669.26	13.413	-1625.98	13.388	-1619.16	13.379	-1592.23	13.324
-1570.3	13.179	-1558.47	13.097	-1543.12	12.969	-1524.72	12.643	-1494.58	11.963
-1490.96	11.902	-1487.27	11.938	-1479.64	12.053	-1434.4	12.746	-1423.45	12.911
-1407.22	12.969	-1389.7	13.086	-1361	13.074	-1355.94	13.071	-1352.86	13.062
-1340.11	13.037	-1305.28	12.968	-1288.44	12.929	-1271.32	12.899	-1254.68	12.88
-1227.42	12.869	-1216.96	12.85	-1187.17	12.737	-1173.56	12.732	-1146.05	12.726
-1119.66	12.663	-1108.24	12.635	-1085.91	12.54	-1068.17	12.488	-1052.15	12.426
-1026.71	12.4	-1004.79	12.349	-977.836	12.299	-950.892	12.278	-947.724	12.283
-921.528	12.273	-890.813	12.272	-883.383	12.271	-863.634	12.284	-849.628	12.377
-839.734	12.393	-782.23	12.453	-782.119	12.453	-782.106	12.453	-782	12.453
-754.916	12.476	-754.356	12.477	-748.47	12.488	-743.486	12.497	-697.907	12.688
-682.16	12.706	-656.677	12.679	-638.714	12.67	-615.85	12.713	-599.9	12.71
-569.867	12.848	-522.273	13.158	-516.384	13.171	-483.459	13.161	-483.229	13.161

ExpandedLocal.rep

-481.882	13.153	-450.074	12.965	-444.645	12.921	-416.919	12.652	-396.248	12.441
-367.017	12.15	-350.608	11.972	-338.375	11.846	-304.524	11.393	-284.298	11.226
-262.207	11.026	-251.731	10.932	-251.105	10.926	-250.706	10.921	-248.905	10.903
-184.571	10.077	-148.753	10.845	-123.605	11.398	-109.3	11.527	-84.769	11.532
-57.243	11.6	-51.502	11.609	-23.841	11.53	-18.235	11.519	1.474	11.426
39.81	11.219	61.618	11.184	81.567	11.066	109.562	10.845	114.834	10.819
118.59	10.775	166.911	9.936	172.793	9.842	181.255	9.716	194.671	9.467
214.081	9.386	233.539	8.226	267.52	7.231	279.733	6.65	288.838	6.502
308.92	10.44	314.2	9	319.47	8.61	324.75	9.01	328.26	10.49
394.39	10.31	415.59	10.32	420.4	6.66	421.96	6.22	430.71	5.72
432.06	5.72	436.81	6.26	440.37	7.61	443.88	7.66	460.14	10.31
516.78	10.1	526.476	6.34	542.343	6.347	560.424	6.353	575.169	6.363
594.372	6.369	607.996	6.422	634.676	6.427	640.822	6.46	652.524	6.596
673.648	6.59	694.291	6.76	727.499	7.834	739.301	8.096	751.499	8.337
772.127	8.664	784.876	8.504	825.832	9.462	843.18	9.865	870.606	10.556
899.906	11.443	906.732	11.665	936.258	12.65	940.619	12.827	985.84	14.353
1032.991	16.683	1034.737	16.757	1065.612	17.685	1067.563	17.743	1068.588	17.792
1100.389	18.643	1101.966	18.687	1133.216	19.444	1135.343	19.479	1166.042	20.109
1168.721	20.153	1198.868	20.644	1228.035	21.049	1232.371	21.087	1237.857	21.123
1265.787	21.137	1279.935	20.979	1299.907	21.245	1317.481	20.468	1346.432	19.589
1384.434	19.648	1402.265	20.264	1414.291	20.611	1436.385	20.952	1450.188	21.12
1470.504	21.311	1476.729	21.335	1498.531	21.436	1524.127	21.531	1538.743	21.623
1556.353	21.756	1602.567	22.313	1609.436	22.389	1618.029	22.461	1654.433	22.786
1668.076	22.873	1698.076	23.123	1709.34	23.222	1737.527	23.593	1763.021	23.925
1777.579	24.084	1795.225	24.289	1841.34	24.704	1845.818	24.742	1848.307	24.754
1857.025	24.803	1879.938	24.907	1889.094	24.917	1914.057	24.921	1943.456	25.299
1954.472	25.344	1976.523	25.275	1981.014	25.271	1982.296	25.257	1984.603	25.198
2016.415	24.573	2045.35	24.162	2084.654	23.579	2113.72	22.822	2118.774	22.754
2140.261	22.574	2152.893	22.527	2162.365	22.498	2187.013	22.403	2205.502	22.346
2240.809	22.138	2255.252	22.055	2272.968	22.051	2289.371	22.092	2305.962	22.166
2335.016	22.377	2349.398	22.483	2357.61	22.543	2379.133	22.598	2391.73	22.682
2405.674	22.782	2425.849	22.982	2436.268	23.085	2474.216	23.499	2494.088	23.726
2520.579	24.036	2533.93	24.185	2562.327	24.333	2574.012	24.348	2591.464	24.37
2596.446	24.362	2626.312	24.262	2659.885	24.153	2664.685	24.144	2675.162	24.628
2693.51	25.313	2724.17	26.798	2748.675	25.942	2767.044	24.852	2791.276	26.7

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -3667 .08 415.59 .05 460.14 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 415.59 460.14 385 385 385 .1 .3

CROSS SECTION

RIVER: Gum Bayou

REACH: Upper

RS: 14148

INPUT

Description: Copy of COE 2.6795\*

Station Elevation Data num= 422

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-5426	15.143	-5419.5	15.136	-5412.59	15.122	-5381.93	15.045	-5357.19	14.971
-5343.55	14.936	-5327.53	14.879	-5309.03	14.842	-5289.44	14.79	-5245.09	14.623
-5240	14.602	-5238.53	14.595	-5229.53	14.552	-5205.48	14.453	-5179.19	14.379
-5159.51	14.309	-5136.44	14.266	-5118.24	14.232	-5081.35	14.238	-5067.4	14.224
-5045.69	14.218	-5032.89	14.193	-5003.32	14.108	-4994.44	14.105	-4960.39	14.096
-4932.54	14.075	-4929.33	14.007	-4927.02	14.079	-4922.84	14.033	-4912.91	13.994
-4873.26	13.34	-4834.72	13.878	-4825.78	13.895	-4823.19	13.885	-4807.37	13.988
-4795.23	14.027	-4791.26	14.041	-4769.22	14.077	-4732.13	14.172	-4722.22	14.195
-4717.19	14.199	-4687.7	14.18	-4651.55	14.275	-4618.66	14.317	-4596.29	14.359
-4586.4	14.365	-4584.23	14.369	-4558.71	14.312	-4550.96	14.305	-4540.11	14.242
-4517.7	14.082	-4501.7	13.923	-4460.25	13.599	-4451.18	13.514	-4439.85	13.488
-4405.95	13.48	-4369.6	13.44	-4351.39	13.432	-4330.69	13.358	-4300.51	13.145
-4284.86	12.984	-4278.85	12.917	-4219.38	12.694	-4218.33	12.687	-4216.69	12.678
-4206.83	12.656	-4165.59	12.535	-4151.81	12.516	-4140.77	12.507	-4110	12.431
-4056.06	12.427	-4052.02	12.43	-4045.68	12.435	-4007.72	12.237	-3991.06	12.159
-3987.21	12.138	-3985.49	12.126	-3956.51	11.975	-3941.1	11.765	-3918.97	11.667
-3903.17	11.687	-3885.7	11.742	-3874.67	11.804	-3852.44	11.973	-3833.71	12.098
-3791.6	12.383	-3785.92	12.435	-3741.73	12.568	-3719.39	12.668	-3718.54	12.667
-3704.54	12.658	-3686.57	12.661	-3677.59	12.641	-3653.76	12.565	-3644.78	12.523
-3620.95	12.414	-3611.97	12.355	-3588.14	12.314	-3570.18	11.936	-3540.49	11.728
-3522.53	11.912	-3507.69	11.929	-3471.75	11.839	-3456.91	11.798	-3431.52	11.75
-3424.1	11.742	-3398.72	11.615	-3391.29	11.603	-3376.45	11.612	-3358.49	11.7
-3328.8	11.768	-3292.87	11.894	-3274.9	11.936	-3260.06	11.98	-3242.09	12.053
-3212.41	12.185	-3176.48	12.307	-3161.64	12.318	-3125.7	12.32	-3103.44	12.303
-3081.18	12.369	-3063.21	12.447	-3045.24	12.413	-3040.54	12.402	-3030.35	12.374
-2990.7	12.352	-2964.42	12.278	-2954.81	12.163	-2902.98	10.915	-2898.48	10.825
-2866.41	11.827	-2864.78	11.85	-2857.34	11.914	-2832.55	12.11	-2804.76	12.302
-2796.59	12.382	-2766.62	12.535	-2756.7	12.586	-2714.73	12.805	-2700.68	12.822
-2671.4	12.692	-2634.75	12.63	-2580.1	12.724	-2571.2	12.735	-2564.69	12.744
-2535.84	12.799	-2519.18	12.78	-2474.66	12.668	-2472.39	12.66	-2469.91	12.647
-2439.67	12.607	-2432.49	12.613	-2427.56	12.614	-2403.98	12.627	-2380.48	12.61
-2362.43	12.566	-2338.04	12.486	-2331.01	12.449	-2305.07	12.285	-2294.6	12.222
-2244.7	11.883	-2239.14	11.865	-2234.58	11.865	-2206.17	11.864	-2148.15	12.121
-2140.24	12.181	-2134.99	12.202	-2107.27	12.256	-2095.36	12.249	-2074.3	12.258
-2071.87	12.259	-2063.47	12.257	-2041.47	12.189	-2030.19	12.164	-1987.71	11.946
-1963.61	11.796	-1943.01	11.746	-1922.97	11.689	-1883.51	11.446	-1877.37	11.408
-1820.48	10.349	-1811.72	10.258	-1750.94	11.462	-1746.08	11.517	-1714.67	11.669
-1713.26	11.673	-1680.91	11.602	-1680.44	11.6	-1679.57	11.596	-1614.8	11.389
-1555.26	11.051	-1549.15	11	-1545.84	11.008	-1516.33	11.006	-1512.07	11.021
-1456.51	11.306	-1450.69	11.333	-1424.58	11.263	-1417.87	11.259	-1403.25	11.17
-1352.23	10.396	-1333.71	10.463	-1286.58	11.065	-1264.95	11.065	-1253.76	11.058

ExpandedLocal.rep

-1250.54	11.019-1244.37	10.956-1216.87	10.924	-1204.2	10.731-1179.53	10.76
-1174.84	10.852-1168.09	10.863-1157.55	10.853	-1132.3	10.819-1116.11	10.7
-1078.61	11.005-1067.52	11.062-1050.83	11.115	-1030.18	11.172-1026.63	11.162
-1020.1	11.152 -998.67	11.034-992.849	11.081	-982.685	11.04-929.862	10.853
-918.174	10.976-905.668	11.042-882.648	11.24	-881.224	11.252-878.682	11.279
-843.499	11.648-813.921	11.939-808.893	11.981	-806.162	12.002-796.933	12.052
-777.122	12.169-769.827	12.188-736.699	12.036	-711.904	11.897-689.451	11.887
-652.033	11.997-638.525	11.998-602.803	11.695	-562.284	11.368-540.048	11.192
-516.317	10.918-507.222	10.814-448.458	9.981	-441.571	9.878-435.117	9.845
-408.745	9.054-407.927	9.074-396.423	9.43	-373.643	9.39-366.943	9.386
-338.483	9.348-337.463	9.337-332.168	9.34	-311.346	9.308-303.323	9.249
-285.239	9.078-268.163	8.836-263.763	8.861	-240.927	8.701-235.207	8.652
-216.595	8.557-197.843	8.421-191.493	8.377	-131.103	8.085-127.523	8.07
-113.628	8.1 -82.928	8.069 -58.445	8.373	-57.203	8.355 -32.169	6.502
-22.043	6.444 -6.789	6.286 13.117	6.091	18.591	6.056 32.796	6.03
43.971	6.005 48.277	6.004 69.351	6.002	83.437	6.002 115.187	6.002
120.11	6.002 124.037	6.002 145.49	6.002	153.757	6.002 170.87	6.002
188.917	6.002 196.25	6.002 215.277	6.002	221.63	6.002 224.077	6.002
247.009	6.002 259.26	10.89 289.52	10.57	294.96	9.39 300.41	9.06
305.86	9.38 309.49	10.59 377.78	10.35	399.66	10.35 404.87	6.42
406.56	6.05 416.04	5.62 417.69	5.62	422.15	6.07 425.5	7.18
428.81	7.22 444.11	10.36 495	10.07	500.493	6.002 505.768	6.002
525.374	6.002 541.629	6.002 569.803	6.003	575.136	6.003 577.489	6.003
600.017	6.005 613.35	6.006 624.898	6.008	649.211	6.014 649.779	6.014
651.067	6.015 674.66	6.03 685.072	6.039	699.541	6.062 720.932	6.103
724.423	6.117 732.332	6.148 749.304	6.218	756.793	6.264 774.185	6.412
792.654	6.502 802.472	7.317 813.596	8.62	864.375	13.915 873.709	13.78
894.86	15.312 936.097	17.614 948.352	18.438	971.958	19.967 976.125	20.217
1007.819	22.0171032.851	22.5211047.877	22.8631057.389	22.9711072.758	22.9711072.758	23.151
1079.54	23.1921138.653	23.1251147.401	23.1031151.262	23.0741172.282	23.0741172.282	22.867
1187.122	22.7021202.497	22.4951219.918	22.2821240.595	21.9931258.844	21.9931258.844	21.812
1301.182	21.644 1316.79	21.5751330.565	21.6271369.051	21.3051392.077	21.3051392.077	21.028
1402.505	20.941432.437	20.8511442.878	20.8891494.443	21.077 1498.23	21.077 1498.23	21.085
1525.088	21.171531.127	21.1671555.734	21.1591564.023	21.1171573.627	21.1171573.627	21.037
1617.026	20.8021629.817	20.4661647.671	19.2291680.141	14.537 1695.61	14.537 1695.61	11.225
1708.963	10.9021728.507	10.7681750.12	10.7581786.655	10.608 1794.3	10.608 1794.3	10.602
1822.159	10.5291831.546	10.4571860.094	10.4061893.168	10.4161940.508	10.4161940.508	10.412
1954.129	10.4041958.784	10.4041984.774	10.4041991.681	10.404 2015.42	10.404 2015.42	10.404
2024.577	10.4042046.066	10.4052057.474	10.4052076.712	10.4062090.371	10.4062090.371	10.407
2107.357	10.4112123.268	10.414 2141.7	10.4222156.164	10.4382162.628	10.4382162.628	10.452
2189.061	10.4862199.295	10.5112221.958	10.5982248.214	10.8412254.854	10.8412254.854	10.898
2260.586	10.9022287.751	11.5782302.887	12.2692352.523	20.4692353.545	20.4692353.545	20.662
2354.728	20.7652386.441	23.032390.232	22.8042444.461	24.0212452.235	24.0212452.235	24.949
2471.799	24.2442502.095	23.259				

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*

ExpandedLocal.rep

-5426 .08 399.66 .05 444.11 .08

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
399.66	444.11	295	295	295	.1	.3	
Ineffective Flow	num=	1					
Sta L	Sta R	Elev	Permanent				
1525.09	2452.24	21.17	F				

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 13853

INPUT

Description: Data from Land Survey

Station Elevation Data num= 421

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-5426	15.143	-5419.5	15.136	-5412.59	15.122	-5381.93	15.045	-5357.19	14.971
-5343.55	14.936	-5327.53	14.879	-5309.03	14.842	-5289.44	14.79	-5245.09	14.623
-5240	14.602	-5238.53	14.595	-5229.53	14.552	-5205.48	14.453	-5179.19	14.379
-5159.51	14.309	-5136.44	14.266	-5118.24	14.232	-5081.35	14.238	-5067.4	14.224
-5045.69	14.218	-5032.89	14.193	-5003.32	14.108	-4994.44	14.105	-4960.39	14.096
-4932.54	14.075	-4929.33	14.007	-4927.02	14.079	-4922.84	14.033	-4912.91	13.994
-4873.26	13.34	-4834.72	13.878	-4825.78	13.895	-4823.19	13.885	-4807.37	13.988
-4795.23	14.027	-4791.26	14.041	-4769.22	14.077	-4732.13	14.172	-4722.22	14.195
-4717.19	14.199	-4687.7	14.18	-4651.55	14.275	-4618.66	14.317	-4596.29	14.359
-4586.4	14.365	-4584.23	14.369	-4558.71	14.312	-4550.96	14.305	-4540.11	14.242
-4517.7	14.082	-4501.7	13.923	-4460.25	13.599	-4451.18	13.514	-4439.85	13.488
-4405.95	13.48	-4369.6	13.44	-4351.39	13.432	-4330.69	13.358	-4300.51	13.145
-4284.86	12.984	-4278.85	12.917	-4219.38	12.694	-4218.33	12.687	-4216.69	12.678
-4206.83	12.656	-4165.59	12.535	-4151.81	12.516	-4140.77	12.507	-4110	12.431
-4056.06	12.427	-4052.02	12.43	-4045.68	12.435	-4007.72	12.237	-3991.06	12.159
-3987.21	12.138	-3985.49	12.126	-3956.51	11.975	-3941.1	11.765	-3918.97	11.667
-3903.17	11.687	-3885.7	11.742	-3874.67	11.804	-3852.44	11.973	-3833.71	12.098
-3791.6	12.383	-3785.92	12.435	-3741.73	12.568	-3719.39	12.668	-3718.54	12.667
-3704.54	12.658	-3686.57	12.661	-3677.59	12.641	-3653.76	12.565	-3644.78	12.523
-3620.95	12.414	-3611.97	12.355	-3588.14	12.314	-3570.18	11.936	-3540.49	11.728
-3522.53	11.912	-3507.69	11.929	-3471.75	11.839	-3456.91	11.798	-3431.52	11.75
-3424.1	11.742	-3398.72	11.615	-3391.29	11.603	-3376.45	11.612	-3358.49	11.7
-3328.8	11.768	-3292.87	11.894	-3274.9	11.936	-3260.06	11.98	-3242.09	12.053
-3212.41	12.185	-3176.48	12.307	-3161.64	12.318	-3125.7	12.32	-3103.44	12.303
-3081.18	12.369	-3063.21	12.447	-3045.24	12.413	-3040.54	12.402	-3030.35	12.374
-2990.7	12.352	-2964.42	12.278	-2954.81	12.163	-2902.98	10.915	-2898.48	10.825
-2866.41	11.827	-2864.78	11.85	-2857.34	11.914	-2832.55	12.11	-2804.76	12.302
-2796.59	12.382	-2766.62	12.535	-2756.7	12.586	-2714.73	12.805	-2700.68	12.822
-2671.4	12.692	-2634.75	12.63	-2580.1	12.724	-2571.2	12.735	-2564.69	12.744



ExpandedLocal.rep

-2535.84	12.799-2519.18	12.78-2474.66	12.668-2472.39	12.66-2469.91	12.647
-2439.67	12.607-2432.49	12.613-2427.56	12.614-2403.98	12.627-2380.48	12.61
-2362.43	12.566-2338.04	12.486-2331.01	12.449-2305.07	12.285 -2294.6	12.222
-2244.7	11.883-2239.14	11.865-2234.58	11.865-2206.17	11.864-2148.15	12.121
-2140.24	12.181-2134.99	12.202-2107.27	12.256-2095.36	12.249 -2074.3	12.258
-2071.87	12.259-2063.47	12.257-2041.47	12.189-2030.19	12.164-1987.71	11.946
-1963.61	11.796-1943.01	11.746-1922.97	11.689-1883.51	11.446-1877.37	11.408
-1820.48	10.349-1811.72	10.258-1750.94	11.462-1746.08	11.517-1714.67	11.669
-1713.26	11.673-1680.91	11.602-1680.44	11.6-1679.57	11.596 -1614.8	11.389
-1555.26	11.051-1549.15	11-1545.84	11.008-1516.33	11.006-1512.07	11.021
-1456.51	11.306-1450.69	11.333-1424.58	11.263-1417.87	11.259-1403.25	11.17
-1352.23	10.396-1333.71	10.463-1286.58	11.065-1264.95	11.065-1253.76	11.058
-1250.54	11.019-1244.37	10.956-1216.87	10.924 -1204.2	10.731-1179.53	10.76
-1174.84	10.852-1168.09	10.863-1157.55	10.853 -1132.3	10.819-1116.11	10.7
-1078.61	11.005-1067.52	11.062-1050.83	11.115-1030.18	11.172-1026.63	11.162
-1020.1	11.152 -998.67	11.034-992.849	11.081-982.685	11.04-929.862	10.853
-918.174	10.976-905.668	11.042-882.648	11.24-881.224	11.252-878.682	11.279
-843.499	11.648-813.921	11.939-808.893	11.981-806.162	12.002-796.933	12.052
-777.122	12.169-769.827	12.188-736.699	12.036-711.904	11.897-689.451	11.887
-652.033	11.997-638.525	11.998-602.803	11.695-562.284	11.368-540.048	11.192
-516.317	10.918-507.222	10.814-448.458	9.981-441.571	9.878-435.117	9.845
-408.745	9.054-407.927	9.074-396.423	9.43-373.643	9.39-366.943	9.386
-338.483	9.348-337.463	9.337-332.168	9.34-311.346	9.308-303.323	9.249
-285.239	9.078-268.163	8.836-263.763	8.861-240.927	8.701-235.207	8.652
-216.595	8.557-197.843	8.421-191.493	8.377-131.103	8.085-127.523	8.07
-113.628	8.1 -82.928	8.069 -58.445	8.373 -57.203	8.355 -32.169	6.502
-22.043	6.444 -6.789	6.286 0	6 29	5.1 56	5
67	4.4 79	5.8 109	5.8 152	6.1 153.757	6.002
170.87	6.002 188.917	6.002 196.25	6.002 215.277	6.002 221.63	6.002
224.077	6.002 247.009	6.002 259.238	6.002 272.389	6.002 294.398	6.002
297.769	6.002 306.518	6.002 323.149	6.002 329.558	6.002 344.002	6.002
364.718	6.002 373.909	6.002 397.759	6.002 399.288	6.002 399.878	6.002
401.206	6.002 435.038	6.002 450.048	6.002 470.198	6.002 475.428	6.002
484.782	6.002 488.539	6.002 500.493	6.002 505.768	6.002 525.374	6.002
541.629	6.002 569.803	6.003 575.136	6.003 577.489	6.003 600.017	6.005
613.35	6.006 624.898	6.008 649.211	6.014 649.779	6.014 651.067	6.015
674.66	6.03 685.072	6.039 699.541	6.062 720.932	6.103 724.423	6.117
732.332	6.148 749.304	6.218 756.793	6.264 774.185	6.412 792.654	6.502
802.472	7.317 813.596	8.62 864.375	13.915 873.709	13.78 894.86	15.312
936.097	17.614 948.352	18.438 971.958	19.967 976.125	20.2171007.819	22.017
1032.851	22.5211047.877	22.8631057.389	22.9711072.758	23.151 1079.54	23.192
1138.653	23.1251147.401	23.1031151.262	23.0741172.282	22.8671187.122	22.702
1202.497	22.4951219.918	22.2821240.595	21.9931258.844	21.8121301.182	21.644
1316.79	21.5751330.565	21.6271369.051	21.3051392.077	21.0281402.505	20.94
1432.437	20.8511442.878	20.8891494.443	21.077 1498.23	21.0851525.088	21.17
1531.127	21.1671555.734	21.1591564.023	21.1171573.627	21.0371617.026	20.802
1629.817	20.4661647.671	19.2291680.141	14.537 1695.61	11.2251708.963	10.902
1728.507	10.768 1750.12	10.7581786.655	10.608 1794.3	10.6021822.159	10.529

ExpandedLocal.rep

1831.546	10.4571860.094	10.4061893.168	10.4161940.508	10.4121954.129	10.404
1958.784	10.4041984.774	10.4041991.681	10.404 2015.42	10.4042024.577	10.404
2046.066	10.4052057.474	10.4052076.712	10.4062090.371	10.4072107.357	10.411
2123.268	10.414 2141.7	10.4222156.164	10.4382162.628	10.4522189.061	10.486
2199.295	10.5112221.958	10.5982248.214	10.8412254.854	10.8982260.586	10.902
2287.751	11.5782302.887	12.2692352.523	20.4692353.545	20.6622354.728	20.765
2386.441	23.032390.232	22.8042444.461	24.0212452.235	24.9492471.799	24.244
2502.095	23.259				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-5426	.08	0	.05	79	.08

\*\*\*\*\*

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
0	79	656	656	656	.1	.3	
Ineffective Flow	num=	1					
Sta L	Sta R	Elev	Permanent				
1525.09	2452.24	21.17	F				

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 13197

INPUT

Description: Data from Land Survey

Station Elevation Data num= 428

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-5426	15.143	-5419.5	15.136	-5412.59	15.122	-5381.93	15.045	-5357.19	14.971
-5343.55	14.936	-5327.53	14.879	-5309.03	14.842	-5289.44	14.79	-5245.09	14.623
-5240	14.602	-5238.53	14.595	-5229.53	14.552	-5205.48	14.453	-5179.19	14.379
-5159.51	14.309	-5136.44	14.266	-5118.24	14.232	-5081.35	14.238	-5067.4	14.224
-5045.69	14.218	-5032.89	14.193	-5003.32	14.108	-4994.44	14.105	-4960.39	14.096
-4932.54	14.075	-4929.33	14.007	-4927.02	14.079	-4922.84	14.033	-4912.91	13.994
-4873.26	13.34	-4834.72	13.878	-4825.78	13.895	-4823.19	13.885	-4807.37	13.988
-4795.23	14.027	-4791.26	14.041	-4769.22	14.077	-4732.13	14.172	-4722.22	14.195
-4717.19	14.199	-4687.7	14.18	-4651.55	14.275	-4618.66	14.317	-4596.29	14.359
-4586.4	14.365	-4584.23	14.369	-4558.71	14.312	-4550.96	14.305	-4540.11	14.242
-4517.7	14.082	-4501.7	13.923	-4460.25	13.599	-4451.18	13.514	-4439.85	13.488
-4405.95	13.48	-4369.6	13.44	-4351.39	13.432	-4330.69	13.358	-4300.51	13.145
-4284.86	12.984	-4278.85	12.917	-4219.38	12.694	-4218.33	12.687	-4216.69	12.678
-4206.83	12.656	-4165.59	12.535	-4151.81	12.516	-4140.77	12.507	-4110	12.431
-4056.06	12.427	-4052.02	12.43	-4045.68	12.435	-4007.72	12.237	-3991.06	12.159
-3987.21	12.138	-3985.49	12.126	-3956.51	11.975	-3941.1	11.765	-3918.97	11.667
-3903.17	11.687	-3885.7	11.742	-3874.67	11.804	-3852.44	11.973	-3833.71	12.098

ExpandedLocal.rep

-3791.6	12.383-3785.92	12.435-3741.73	12.568-3719.39	12.668-3718.54	12.667
-3704.54	12.658-3686.57	12.661-3677.59	12.641-3653.76	12.565-3644.78	12.523
-3620.95	12.414-3611.97	12.355-3588.14	12.314-3570.18	11.936-3540.49	11.728
-3522.53	11.912-3507.69	11.929-3471.75	11.839-3456.91	11.798-3431.52	11.75
-3424.1	11.742-3398.72	11.615-3391.29	11.603-3376.45	11.612-3358.49	11.7
-3328.8	11.768-3292.87	11.894 -3274.9	11.936-3260.06	11.98-3242.09	12.053
-3212.41	12.185-3176.48	12.307-3161.64	12.318 -3125.7	12.32-3103.44	12.303
-3081.18	12.369-3063.21	12.447-3045.24	12.413-3040.54	12.402-3030.35	12.374
-2990.7	12.352-2964.42	12.278-2954.81	12.163-2902.98	10.915-2898.48	10.825
-2866.41	11.827-2864.78	11.85-2857.34	11.914-2832.55	12.11-2804.76	12.302
-2796.59	12.382-2766.62	12.535 -2756.7	12.586-2714.73	12.805-2700.68	12.822
-2671.4	12.692-2634.75	12.63 -2580.1	12.724 -2571.2	12.735-2564.69	12.744
-2535.84	12.799-2519.18	12.78-2474.66	12.668-2472.39	12.66-2469.91	12.647
-2439.67	12.607-2432.49	12.613-2427.56	12.614-2403.98	12.627-2380.48	12.61
-2362.43	12.566-2338.04	12.486-2331.01	12.449-2305.07	12.285 -2294.6	12.222
-2244.7	11.883-2239.14	11.865-2234.58	11.865-2206.17	11.864-2148.15	12.121
-2140.24	12.181-2134.99	12.202-2107.27	12.256-2095.36	12.249 -2074.3	12.258
-2071.87	12.259-2063.47	12.257-2041.47	12.189-2030.19	12.164-1987.71	11.946
-1963.61	11.796-1943.01	11.746-1922.97	11.689-1883.51	11.446-1877.37	11.408
-1820.48	10.349-1811.72	10.258-1750.94	11.462-1746.08	11.517-1714.67	11.669
-1713.26	11.673-1680.91	11.602-1680.44	11.6-1679.57	11.596 -1614.8	11.389
-1555.26	11.051-1549.15	11-1545.84	11.008-1516.33	11.006-1512.07	11.021
-1456.51	11.306-1450.69	11.333-1424.58	11.263-1417.87	11.259-1403.25	11.17
-1352.23	10.396-1333.71	10.463-1286.58	11.065-1264.95	11.065-1253.76	11.058
-1250.54	11.019-1244.37	10.956-1216.87	10.924 -1204.2	10.731-1179.53	10.76
-1174.84	10.852-1168.09	10.863-1157.55	10.853 -1132.3	10.819-1116.11	10.7
-1078.61	11.005-1067.52	11.062-1050.83	11.115-1030.18	11.172-1026.63	11.162
-1020.1	11.152 -998.67	11.034-992.849	11.081-982.685	11.04-929.862	10.853
-918.174	10.976-905.668	11.042-882.648	11.24-881.224	11.252-878.682	11.279
-843.499	11.648-813.921	11.939-808.893	11.981-806.162	12.002-796.933	12.052
-777.122	12.169-769.827	12.188-736.699	12.036-711.904	11.897-689.451	11.887
-652.033	11.997-638.525	11.998-602.803	11.695-562.284	11.368-540.048	11.192
-516.317	10.918-507.222	10.814-448.458	9.981-441.571	9.878-435.117	9.845
-408.745	9.054-407.927	9.074-396.423	9.43-373.643	9.39-366.943	9.386
-338.483	9.348-337.463	9.337-332.168	9.34-311.346	9.308-303.323	9.249
-285.239	9.078-268.163	8.836-263.763	8.861-240.927	8.701-235.207	8.652
-216.595	8.557-197.843	8.421-191.493	8.377-131.103	8.085-127.523	8.07
-113.628	8.1 -82.928	8.069 -58.445	8.373 -57.203	8.355 -32.169	6.502
-22.043	6.444 -6.789	6.286 0	6.1 19	6 34	6
36	4.6 41	3.8 44	4.5 48	5.4 59	5.8
71	6 83.437	6.002 115.187	6.002 120.11	6.002 124.037	6.002
145.49	6.002 153.757	6.002 170.87	6.002 188.917	6.002 196.25	6.002
215.277	6.002 221.63	6.002 224.077	6.002 247.009	6.002 259.238	6.002
272.389	6.002 294.398	6.002 297.769	6.002 306.518	6.002 323.149	6.002
329.558	6.002 344.002	6.002 364.718	6.002 373.909	6.002 397.759	6.002
399.288	6.002 399.878	6.002 401.206	6.002 435.038	6.002 450.048	6.002
470.198	6.002 475.428	6.002 484.782	6.002 488.539	6.002 500.493	6.002
505.768	6.002 525.374	6.002 541.629	6.002 569.803	6.003 575.136	6.003

ExpandedLocal.rep

577.489	6.003	600.017	6.005	613.35	6.006	624.898	6.008	649.211	6.014
649.779	6.014	651.067	6.015	674.66	6.03	685.072	6.039	699.541	6.062
720.932	6.103	724.423	6.117	732.332	6.148	749.304	6.218	756.793	6.264
774.185	6.412	792.654	6.502	802.472	7.317	813.596	8.62	864.375	13.915
873.709	13.78	894.86	15.312	936.097	17.614	948.352	18.438	971.958	19.967
976.125	20.217	1007.819	22.017	1032.851	22.521	1047.877	22.863	1057.389	22.971
1072.758	23.151	1079.54	23.192	1138.653	23.125	1147.401	23.103	1151.262	23.074
1172.282	22.867	1187.122	22.702	1202.497	22.495	1219.918	22.282	1240.595	21.993
1258.844	21.812	1301.182	21.644	1316.79	21.575	1330.565	21.627	1369.051	21.305
1392.077	21.028	1402.505	20.941	1432.437	20.851	1442.878	20.889	1494.443	21.077
1498.23	21.085	1525.088	21.171	1531.127	21.167	1555.734	21.159	1564.023	21.117
1573.627	21.037	1617.026	20.802	1629.817	20.466	1647.671	19.229	1680.141	14.537
1695.61	11.225	1708.963	10.902	1728.507	10.768	1750.12	10.758	1786.655	10.608
1794.3	10.602	1822.159	10.529	1831.546	10.457	1860.094	10.406	1893.168	10.416
1940.508	10.412	1954.129	10.404	1958.784	10.404	1984.774	10.404	1991.681	10.404
2015.42	10.404	2024.577	10.404	2046.066	10.405	2057.474	10.405	2076.712	10.406
2090.371	10.407	2107.357	10.411	2123.268	10.414	2141.7	10.422	2156.164	10.438
2162.628	10.452	2189.061	10.486	2199.295	10.511	2221.958	10.598	2248.214	10.841
2254.854	10.898	2260.586	10.902	2287.751	11.578	2302.887	12.269	2352.523	20.469
2353.545	20.662	2354.728	20.765	2386.441	23.032	2390.232	22.804	2444.461	24.021
2452.235	24.949	2471.799	24.244	2502.095	23.259				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-5426	.08	34	.05	48	.08

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	34	48		398	398	398		.1	.3
Ineffective Flow		num=	1						
Sta L	Sta R	Elev	Permanent						
1525.09	2452.24	21.17	F						

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 12799

INPUT

Description: Copy of COE 2.424\*

Station Elevation Data num= 424

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-5426	15.143	-5419.5	15.136	-5412.59	15.122	-5381.93	15.045	-5357.19	14.971
-5343.55	14.936	-5327.53	14.879	-5309.03	14.842	-5289.44	14.79	-5245.09	14.623
-5240	14.602	-5238.53	14.595	-5229.53	14.552	-5205.48	14.453	-5179.19	14.379
-5159.51	14.309	-5136.44	14.266	-5118.24	14.232	-5081.35	14.238	-5067.4	14.224

ExpandedLocal.rep

-5045.69	14.218-5032.89	14.193-5003.32	14.108-4994.44	14.105-4960.39	14.096
-4932.54	14.075-4929.33	14.007-4927.02	14.079-4922.84	14.033-4912.91	13.994
-4873.26	13.34-4834.72	13.878-4825.78	13.895-4823.19	13.885-4807.37	13.988
-4795.23	14.027-4791.26	14.041-4769.22	14.077-4732.13	14.172-4722.22	14.195
-4717.19	14.199 -4687.7	14.18-4651.55	14.275-4618.66	14.317-4596.29	14.359
-4586.4	14.365-4584.23	14.369-4558.71	14.312-4550.96	14.305-4540.11	14.242
-4517.7	14.082 -4501.7	13.923-4460.25	13.599-4451.18	13.514-4439.85	13.488
-4405.95	13.48 -4369.6	13.44-4351.39	13.432-4330.69	13.358-4300.51	13.145
-4284.86	12.984-4278.85	12.917-4219.38	12.694-4218.33	12.687-4216.69	12.678
-4206.83	12.656-4165.59	12.535-4151.81	12.516-4140.77	12.507 -4110	12.431
-4056.06	12.427-4052.02	12.43-4045.68	12.435-4007.72	12.237-3991.06	12.159
-3987.21	12.138-3985.49	12.126-3956.51	11.975 -3941.1	11.765-3918.97	11.667
-3903.17	11.687 -3885.7	11.742-3874.67	11.804-3852.44	11.973-3833.71	12.098
-3791.6	12.383-3785.92	12.435-3741.73	12.568-3719.39	12.668-3718.54	12.667
-3704.54	12.658-3686.57	12.661-3677.59	12.641-3653.76	12.565-3644.78	12.523
-3620.95	12.414-3611.97	12.355-3588.14	12.314-3570.18	11.936-3540.49	11.728
-3522.53	11.912-3507.69	11.929-3471.75	11.839-3456.91	11.798-3431.52	11.75
-3424.1	11.742-3398.72	11.615-3391.29	11.603-3376.45	11.612-3358.49	11.7
-3328.8	11.768-3292.87	11.894 -3274.9	11.936-3260.06	11.98-3242.09	12.053
-3212.41	12.185-3176.48	12.307-3161.64	12.318 -3125.7	12.32-3103.44	12.303
-3081.18	12.369-3063.21	12.447-3045.24	12.413-3040.54	12.402-3030.35	12.374
-2990.7	12.352-2964.42	12.278-2954.81	12.163-2902.98	10.915-2898.48	10.825
-2866.41	11.827-2864.78	11.85-2857.34	11.914-2832.55	12.11-2804.76	12.302
-2796.59	12.382-2766.62	12.535 -2756.7	12.586-2714.73	12.805-2700.68	12.822
-2671.4	12.692-2634.75	12.63 -2580.1	12.724 -2571.2	12.735-2564.69	12.744
-2535.84	12.799-2519.18	12.78-2474.66	12.668-2472.39	12.66-2469.91	12.647
-2439.67	12.607-2432.49	12.613-2427.56	12.614-2403.98	12.627-2380.48	12.61
-2362.43	12.566-2338.04	12.486-2331.01	12.449-2305.07	12.285 -2294.6	12.222
-2244.7	11.883-2239.14	11.865-2234.58	11.865-2206.17	11.864-2148.15	12.121
-2140.24	12.181-2134.99	12.202-2107.27	12.256-2095.36	12.249 -2074.3	12.258
-2071.87	12.259-2063.47	12.257-2041.47	12.189-2030.19	12.164-1987.71	11.946
-1963.61	11.796-1943.01	11.746-1922.97	11.689-1883.51	11.446-1877.37	11.408
-1820.48	10.349-1811.72	10.258-1750.94	11.462-1746.08	11.517-1714.67	11.669
-1713.26	11.673-1680.91	11.602-1680.44	11.6-1679.57	11.596 -1614.8	11.389
-1555.26	11.051-1549.15	11-1545.84	11.008-1516.33	11.006-1512.07	11.021
-1456.51	11.306-1450.69	11.333-1424.58	11.263-1417.87	11.259-1403.25	11.17
-1352.23	10.396-1333.71	10.463-1286.58	11.065-1264.95	11.065-1253.76	11.058
-1250.54	11.019-1244.37	10.956-1216.87	10.924 -1204.2	10.731-1179.53	10.76
-1174.84	10.852-1168.09	10.863-1157.55	10.853 -1132.3	10.819-1116.11	10.7
-1078.61	11.005-1067.52	11.062-1050.83	11.115-1030.18	11.172-1026.63	11.162
-1020.1	11.152 -998.67	11.034-992.849	11.081-982.685	11.04-929.862	10.853
-918.174	10.976-905.668	11.042-882.648	11.24-881.224	11.252-878.682	11.279
-843.499	11.648-813.921	11.939-808.893	11.981-806.162	12.002-796.933	12.052
-777.122	12.169-769.827	12.188-736.699	12.036-711.904	11.897-689.451	11.887
-652.033	11.997-638.525	11.998-602.803	11.695-562.284	11.368-540.048	11.192
-516.317	10.918-507.222	10.814-448.458	9.981-441.571	9.878-435.117	9.845
-408.745	9.054-407.927	9.074-396.423	9.43-373.643	9.39-366.943	9.386
-338.483	9.348-337.463	9.337-332.168	9.34-311.346	9.308-303.323	9.249

ExpandedLocal.rep

-285.239	9.078-268.163	8.836-263.763	8.861-240.927	8.701-235.207	8.652
-216.595	8.557-197.843	8.421-191.493	8.377-131.103	8.085-127.523	8.07
-113.628	8.1 -82.928	8.069 -58.445	8.373 -57.203	8.355 -32.169	6.502
-22.043	6.444 -6.789	6.286 13.117	6.091 18.591	6.056 32.796	6.03
43.971	6.005 48.277	6.004 69.351	6.002 83.437	6.002 115.187	6.002
120.11	6.002 124.037	6.002 145.49	6.002 153.757	6.002 170.87	6.002
188.917	6.002 196.25	6.002 215.277	6.002 221.6	11.03 227.65	10.74
233.7	10.63 239.75	10.67 243.78	10.92 319.62	10.47 343.92	10.46
350.53	5.57 352.66	5.48 364.67	5.29 367.38	5.29 370.87	5.41
373.48	5.66 376.07	5.68 388.02	10.56 418.78	9.97 435.038	6.002
450.048	6.002 470.198	6.002 475.428	6.002 484.782	6.002 488.539	6.002
500.493	6.002 505.768	6.002 525.374	6.002 541.629	6.002 569.803	6.003
575.136	6.003 577.489	6.003 600.017	6.005 613.35	6.006 624.898	6.008
649.211	6.014 649.779	6.014 651.067	6.015 674.66	6.03 685.072	6.039
699.541	6.062 720.932	6.103 724.423	6.117 732.332	6.148 749.304	6.218
756.793	6.264 774.185	6.412 792.654	6.502 802.472	7.317 813.596	8.62
864.375	13.915 873.709	13.78 894.86	15.312 936.097	17.614 948.352	18.438
971.958	19.967 976.125	20.2171007.819	22.0171032.851	22.5211047.877	22.863
1057.389	22.9711072.758	23.151 1079.54	23.1921138.653	23.1251147.401	23.103
1151.262	23.0741172.282	22.8671187.122	22.7021202.497	22.4951219.918	22.282
1240.595	21.9931258.844	21.8121301.182	21.644 1316.79	21.5751330.565	21.627
1369.051	21.3051392.077	21.0281402.505	20.941432.437	20.8511442.878	20.889
1494.443	21.077 1498.23	21.0851525.088	21.171531.127	21.1671555.734	21.159
1564.023	21.1171573.627	21.0371617.026	20.8021629.817	20.4661647.671	19.229
1680.141	14.537 1695.61	11.2251708.963	10.9021728.507	10.768 1750.12	10.758
1786.655	10.608 1794.3	10.6021822.159	10.5291831.546	10.4571860.094	10.406
1893.168	10.4161940.508	10.4121954.129	10.4041958.784	10.4041984.774	10.404
1991.681	10.404 2015.42	10.4042024.577	10.4042046.066	10.4052057.474	10.405
2076.712	10.4062090.371	10.4072107.357	10.4112123.268	10.414 2141.7	10.422
2156.164	10.4382162.628	10.4522189.061	10.4862199.295	10.5112221.958	10.598
2248.214	10.8412254.854	10.8982260.586	10.9022287.751	11.5782302.887	12.269
2352.523	20.4692353.545	20.6622354.728	20.7652386.441	23.032390.232	22.804
2444.461	24.0212452.235	24.9492471.799	24.2442502.095	23.259	

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -5426 .06 343.92 .05 388.02 .07

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 343.92 388.02 386 386 386 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 1525.09 2452.24 21.17 F

CROSS SECTION

ExpandedLocal.rep

RIVER: Gum Bayou  
REACH: Upper

RS: 12413

INPUT

Description: Copy of COE 2.351

Station Elevation Data num= 411

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4099	13.228	4089.15	13.215	4082.64	13.201	4056.11	13.115	4050.62	13.102
-3970.18	13.026	3957.01	13.114	3934.83	13.178	3923.98	13.19	3905.27	13.143
-3872.81	12.934	3857.91	12.831	3835.38	12.265	3820.5	11.99	3809.86	11.777
-3773.7	11.655	3758.81	11.629	3742.49	12.02	3702.86	11.88	3695.69	11.804
-3692.74	11.789	3685.66	11.769	3659.71	11.782	3639.21	11.743	3610.8	12.006
-3593.64	12.101	3580.08	12.077	3535.95	12.357	3527.57	12.366	3520.96	12.389
-3494.54	13.103	3491.4	13.141	3464.64	13.168	3461.83	13.144	3461.5	13.146
-3459.8	13.133	3386.23	11.794	3362.4	11.743	3343.58	11.851	3311.37	12.199
-3296.34	12.223	3284.44	12.188	3273.41	12.152	3230.61	11.923	3218.99	11.939
-3181.64	11.905	3168.91	11.894	3157.42	11.785	3132.13	11.712	3112.7	11.834
-3099.3	11.761	3085.44	11.697	3066.47	11.76	3048.13	11.804	3003.16	11.846
-2998.63	11.846	2935.23	11.595	2935.17	11.595	2933.44	11.561	2903.35	10.981
-2902.34	10.941	2901.26	10.956	2869.51	11.45	2867.29	11.449	2836.68	11.407
-2822.14	11.439	2781.26	11.616	2771.03	11.725	2765.38	11.52	2712.79	11.37
-2705.38	11.483	2697.44	11.424	2649.28	11.498	2639.72	11.763	2634.7	11.629
-2618.55	11.732	2574.07	11.756	2570.03	11.75	2545.5	11.718	2513.57	11.677
-2508.24	11.664	2500.78	11.642	2481.59	11.511	2442.4	11.392	2417.47	10.464
-2409.47	10.403	2402.71	10.392	2376.55	11.278	2361.78	11.148	2343.63	11.131
-2311.52	9.858	2309.76	9.866	2250.73	9.778	2244.87	9.561	2237.95	9.489
-2211.95	10.558	2189.93	10.483	2179.03	10.892	2153.09	10.979	2130.23	11.009
-2113.18	11.026	2084.68	10.719	2080.26	10.699	2058.14	10.663	2026.66	10.47
-2014.42	10.305	1986.62	10.462	1977.16	10.459	1948.58	10.575	1924.99	10.561
-1885.97	10.573	1878.9	10.348	1849.81	10.308	1825.18	9.443	1807.09	9.596
-1783.97	10.198	1771.19	10.634	1733.99	10.322	1718.13	10.392	1709.16	10.372
-1663.16	10.811	1652.28	10.839	1627.57	11.212	1619.36	11.37	1612.41	11.383
-1567.59	11.39	1557.87	11.38	1553.47	11.378	1528.38	11.347	1520.42	11.308
-1510.29	11.391	1454.33	11.467	1435.16	11.54	1421.29	11.551	1410.39	11.498
-1360.04	10.893	1351.4	10.81	1322.15	10.544	1304.72	10.106	1262.91	10.367
-1256.06	10.486	1251.98	10.487	1223.02	10.133	1209.78	9.909	1174.42	9.632
-1156.93	9.676	1135	9.657	1097.09	8.455	1090.84	8.451	1085.93	8.356
-1057.79	9.417	1045.1	9.467	1024.75	9.571	1021.97	9.566	967.946	9.473
-958.664	9.432	953.132	9.415	925.619	9.315	909.28	9.29	892.574	9.26
-872.622	9.26	871.725	9.26	859.541	9.271	830.281	9.315	823.168	9.319
-763.618	9.099	760.809	9.092	760.492	9.09	760.095	9.09	727.476	8.92
-722.885	8.952	694.46	9.112	682.522	9.166	653.297	9.539	628.428	9.85
-559.364	9.896	529.38	10.004	523.435	9.843	480.403	9.584	452.982	10.284
-440.375	10.464	422.031	11.073	412.448	11.159	402.296	11.08	389.24	10.43
-354.5	10.286	342.822	10.523	331.799	10.554	315.394	10.441	277.778	10.071
-258.908	9.913	226.779	9.629	211.112	9.541	196.452	9.412	180.362	9.275
-151.336	8.982	133.945	8.885	106.22	8.503	81.054	8.344	47.902	8.026

ExpandedLocal.rep

-34.186	7.913	-19.928	7.747	13.399	7.43	29.128	7.197	44.049	6.97
59.549	6.521	75.664	6.403	98.142	6.217	119.36	6.096	123.46	6.075
144.559	6.05	164.475	6.047	190.977	6.009	209.591	6.005	214.185	6.003
219.052	6.002	237.394	6.002	254.707	6.002	260.602	6.002	266.848	6.002
299.823	6.002	303	10.5	328	10.49	335	5.33	350	5.2
353	5.2	361	5.24	372	10.62	397	9.94	399.854	6.002
410.236	6.002	423.063	6.002	429.855	6.002	434.517	6.002	446.573	6.003
464.457	6.003	470.207	6.003	474.083	6.003	493.842	6.005	513.65	6.006
517.476	6.006	523.153	6.007	541.111	6.011	553.216	6.013	581.848	6.02
588.38	6.025	592.783	6.028	612.014	6.043	632.349	6.06	635.649	6.062
640.544	6.067	659.283	6.111	671.916	6.143	682.918	6.171	699.239	6.219
730.187	6.401	751.049	6.497	757.934	6.556	777.456	8.294	790.615	9.533
801.09	10.494	816.63	13.017	848.359	15.215	869.748	17.331	872.95	17.45
915.543	18.574	934.02	19.112	948.881	19.27	979.62	19.76	988.448	19.895
992.716	19.8751037	435	19.771051	411	19.5371107	147	18.3771110	106	18.305
1131.973	17.7611132	947	17.74	1149.14	17.181157	368	16.9161179	223	16.309
1247.222	14.0171274	596	14.221281	355	14.2151298	144	14.8621349	621	16.858
1370.344	17.6571383	754	18.121417	065	18.8961417	704	18.9081418	218	18.92
1452.02	19.5121466	092	19.6851486	153	19.9191513	965	20.171535	987	20.357
1554.419	20.471561	839	20.5721588	552	20.7841609	713	20.9541622	685	21.034
1654.908	21.2091656	818	21.2141657	587	21.2181690	951	21.3161705	461	21.445
1735.955	21.621759	217	21.8371773	829	21.968	1793.35	22.0751796	621	22.071
1827.483	21.9571849	082	21.9241861	616	21.8671892	751	21.541895	749	21.495
1921.601	20.8881936	104	20.5122024	765	18.9842027	685	18.932032	281	18.958
2060.055	19.412100	547	19.9122107	248	20.0822130	593	20.6822168	813	21.852
2220.32	22.1712234	995	22.3112237	079	22.3142239	852	22.422271	212	23.286
2292.894	23.2692305	345	23.3172368	436	23.1432383	478	23.1092403	401	23.052
2407.1	23.0262416	615	22.9362440	327	22.7182456	186	22.5012473	554	22.254
2528.438	21.4012540	009	21.2182564	525	21.0592572	033	21.012573	236	20.993
2574.899	20.9982618	732	21.0772646	602	21.0872672	918	21.1152724	073	20.92
2739.372	20.8692743	851	20.8842771	789	20.401	2772.6	20.392772	982	20.394
2839.054	21.0482873	044	21.0862895	586	21.1692905	509	21.2352931	039	21.345
2938.736	21.388	2970.61	21.4222972	943	21.4222979	053	21.395	3005.19	21.28
3010.181	21.1733038	418	20.9533058	852	20.2743089	323	15.1963116	125	10.902
3168.465	10.6663171	327	10.6633186	317	10.763202	034	10.8713208	036	10.871
3237.781	10.8273259	307	10.7963271	009	10.7793286	868	10.756	3287.26	10.755
3304.837	10.7073337	302	10.6173339	215	10.6113343	415	10.5993373	593	10.558
3392.581	10.5243407	971	10.5033437	386	10.463444	946	10.4453476	727	10.451
3497.312	10.4493511	106	10.4493523	494	10.4653562	598	10.4873602	042	10.513
3614.24	10.5263637	553	10.6023648	618	10.6373672	901	10.8213682	996	10.902
3699.894	13.2253746	004	20.1293751	752	20.689	3782.73	22.786	3786.13	23.053
3811.502	22.0783820	508	21.753837	721	23.4173854	886	25.1443892	558	23.909
3922.909	22.907								

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -4099 .06 328 .05 372 .07



ExpandedLocal.rep

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
328	372	137	137	137	.1	.3	
Ineffective Flow	num=	1					
Sta L	Sta R	Elev	Permanent				
2970.61	3854.89	21.42	F				

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 12276

INPUT

Description: Copy of COE 2.325

Station Elevation Data	num=	411							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-4099	13.228-4089.15	13.215-4082.64	13.201-4056.11	13.115-4050.62	13.102				
-3970.18	13.026-3957.01	13.114-3934.83	13.178-3923.98	13.19-3905.27	13.143				
-3872.81	12.934-3857.91	12.831-3835.38	12.265 -3820.5	11.99-3809.86	11.777				
-3773.7	11.655-3758.81	11.629-3742.49	12.02-3702.86	11.88-3695.69	11.804				
-3692.74	11.789-3685.66	11.769-3659.71	11.782-3639.21	11.743 -3610.8	12.006				
-3593.64	12.101-3580.08	12.077-3535.95	12.357-3527.57	12.366-3520.96	12.389				
-3494.54	13.103 -3491.4	13.141-3464.64	13.168-3461.83	13.144 -3461.5	13.146				
-3459.8	13.133-3386.23	11.794 -3362.4	11.743-3343.58	11.851-3311.37	12.199				
-3296.34	12.223-3284.44	12.188-3273.41	12.152-3230.61	11.923-3218.99	11.939				
-3181.64	11.905-3168.91	11.894-3157.42	11.785-3132.13	11.712 -3112.7	11.834				
-3099.3	11.761-3085.44	11.697-3066.47	11.76-3048.13	11.804-3003.16	11.846				
-2998.63	11.846-2935.23	11.595-2935.17	11.595-2933.44	11.561-2903.35	10.981				
-2902.34	10.941-2901.26	10.956-2869.51	11.45-2867.29	11.449-2836.68	11.407				
-2822.14	11.439-2781.26	11.616-2771.03	11.725-2765.38	11.52-2712.79	11.37				
-2705.38	11.483-2697.44	11.424-2649.28	11.498-2639.72	11.763 -2634.7	11.629				
-2618.55	11.732-2574.07	11.756-2570.03	11.75 -2545.5	11.718-2513.57	11.677				
-2508.24	11.664-2500.78	11.642-2481.59	11.511 -2442.4	11.392-2417.47	10.464				
-2409.47	10.403-2402.71	10.392-2376.55	11.278-2361.78	11.148-2343.63	11.131				
-2311.52	9.858-2309.76	9.866-2250.73	9.778-2244.87	9.561-2237.95	9.489				
-2211.95	10.558-2189.93	10.483-2179.03	10.892-2153.09	10.979-2130.23	11.009				
-2113.18	11.026-2084.68	10.719-2080.26	10.699-2058.14	10.663-2026.66	10.47				
-2014.42	10.305-1986.62	10.462-1977.16	10.459-1948.58	10.575-1924.99	10.561				
-1885.97	10.573 -1878.9	10.348-1849.81	10.308-1825.18	9.443-1807.09	9.596				
-1783.97	10.198-1771.19	10.634-1733.99	10.322-1718.13	10.392-1709.16	10.372				
-1663.16	10.811-1652.28	10.839-1627.57	11.212-1619.36	11.37-1612.41	11.383				
-1567.59	11.39-1557.87	11.38-1553.47	11.378-1528.38	11.347-1520.42	11.308				
-1510.29	11.391-1454.33	11.467-1435.16	11.54-1421.29	11.551-1410.39	11.498				
-1360.04	10.893 -1351.4	10.81-1322.15	10.544-1304.72	10.106-1262.91	10.367				
-1256.06	10.486-1251.98	10.487-1223.02	10.133-1209.78	9.909-1174.42	9.632				
-1156.93	9.676 -1135	9.657-1097.09	8.455-1090.84	8.451-1085.93	8.356				

ExpandedLocal.rep

-1057.79	9.417	-1045.1	9.467-1024.75	9.571-1021.97	9.566-967.946	9.473			
-958.664	9.432-953.132	9.415-925.619	9.315	-909.28	9.29-892.574	9.26			
-872.622	9.26-871.725	9.26-859.541	9.271-830.281	9.315-823.168	9.319				
-763.618	9.099-760.809	9.092-760.492	9.09-760.095	9.09-727.476	8.92				
-722.885	8.952	-694.46	9.112-682.522	9.166-653.297	9.539-628.428	9.85			
-559.364	9.896	-529.38	10.004-523.435	9.843-480.403	9.584-452.982	10.284			
-440.375	10.464-422.031	11.073-412.448	11.159-402.296	11.08	-389.24	10.43			
-354.5	10.286-342.822	10.523-331.799	10.554-315.394	10.441-277.778	10.071				
-258.908	9.913-226.779	9.629-211.112	9.541-196.452	9.412-180.362	9.275				
-151.336	8.982-133.945	8.885	-106.22	8.503	-81.054	8.344	-47.902	8.026	
-34.186	7.913	-19.928	7.747	13.399	7.43	29.128	7.197	44.049	6.97
59.549	6.521	75.664	6.403	98.142	6.217	119.36	6.096	123.46	6.075
144.559	6.05	164.475	6.047	190.977	6.009	209.591	6.005	214.185	6.003
219.052	6.002	237.394	6.002	254.707	6.002	260.602	6.002	266.848	6.002
299.823	6.002	303	10.5	328	10.49	335	5.33	350	5.2
353	5.2	361	5.24	372	10.62	397	9.94	399.854	6.002
410.236	6.002	423.063	6.002	429.855	6.002	434.517	6.002	446.573	6.003
464.457	6.003	470.207	6.003	474.083	6.003	493.842	6.005	513.65	6.006
517.476	6.006	523.153	6.007	541.111	6.011	553.216	6.013	581.848	6.02
588.38	6.025	592.783	6.028	612.014	6.043	632.349	6.06	635.649	6.062
640.544	6.067	659.283	6.111	671.916	6.143	682.918	6.171	699.239	6.219
730.187	6.401	751.049	6.497	757.934	6.556	777.456	8.294	790.615	9.533
801.09	10.494	816.63	13.017	848.359	15.215	869.748	17.331	872.95	17.45
915.543	18.574	934.02	19.112	948.881	19.27	979.62	19.76	988.448	19.895
992.716	19.8751037.435	19.771051.411	19.5371107.147	18.3771110.106	18.305				
1131.973	17.7611132.947	17.74	1149.14	17.181157.368	16.9161179.223	16.309			
1247.222	14.0171274.596	14.221281.355	14.2151298.144	14.8621349.621	16.858				
1370.344	17.6571383.754	18.121417.065	18.8961417.704	18.9081418.218	18.92				
1452.02	19.5121466.092	19.6851486.153	19.9191513.965	20.171535.987	20.357				
1554.419	20.471561.839	20.5721588.552	20.7841609.713	20.9541622.685	21.034				
1654.908	21.2091656.818	21.2141657.587	21.2181690.951	21.3161705.461	21.445				
1735.955	21.621759.217	21.8371773.829	21.968	1793.35	22.0751796.621	22.071			
1827.483	21.9571849.082	21.9241861.616	21.8671892.751	21.541895.749	21.495				
1921.601	20.8881936.104	20.5122024.765	18.9842027.685	18.932032.281	18.958				
2060.055	19.412100.547	19.9122107.248	20.0822130.593	20.6822168.813	21.852				
2220.32	22.1712234.995	22.3112237.079	22.3142239.852	22.422271.212	23.286				
2292.894	23.2692305.345	23.3172368.436	23.1432383.478	23.1092403.401	23.052				
2407.1	23.0262416.615	22.9362440.327	22.7182456.186	22.5012473.554	22.254				
2528.438	21.4012540.009	21.2182564.525	21.0592572.033	21.012573.236	20.993				
2574.899	20.9982618.732	21.0772646.602	21.0872672.918	21.1152724.073	20.92				
2739.372	20.8692743.851	20.8842771.789	20.401	2772.6	20.392772.982	20.394			
2839.054	21.0482873.044	21.0862895.586	21.1692905.509	21.2352931.039	21.345				
2938.736	21.388	2970.61	21.4222972.943	21.4222979.053	21.395	3005.19	21.28		
3010.181	21.1733038.418	20.9533058.852	20.2743089.323	15.1963116.125	10.902				
3168.465	10.6663171.327	10.6633186.317	10.763202.034	10.8713208.036	10.871				
3237.781	10.8273259.307	10.7963271.009	10.7793286.868	10.756	3287.26	10.755			
3304.837	10.7073337.302	10.6173339.215	10.6113343.415	10.5993373.593	10.558				
3392.581	10.5243407.971	10.5033437.386	10.463444.946	10.4453476.727	10.451				

ExpandedLocal.rep

3497.312	10.4493511.106	10.4493523.494	10.4653562.598	10.4873602.042	10.513
3614.24	10.5263637.553	10.6023648.618	10.6373672.901	10.8213682.996	10.902
3699.894	13.2253746.004	20.1293751.752	20.689 3782.73	22.786 3786.13	23.053
3811.502	22.0783820.508	21.753837.721	23.4173854.886	25.1443892.558	23.909
3922.909	22.907				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-4099	.06	328	.05	372	.07

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	328	372		496	496	.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
2970.61	3854.89	21.42	F

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 11780

INPUT

Description: Copy of COE 2.231

Station Elevation Data num= 395

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3788	12.67-3774.11	12.653	-3760.4	12.569	-3738.99	12.497	-3707.47	12.349	
-3701.42	12.304	-3688.6	12.237	-3668.75	12.102	-3630.25	11.823	-3596.66	11.612
-3577.79	11.467	-3572.58	11.431	-3563.39	11.284	-3504.71	11.036	-3498.15	11.018
-3493.15	10.985	-3470.93	10.407	-3447	10.167	-3422.9	10.219	-3394.69	9.816
-3352.66	10.231	-3320.82	10.622	-3317.54	10.653	-3293.04	10.827	-3282.42	10.897
-3228.88	10.939	-3216.8	10.952	-3212.18	10.939	-3158.16	10.596	-3143.13	10.509
-3141.94	10.505	-3140.56	10.498	-3136.93	10.467	-3111.65	10.263	-3106.82	10.226
-3088.21	10.001	-3071.7	9.818	-3060.13	9.564	-3044.99	9.412	-3001.46	8.87
-2988.08	8.88	-2966.34	9.008	-2920.76	9.551	-2896.1	9.827	-2886.43	9.874
-2861.1	9.954	-2860.98	9.955	-2860.6	9.954	-2790.74	9.788	-2784.77	9.761
-2730.72	9.473	-2720.5	9.418	-2713.56	9.374	-2685.38	9.196	-2677.21	9.072
-2657.71	8.777	-2633.6	8.484	-2615.14	8.257	-2606.88	8.199	-2580.02	8.076
-2566.11	8.007	-2542.47	8.522	-2509.78	8.719	-2479.81	9.208	-2474.66	9.275
-2454.4	9.448	-2406.3	10.119	-2403.58	10.142	-2401.37	10.149	-2386.75	10.161
-2374.88	10.198	-2370.41	10.232	-2305.07	9.953	-2304.69	9.951	-2304.63	9.951
-2271.79	9.874	-2256.89	9.844	-2238.91	9.84	-2219.74	9.81	-2181.09	9.823
-2173.16	9.801	-2164.14	9.763	-2140.28	9.652	-2100.69	9.498	-2074.53	9.446
-2040.69	9.36	-2008.78	9.247	-1988.52	9.257	-1975.91	9.281	-1953.4	9.369
-1943.03	9.407	-1889.89	9.68	-1877.28	9.731	-1848.03	9.807	-1844.4	9.811
-1838.39	9.791	-1794.98	9.632	-1750.95	9.324	-1745.78	9.279	-1717.62	9.017

ExpandedLocal.rep

-1707.54	8.924-1667.55	8.605-1647.15	8.619-1635.22	8.629 -1624.1	8.642
-1613.7	8.632-1589.19	8.594-1546.16	8.305-1539.02	8.323-1512.38	8.439
-1490.47	8.534 -1470.2	8.689-1444.84	8.846-1414.38	9.157-1411.06	9.186
-1409.05	9.195-1400.81	9.17-1354.77	8.961-1343.52	8.928-1324.99	9.053
-1309.74	9.082-1280.29	8.929-1275.97	8.933-1262.59	8.948 -1246.2	8.921
-1242.19	9.003-1239.36	8.906 -1222.7	9.31-1181.64	9.939-1174.65	9.969
-1164.78	9.788-1140.87	9.881-1133.89	9.904-1109.41	9.828-1107.86	9.854
-1075.32	10.096-1075.03	10.093-1055.38	10.324-1042.21	10.457-1010.68	10.327
-1009.39	10.358-978.777	10.386-976.572	10.4-975.422	10.399 -943.75	10.148
-912.977	10.184-910.928	10.191-879.791	9.701-875.519	9.703-872.854	9.718
-845.285	10.066-819.257	9.539-805.265	9.515-779.641	9.082-758.965	9.095
-746.819	9.677-723.546	7.836-716.722	7.878-713.998	7.888-704.256	7.89
-681.19	10.028-658.123	9.475 -638.64	9.554-615.573	10.042-594.298	10.06
-582.765	10.093-571.231	10.075-528.681	9.817-517.148	9.824-494.081	8.69
-484.34	8.667-474.598	8.779-451.531	10.265-430.256	10.34-418.723	10.265
-395.656	9.886-381.044	9.877-366.432	9.927-331.831	10.394-320.298	10.366
-297.231	9.611-277.748	9.59-254.681	10.224-233.406	10.246 -210.34	9.888
-189.065	9.791-165.998	9.659-156.256	9.614 -133.19	9.694-123.448	9.634
-118.577	9.584-109.722	9.657 -90.64	9.816 -62.702	9.148 -52.961	8.971
-25.023	8.431 2.915	8.098 17.527	7.692 40.594	7.229 61.869	6.969
73.402	6.476 94.677	6.291 106.21	6.291 129.277	6.207 158.502	6.174
181.569	6.16 204.635	6.16 214.377	6.16 237.444	6.16 247.185	6.16
270.252	6.16 279.994	6.16 303.06	6.16 312.802	6.16 335.869	6.16
345.61	6.16 368.677	6.16 378.419	6.16 401.485	6.218 424.552	6.16
434.294	6.16 444.035	6.16 449.278	6.16 469.585	6.12 497.417	6.065
506.964	6.058 518.441	6.051 544.343	6.034 550	11.8 575	11.82
583	5.26 600	3.52 618	4.25 628	11.79 653	11.52
656.479	6.015 690.491	6.026 697.025	6.026 702.827	6.034 731.237	6.093
765.394	6.335 768.616	6.352 771.296	6.371 793.741	6.502 839.766	9.271
842.1	9.423 843.374	9.481 847.711	9.692 880.752	11.208 895.887	11.933
909.605	12.568 917.528	12.919 985.666	15.502 990.259	15.667 994.465	15.659
1026.624	15.5841061.728	16.9161062.581	16.9481064.144	16.9891099.354	17.879
1106.77	18.1061164.167	19.3281180.143	19.7221185.594	19.8221199.593	20.176
1207.584	20.2881233.942	19.6931240.393	19.751266.466	19.0511273.203	18.874
1324.333	17.2571338.822	16.8381353.829	16.6241391.956	15.8721404.441	15.633
1429.088	15.6741437.251	15.7171461.612	16.5391470.061	16.7531517.797	18.296
1535.68	18.8151544.859	19.0121568.489	19.5831591.709	19.9911601.299	20.14
1611.059	20.221634.109	20.4511645.483	20.5271666.918	20.6121689.282	20.684
1710.359	20.752 1754.33	20.941765.347	20.9781786.855	21.0381798.157	21.077
1860.736	21.34 1890.48	21.4491921.552	21.6521952.176	21.8531962.205	21.921
1982.001	22.0171995.014	22.082014.525	22.1152055.134	22.0882093.443	21.944
2107.558	21.9262144.622	21.842173.758	21.9692191.872	22.122206.858	22.171
2242.195	22.3192257.491	22.333 2291.65	22.386 2323.11	22.3792356.138	22.498
2388.729	22.5952404.816	22.7112421.539	22.7492437.341	22.6462454.349	22.606
2469.865	22.472487.158	22.3282517.358	21.8582552.777	21.392567.438	21.208
2567.645	21.2052585.589	20.9752599.692	20.8742618.402	20.6992641.497	20.657
2691.841	21.0032716.842	21.1952728.702	21.2032749.655	21.3622760.954	21.346
2782.469	21.285 2851.75	20.9912880.909	20.9612904.927	20.4432913.722	20.215

ExpandedLocal.rep

2943.829	20.712950.536	20.8262979.348	21.1162986.721	21.1213038.503	21.227
3044.975	21.233071.898	21.1343077.788	21.1293105.292	21.123110.602	21.12
3115.73	21.1263143.415	21.2813161.984	21.3273205.474	21.3993209.042	21.418
3238.868	21.514 3244.74	21.524 3257.75	21.5733276.725	21.6193286.364	21.614
3324.292	21.5183341.556	21.5183377.245	21.5423387.134	21.5323390.358	21.573
3396.701	21.6073439.159	21.827 3460.74	21.96 3469.11	22.0313512.362	22.433
3534.345	22.5883541.519	22.6143571.148	22.6943613.928	22.7293644.754	22.737
3676.616	22.7733683.168	22.7923686.337	22.7993755.163	22.814 3756.37	22.808
3791.966	22.3443811.721	22.1923831.155	21.7743853.973	21.6033865.571	21.662
3901.145	21.4243931.672	21.5013939.177	21.363951.577	21.5123975.973	21.924
3975.98	21.9243975.988	21.9254012.783	26.1724030.728	25.4054072.143	24.205

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3788	.06	575	.05	628	.08

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	575	628		48	48	48		.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 11732

INPUT

Description: Copy of COE 2.222

Station Elevation Data num= 398

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3788	12.67-3774.11	12.653	-3760.4	12.569	-3738.99	12.497	-3707.47	12.349	
-3701.42	12.304	-3688.6	12.237	-3668.75	12.102	-3630.25	11.823	-3596.66	11.612
-3577.79	11.467	-3572.58	11.431	-3563.39	11.284	-3504.71	11.036	-3498.15	11.018
-3493.15	10.985	-3470.93	10.407	-3447	10.167	-3422.9	10.219	-3394.69	9.816
-3352.66	10.231	-3320.82	10.622	-3317.54	10.653	-3293.04	10.827	-3282.42	10.897
-3228.88	10.939	-3216.8	10.952	-3212.18	10.939	-3158.16	10.596	-3143.13	10.509
-3141.94	10.505	-3140.56	10.498	-3136.93	10.467	-3111.65	10.263	-3106.82	10.226
-3088.21	10.001	-3071.7	9.818	-3060.13	9.564	-3044.99	9.412	-3001.46	8.87
-2988.08	8.88	-2966.34	9.008	-2920.76	9.551	-2896.1	9.827	-2886.43	9.874
-2861.1	9.954	-2860.98	9.955	-2860.6	9.954	-2790.74	9.788	-2784.77	9.761
-2730.72	9.473	-2720.5	9.418	-2713.56	9.374	-2685.38	9.196	-2677.21	9.072
-2657.71	8.777	-2633.6	8.484	-2615.14	8.257	-2606.88	8.199	-2580.02	8.076
-2566.11	8.007	-2542.47	8.522	-2509.78	8.719	-2479.81	9.208	-2474.66	9.275
-2454.4	9.448	-2406.3	10.119	-2403.58	10.142	-2401.37	10.149	-2386.75	10.161
-2374.88	10.198	-2370.41	10.232	-2305.07	9.953	-2304.69	9.951	-2304.63	9.951
-2271.79	9.874	-2256.89	9.844	-2238.91	9.84	-2219.74	9.81	-2181.09	9.823
-2173.16	9.801	-2164.14	9.763	-2140.28	9.652	-2100.69	9.498	-2074.53	9.446

ExpandedLocal.rep

-2040.69	9.36-2008.78	9.247-1988.52	9.257-1975.91	9.281 -1953.4	9.369
-1943.03	9.407-1889.89	9.68-1877.28	9.731-1848.03	9.807 -1844.4	9.811
-1838.39	9.791-1794.98	9.632-1750.95	9.324-1745.78	9.279-1717.62	9.017
-1707.54	8.924-1667.55	8.605-1647.15	8.619-1635.22	8.629 -1624.1	8.642
-1613.7	8.632-1589.19	8.594-1546.16	8.305-1539.02	8.323-1512.38	8.439
-1490.47	8.534 -1470.2	8.689-1444.84	8.846-1414.38	9.157-1411.06	9.186
-1409.05	9.195-1400.81	9.17-1354.77	8.961-1343.52	8.928-1324.99	9.053
-1309.74	9.082-1280.29	8.929-1275.97	8.933-1262.59	8.948 -1246.2	8.921
-1242.19	9.003-1239.36	8.906 -1222.7	9.31-1181.64	9.939-1174.65	9.969
-1164.78	9.788-1140.87	9.881-1133.89	9.904-1109.41	9.828-1107.86	9.854
-1075.32	10.096-1075.03	10.093-1055.38	10.324-1042.21	10.457-1010.68	10.327
-1009.39	10.358-978.777	10.386-976.572	10.4-975.422	10.399 -943.75	10.148
-912.977	10.184-910.928	10.191-879.791	9.701-875.519	9.703-872.854	9.718
-845.285	10.066-819.257	9.539-805.265	9.515-779.641	9.082-758.965	9.095
-746.819	9.677-723.546	7.836-716.722	7.878-713.998	7.888-704.256	7.89
-681.19	10.028-658.123	9.475 -638.64	9.554-615.573	10.042-594.298	10.06
-582.765	10.093-571.231	10.075-528.681	9.817-517.148	9.824-494.081	8.69
-484.34	8.667-474.598	8.779-451.531	10.265-430.256	10.34-418.723	10.265
-395.656	9.886-381.044	9.877-366.432	9.927-331.831	10.394-320.298	10.366
-297.231	9.611-277.748	9.59-254.681	10.224-233.406	10.246 -210.34	9.888
-189.065	9.791-165.998	9.659-156.256	9.614 -133.19	9.694-123.448	9.634
-118.577	9.584-109.722	9.657 -90.64	9.816 -62.702	9.148 -52.961	8.971
-25.023	8.431 2.915	8.098 17.527	7.692 40.594	7.229 61.869	6.969
73.402	6.476 94.677	6.291 106.21	6.291 129.277	6.207 158.502	6.174
181.569	6.16 204.635	6.16 214.377	6.16 237.444	6.16 247.185	6.16
270.252	6.16 279.994	6.16 303.06	6.16 312.802	6.16 335.869	6.16
345.61	6.16 368.677	6.16 378.419	6.16 401.485	6.218 424.552	6.16
434.294	6.16 444.035	6.16 449.278	6.16 469.585	6.12 497.417	6.065
506.964	6.058 518.441	6.051 544.343	6.034 550	11.8 575	11.82
583	3.62 600	3.62 600.01	3.62 601	3.62 601.01	3.62
618	3.62 627	3.62 653	11.52 656.479	6.015 690.491	6.026
697.025	6.026 702.827	6.034 731.237	6.093 765.394	6.335 768.616	6.352
771.296	6.371 793.741	6.502 839.766	9.271 842.1	9.423 843.374	9.481
847.711	9.692 880.752	11.208 895.887	11.933 909.605	12.568 917.528	12.919
985.666	15.502 990.259	15.667 994.465	15.6591026.624	15.5841061.728	16.916
1062.581	16.9481064.144	16.9891099.354	17.879 1106.77	18.1061164.167	19.328
1180.143	19.7221185.594	19.8221199.593	20.1761207.584	20.2881233.942	19.693
1240.393	19.751266.466	19.0511273.203	18.8741324.333	17.2571338.822	16.838
1353.829	16.6241391.956	15.8721404.441	15.6331429.088	15.6741437.251	15.717
1461.612	16.5391470.061	16.7531517.797	18.296 1535.68	18.8151544.859	19.012
1568.489	19.5831591.709	19.9911601.299	20.141611.059	20.221634.109	20.451
1645.483	20.5271666.918	20.6121689.282	20.6841710.359	20.752 1754.33	20.94
1765.347	20.9781786.855	21.0381798.157	21.0771860.736	21.34 1890.48	21.449
1921.552	21.6521952.176	21.8531962.205	21.9211982.001	22.0171995.014	22.08
2014.525	22.1152055.134	22.0882093.443	21.9442107.558	21.9262144.622	21.84
2173.758	21.9692191.872	22.122206.858	22.1712242.195	22.3192257.491	22.333
2291.65	22.386 2323.11	22.3792356.138	22.4982388.729	22.5952404.816	22.711
2421.539	22.7492437.341	22.6462454.349	22.6062469.865	22.472487.158	22.328

ExpandedLocal.rep

2517.358	21.8582552.777	21.392567.438	21.2082567.645	21.2052585.589	20.975
2599.692	20.8742618.402	20.6992641.497	20.6572691.841	21.0032716.842	21.195
2728.702	21.2032749.655	21.3622760.954	21.3462782.469	21.285 2851.75	20.991
2880.909	20.9612904.927	20.4432913.722	20.2152943.829	20.712950.536	20.826
2979.348	21.1162986.721	21.1213038.503	21.2273044.975	21.233071.898	21.134
3077.788	21.1293105.292	21.123110.602	21.12 3115.73	21.1263143.415	21.281
3161.984	21.3273205.474	21.3993209.042	21.4183238.868	21.514 3244.74	21.524
3257.75	21.5733276.725	21.6193286.364	21.6143324.292	21.5183341.556	21.518
3377.245	21.5423387.134	21.5323390.358	21.5733396.701	21.6073439.159	21.827
3460.74	21.96 3469.11	22.0313512.362	22.4333534.345	22.5883541.519	22.614
3571.148	22.6943613.928	22.7293644.754	22.7373676.616	22.7733683.168	22.792
3686.337	22.7993755.163	22.814 3756.37	22.8083791.966	22.3443811.721	22.192
3831.155	21.7743853.973	21.6033865.571	21.6623901.145	21.4243931.672	21.501
3939.177	21.363951.577	21.5123975.973	21.924 3975.98	21.9243975.988	21.925
4012.783	26.1724030.728	25.4054072.143	24.205		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3788	.06	575	.05	653	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	575	653		84	84	.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 11648

INPUT

Description: Copy of COE 2.206

Station Elevation Data num= 395

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3788	12.67-3774.11	12.653	-3760.4	12.569	-3738.99	12.497	-3707.47	12.349	
-3701.42	12.304	-3688.6	12.237	-3668.75	12.102	-3630.25	11.823	-3596.66	11.612
-3577.79	11.467	-3572.58	11.431	-3563.39	11.284	-3504.71	11.036	-3498.15	11.018
-3493.15	10.985	-3470.93	10.407	-3447	10.167	-3422.9	10.219	-3394.69	9.816
-3352.66	10.231	-3320.82	10.622	-3317.54	10.653	-3293.04	10.827	-3282.42	10.897
-3228.88	10.939	-3216.8	10.952	-3212.18	10.939	-3158.16	10.596	-3143.13	10.509
-3141.94	10.505	-3140.56	10.498	-3136.93	10.467	-3111.65	10.263	-3106.82	10.226
-3088.21	10.001	-3071.7	9.818	-3060.13	9.564	-3044.99	9.412	-3001.46	8.87
-2988.08	8.88	-2966.34	9.008	-2920.76	9.551	-2896.1	9.827	-2886.43	9.874
-2861.1	9.954	-2860.98	9.955	-2860.6	9.954	-2790.74	9.788	-2784.77	9.761
-2730.72	9.473	-2720.5	9.418	-2713.56	9.374	-2685.38	9.196	-2677.21	9.072
-2657.71	8.777	-2633.6	8.484	-2615.14	8.257	-2606.88	8.199	-2580.02	8.076
-2566.11	8.007	-2542.47	8.522	-2509.78	8.719	-2479.81	9.208	-2474.66	9.275

ExpandedLocal.rep

-2454.4	9.448	-2406.3	10.119-2403.58	10.142-2401.37	10.149-2386.75	10.161			
-2374.88	10.198	-2370.41	10.232-2305.07	9.953-2304.69	9.951-2304.63	9.951			
-2271.79	9.874	-2256.89	9.844-2238.91	9.84-2219.74	9.81-2181.09	9.823			
-2173.16	9.801	-2164.14	9.763-2140.28	9.652-2100.69	9.498-2074.53	9.446			
-2040.69	9.36	-2008.78	9.247-1988.52	9.257-1975.91	9.281 -1953.4	9.369			
-1943.03	9.407	-1889.89	9.68-1877.28	9.731-1848.03	9.807 -1844.4	9.811			
-1838.39	9.791	-1794.98	9.632-1750.95	9.324-1745.78	9.279-1717.62	9.017			
-1707.54	8.924	-1667.55	8.605-1647.15	8.619-1635.22	8.629 -1624.1	8.642			
-1613.7	8.632	-1589.19	8.594-1546.16	8.305-1539.02	8.323-1512.38	8.439			
-1490.47	8.534	-1470.2	8.689-1444.84	8.846-1414.38	9.157-1411.06	9.186			
-1409.05	9.195	-1400.81	9.17-1354.77	8.961-1343.52	8.928-1324.99	9.053			
-1309.74	9.082	-1280.29	8.929-1275.97	8.933-1262.59	8.948 -1246.2	8.921			
-1242.19	9.003	-1239.36	8.906 -1222.7	9.31-1181.64	9.939-1174.65	9.969			
-1164.78	9.788	-1140.87	9.881-1133.89	9.904-1109.41	9.828-1107.86	9.854			
-1075.32	10.096	-1075.03	10.093-1055.38	10.324-1042.21	10.457-1010.68	10.327			
-1009.39	10.358	-978.777	10.386-976.572	10.4-975.422	10.399 -943.75	10.148			
-912.977	10.184	-910.928	10.191-879.791	9.701-875.519	9.703-872.854	9.718			
-845.285	10.066	-819.257	9.539-805.265	9.515-779.641	9.082-758.965	9.095			
-746.819	9.677	-723.546	7.836-716.722	7.878-713.998	7.888-704.256	7.89			
-681.19	10.028	-658.123	9.475 -638.64	9.554-615.573	10.042-594.298	10.06			
-582.765	10.093	-571.231	10.075-528.681	9.817-517.148	9.824-494.081	8.69			
-484.34	8.667	-474.598	8.779-451.531	10.265-430.256	10.34-418.723	10.265			
-395.656	9.886	-381.044	9.877-366.432	9.927-331.831	10.394-320.298	10.366			
-297.231	9.611	-277.748	9.59-254.681	10.224-233.406	10.246 -210.34	9.888			
-189.065	9.791	-165.998	9.659-156.256	9.614 -133.19	9.694-123.448	9.634			
-118.577	9.584	-109.722	9.657 -90.64	9.816 -62.702	9.148 -52.961	8.971			
-25.023	8.431	2.915	8.098 17.527	7.692 40.594	7.229 61.869	6.969			
73.402	6.476	94.677	6.291 106.21	6.291 129.277	6.207 158.502	6.174			
181.569	6.16	204.635	6.16 214.377	6.16 237.444	6.16 247.185	6.16			
270.252	6.16	279.994	6.16 303.06	6.16 312.802	6.16 335.869	6.16			
345.61	6.16	368.677	6.16 378.419	6.16 401.485	6.218 424.552	6.16			
434.294	6.16	444.035	6.16 449.278	6.16 469.585	6.12 497.417	6.065			
506.964	6.058	518.441	6.051 544.343	6.034 550	11.8 575	11.82			
583	5.26	600	3.52 618	4.25 628	11.79 653	11.52			
656.479	6.015	690.491	6.026 697.025	6.026 702.827	6.034 731.237	6.093			
765.394	6.335	768.616	6.352 771.296	6.371 793.741	6.502 839.766	9.271			
842.1	9.423	843.374	9.481 847.711	9.692 880.752	11.208 895.887	11.933			
909.605	12.568	917.528	12.919 985.666	15.502 990.259	15.667 994.465	15.659			
1026.624	15.584	1061.728	16.916	1062.581	16.948	1064.144	16.989	1099.354	17.879
1106.77	18.106	1164.167	19.328	1180.143	19.722	1185.594	19.822	1199.593	20.176
1207.584	20.288	1233.942	19.693	1240.393	19.751	1266.466	19.051	1273.203	18.874
1324.333	17.257	1338.822	16.838	1353.829	16.624	1391.956	15.872	1404.441	15.633
1429.088	15.674	1437.251	15.717	1461.612	16.539	1470.061	16.753	1517.797	18.296
1535.68	18.815	1544.859	19.012	1568.489	19.583	1591.709	19.991	1601.299	20.14
1611.059	20.221	1634.109	20.451	1645.483	20.527	1666.918	20.612	1689.282	20.684
1710.359	20.752	1754.33	20.941	1765.347	20.978	1786.855	21.038	1798.157	21.077
1860.736	21.34	1890.48	21.449	1921.552	21.652	1952.176	21.853	1962.205	21.921
1982.001	22.017	1995.014	22.082	2014.525	22.115	2055.134	22.088	2093.443	21.944



ExpandedLocal.rep

2107.558	21.9262144.622	21.842173.758	21.9692191.872	22.122206.858	22.171
2242.195	22.3192257.491	22.333 2291.65	22.386 2323.11	22.3792356.138	22.498
2388.729	22.5952404.816	22.7112421.539	22.7492437.341	22.6462454.349	22.606
2469.865	22.472487.158	22.3282517.358	21.8582552.777	21.392567.438	21.208
2567.645	21.2052585.589	20.9752599.692	20.8742618.402	20.6992641.497	20.657
2691.841	21.0032716.842	21.1952728.702	21.2032749.655	21.3622760.954	21.346
2782.469	21.285 2851.75	20.9912880.909	20.9612904.927	20.4432913.722	20.215
2943.829	20.712950.536	20.8262979.348	21.1162986.721	21.1213038.503	21.227
3044.975	21.233071.898	21.1343077.788	21.1293105.292	21.123110.602	21.12
3115.73	21.1263143.415	21.2813161.984	21.3273205.474	21.3993209.042	21.418
3238.868	21.514 3244.74	21.524 3257.75	21.5733276.725	21.6193286.364	21.614
3324.292	21.5183341.556	21.5183377.245	21.5423387.134	21.5323390.358	21.573
3396.701	21.6073439.159	21.827 3460.74	21.96 3469.11	22.0313512.362	22.433
3534.345	22.5883541.519	22.6143571.148	22.6943613.928	22.7293644.754	22.737
3676.616	22.7733683.168	22.7923686.337	22.7993755.163	22.814 3756.37	22.808
3791.966	22.3443811.721	22.1923831.155	21.7743853.973	21.6033865.571	21.662
3901.145	21.4243931.672	21.5013939.177	21.363951.577	21.5123975.973	21.924
3975.98	21.9243975.988	21.9254012.783	26.1724030.728	25.4054072.143	24.205

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3788	.06	575	.05	628	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	575	628		502	502	.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 11146

INPUT

Description: Copy of COE 2.111

Station Elevation Data num= 395

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3788	12.67-3774.11	12.653	-3760.4	12.569	-3738.99	12.497	-3707.47	12.349	
-3701.42	12.304	-3688.6	12.237	-3668.75	12.102	-3630.25	11.823	-3596.66	11.612
-3577.79	11.467	-3572.58	11.431	-3563.39	11.284	-3504.71	11.036	-3498.15	11.018
-3493.15	10.985	-3470.93	10.407	-3447	10.167	-3422.9	10.219	-3394.69	9.816
-3352.66	10.231	-3320.82	10.622	-3317.54	10.653	-3293.04	10.827	-3282.42	10.897
-3228.88	10.939	-3216.8	10.952	-3212.18	10.939	-3158.16	10.596	-3143.13	10.509
-3141.94	10.505	-3140.56	10.498	-3136.93	10.467	-3111.65	10.263	-3106.82	10.226
-3088.21	10.001	-3071.7	9.818	-3060.13	9.564	-3044.99	9.412	-3001.46	8.87
-2988.08	8.88	-2966.34	9.008	-2920.76	9.551	-2896.1	9.827	-2886.43	9.874
-2861.1	9.954	-2860.98	9.955	-2860.6	9.954	-2790.74	9.788	-2784.77	9.761

ExpandedLocal.rep

-2730.72	9.473	-2720.5	9.418-2713.56	9.374-2685.38	9.196-2677.21	9.072
-2657.71	8.777	-2633.6	8.484-2615.14	8.257-2606.88	8.199-2580.02	8.076
-2566.11	8.007-2542.47	8.522-2509.78	8.719-2479.81	9.208-2474.66	9.275	
-2454.4	9.448	-2406.3	10.119-2403.58	10.142-2401.37	10.149-2386.75	10.161
-2374.88	10.198-2370.41	10.232-2305.07	9.953-2304.69	9.951-2304.63	9.951	
-2271.79	9.874-2256.89	9.844-2238.91	9.84-2219.74	9.81-2181.09	9.823	
-2173.16	9.801-2164.14	9.763-2140.28	9.652-2100.69	9.498-2074.53	9.446	
-2040.69	9.36-2008.78	9.247-1988.52	9.257-1975.91	9.281 -1953.4	9.369	
-1943.03	9.407-1889.89	9.68-1877.28	9.731-1848.03	9.807 -1844.4	9.811	
-1838.39	9.791-1794.98	9.632-1750.95	9.324-1745.78	9.279-1717.62	9.017	
-1707.54	8.924-1667.55	8.605-1647.15	8.619-1635.22	8.629 -1624.1	8.642	
-1613.7	8.632-1589.19	8.594-1546.16	8.305-1539.02	8.323-1512.38	8.439	
-1490.47	8.534 -1470.2	8.689-1444.84	8.846-1414.38	9.157-1411.06	9.186	
-1409.05	9.195-1400.81	9.17-1354.77	8.961-1343.52	8.928-1324.99	9.053	
-1309.74	9.082-1280.29	8.929-1275.97	8.933-1262.59	8.948 -1246.2	8.921	
-1242.19	9.003-1239.36	8.906 -1222.7	9.31-1181.64	9.939-1174.65	9.969	
-1164.78	9.788-1140.87	9.881-1133.89	9.904-1109.41	9.828-1107.86	9.854	
-1075.32	10.096-1075.03	10.093-1055.38	10.324-1042.21	10.457-1010.68	10.327	
-1009.39	10.358-978.777	10.386-976.572	10.4-975.422	10.399 -943.75	10.148	
-912.977	10.184-910.928	10.191-879.791	9.701-875.519	9.703-872.854	9.718	
-845.285	10.066-819.257	9.539-805.265	9.515-779.641	9.082-758.965	9.095	
-746.819	9.677-723.546	7.836-716.722	7.878-713.998	7.888-704.256	7.89	
-681.19	10.028-658.123	9.475 -638.64	9.554-615.573	10.042-594.298	10.06	
-582.765	10.093-571.231	10.075-528.681	9.817-517.148	9.824-494.081	8.69	
-484.34	8.667-474.598	8.779-451.531	10.265-430.256	10.34-418.723	10.265	
-395.656	9.886-381.044	9.877-366.432	9.927-331.831	10.394-320.298	10.366	
-297.231	9.611-277.748	9.59-254.681	10.224-233.406	10.246 -210.34	9.888	
-189.065	9.791-165.998	9.659-156.256	9.614 -133.19	9.694-123.448	9.634	
-118.577	9.584-109.722	9.657 -90.64	9.816 -62.702	9.148 -52.961	8.971	
-25.023	8.431 2.915	8.098 17.527	7.692 40.594	7.229 61.869	6.969	
73.402	6.476 94.677	6.291 106.21	6.291 129.277	6.207 158.502	6.174	
181.569	6.16 204.635	6.16 214.377	6.16 237.444	6.16 247.185	6.16	
270.252	6.16 279.994	6.16 303.06	6.16 312.802	6.16 335.869	6.16	
345.61	6.16 368.677	6.16 378.419	6.16 401.485	6.218 424.552	6.16	
434.294	6.16 444.035	6.16 449.278	6.16 469.585	6.12 497.417	6.065	
506.964	6.058 518.441	6.051 544.343	6.034 550	12.19 575	12.21	
583	5.65 600	3.91 618	4.64 628	12.18 653	11.91	
656.479	6.015 690.491	6.026 697.025	6.026 702.827	6.034 731.237	6.093	
765.394	6.335 768.616	6.352 771.296	6.371 793.741	6.502 839.766	9.271	
842.1	9.423 843.374	9.481 847.711	9.692 880.752	11.208 895.887	11.933	
909.605	12.568 917.528	12.919 985.666	15.502 990.259	15.667 994.465	15.659	
1026.624	15.5841061.728	16.9161062.581	16.9481064.144	16.9891099.354	17.879	
1106.77	18.1061164.167	19.3281180.143	19.7221185.594	19.8221199.593	20.176	
1207.584	20.2881233.942	19.6931240.393	19.751266.466	19.0511273.203	18.874	
1324.333	17.2571338.822	16.8381353.829	16.6241391.956	15.8721404.441	15.633	
1429.088	15.6741437.251	15.7171461.612	16.5391470.061	16.7531517.797	18.296	
1535.68	18.8151544.859	19.0121568.489	19.5831591.709	19.9911601.299	20.14	
1611.059	20.221634.109	20.4511645.483	20.5271666.918	20.6121689.282	20.684	

ExpandedLocal.rep

1710.359	20.752	1754.33	20.941765.347	20.9781786.855	21.0381798.157	21.077	
1860.736	21.34	1890.48	21.4491921.552	21.6521952.176	21.8531962.205	21.921	
1982.001	22.0171995.014		22.082014.525	22.1152055.134	22.0882093.443	21.944	
2107.558	21.9262144.622		21.842173.758	21.9692191.872	22.122206.858	22.171	
2242.195	22.3192257.491	22.333	2291.65	22.386	2323.11	22.3792356.138	22.498
2388.729	22.5952404.816	22.7112421.539		22.7492437.341		22.6462454.349	22.606
2469.865	22.472487.158	22.3282517.358		21.8582552.777	21.392567.438		21.208
2567.645	21.2052585.589	20.9752599.692		20.8742618.402	20.6992641.497		20.657
2691.841	21.0032716.842	21.1952728.702		21.2032749.655	21.3622760.954		21.346
2782.469	21.285	2851.75	20.9912880.909	20.9612904.927	20.4432913.722		20.215
2943.829	20.712950.536	20.8262979.348		21.1162986.721	21.1213038.503		21.227
3044.975	21.233071.898	21.1343077.788		21.1293105.292	21.123110.602		21.12
3115.73	21.1263143.415	21.2813161.984		21.3273205.474	21.3993209.042		21.418
3238.868	21.514	3244.74	21.524	3257.75	21.5733276.725	21.6193286.364	21.614
3324.292	21.5183341.556	21.5183377.245		21.5423387.134	21.5323390.358		21.573
3396.701	21.6073439.159	21.827	3460.74	21.96	3469.11	22.0313512.362	22.433
3534.345	22.5883541.519	22.6143571.148		22.6943613.928	22.7293644.754		22.737
3676.616	22.7733683.168	22.7923686.337		22.7993755.163	22.814	3756.37	22.808
3791.966	22.3443811.721	22.1923831.155		21.7743853.973	21.6033865.571		21.662
3901.145	21.4243931.672	21.5013939.177		21.363951.577	21.5123975.973		21.924
3975.98	21.9243975.988	21.9254012.783		26.1724030.728	25.4054072.143		24.205

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3788	.07	575	.05	628	.07

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	575	628		338	338	338		.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 10808

INPUT

Description: Data from Land Survey

Station Elevation Data num= 392

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4501	11.163-4494.05	11.156-4443.42	10.49-4424.88	10.385-4416.68	10.519				
-4390.3	10.101-4367.22	9.981-4355.72	9.885-4332.72	9.877-4312.93	10.052				
-4286.55	10.048-4280.84	10.01-4263.72	9.942-4254.91	9.924-4251.97	9.916				
-4249.62	9.906-4217.38	9.837-4194.22	9.802 -4182.8	9.801-4159.97	9.792				
-4149.9	9.786-4148.22	9.78-4142.34	9.783-4124.68	9.788-4093.22	9.813				
-4081.38	9.801-4061.09	9.778-4048.57	9.751-4035.49	9.754-4015.75	9.725				
-4001.96	9.713-3982.94	9.678-3973.73	9.64-3947.24	9.529 -3917.3	9.413				

ExpandedLocal.rep

-3884.31	9.453-3851.67	9.498-3821.38	9.526-3786.04	9.569-3767.21	9.65
-3739.83	9.796-3720.41	9.873-3707.71	9.933-3687.59	9.994-3644.66	10.209
-3621.96	10.291-3611.33	10.321-3589.15	10.399-3565.56	10.334-3532.21	10.239
-3524.74	10.212-3520.28	10.18-3502.57	10.082-3489.82	10.009-3462.79	9.669
-3456.62	9.614-3416.81	9.006 -3398.3	8.724-3390.22	8.648-3369.61	8.58
-3347.81	8.476-3323.82	8.304-3319.07	8.266-3290.62	7.904 -3290.1	7.9
-3288.41	7.885-3232.84	7.375-3224.22	7.287-3212.44	7.196-3175.35	6.923
-3157.82	6.868 -3146.6	6.852-3124.62	6.846-3117.86	6.862-3091.42	6.892
-3089.11	6.899-3074.26	6.916-3028.56	6.97-3025.02	6.956-2974.14	6.977
-2937.4	7.127-2925.42	7.18-2916.65	7.253-2892.22	7.613-2884.62	7.79
-2860.1	8.202-2830.42	8.765-2825.82	8.796-2801.67	8.934-2786.94	8.941
-2759.42	9.107-2740.94	8.986-2726.22	8.758-2710.46	8.572-2703.89	8.487
-2693.08	8.319-2660.28	7.779-2626.93	7.252-2598.21	7.018-2593.85	6.968
-2591.24	6.945-2580.86	6.916-2530.22	6.821-2527.98	6.816-2527.69	6.817
-2527.32	6.82-2494.62	7.01-2474.51	7.274-2440.03	7.665-2428.46	7.798
-2410.71	7.919-2375.55	8.091-2362.31	8.131-2337.61	8.119-2329.23	8.098
-2297.79	8.024-2293.44	8.023-2272.28	7.974-2263.08	7.95-2259.91	7.948
-2196.92	7.906-2185.84	8.051-2163.85	8.09-2138.75	7.872-2117.54	7.896
-2085.73	7.765-2064.62	7.794-2034.07	7.857-2031.54	7.865-2014.33	7.928
-1970.95	8.091-1965.39	8.12-1958.19	8.142-1932.31	8.231-1904.02	8.341
-1866.16	8.514-1853.68	8.537-1833.08	8.557-1806.42	8.523 -1800	8.522
-1774.86	8.473-1764.66	8.45-1733.06	8.393-1711.84	8.376-1699.34	8.422
-1690.57	8.39-1640.61	8.228-1631.91	8.202-1622.24	8.177-1600.74	8.126
-1590.74	8.106-1564.48	7.966-1546.57	8.035-1521.01	8.245-1497.05	8.368
-1445.75	8.551-1429.62	8.629-1414.05	8.646-1395.91	8.665-1384.71	8.628
-1337.39	8.524-1328.48	8.505-1325.71	8.509-1275.66	8.572-1250.79	8.603
-1227.33	8.637-1212.55	8.654-1193.61	8.665-1166.61	8.689 -1159.9	8.702
-1149.02	8.764-1112.09	8.95-1092.47	9.129-1060.68	9.27-1058.75	9.275
-1056.76	9.276-1012.88	9.222-991.329	9.195-975.786	9.225-957.614	9.22
-928.169	9.274-923.899	9.286 -910.13	9.32-856.469	9.452-845.883	9.461
-839.061	9.465-802.023	9.42 -790.02	9.404-780.984	9.383-756.887	9.288
-724.88	9.341-723.754	9.339-722.907	9.336-716.896	9.333-690.622	9.308
-686.309	9.288-657.489	9.135-634.157	8.904-591.223	8.485-570.595	8.436
-558.09	8.443-495.721	8.719-492.577	8.735-490.598	8.741-481.903	8.808
-458.692	8.96-449.576	9.096-403.463	9.671-374.444	10.135-359.293	10.639
-339.168	10.553 -326.16	10.589-300.597	10.188-264.994	9.828 -259.04	9.772
-246.91	9.697-226.762	9.554-200.213	9.448-172.703	9.086-146.312	8.904
-127.363	8.803-107.741	8.322 -94.23	7.93 -69.17	7.352 -57.859	7.013
-27.965	7.101 -25.982	7.092 -11.918	7.154 0	6.5 43	5.3
79	5.2 114	5.6 150	4.2 182	5.5 202	5.5
233	5.2 263	5.3 271.16	7.086 309.643	7.358 337.659	7.547
345.729	7.648 370.909	7.94 394.769	7.8 402.832	7.731 404.158	7.729
404.703	7.726 408.764	7.729 470.658	7.547 485.605	7.728 503.907	7.876
513.692	8.133 550.766	8.828 570.406	9.226 602.69	9.691 603.656	9.704
604.268	9.709 636.905	10.652 644.8	10.797 670.155	11.504 684.599	11.891
703.405	12.466 755.689	13.975 769.904	14.393 773.998	14.583 803.153	15.653
818.189	16.209 852.128	16.86 864.272	17.201 883.593	17.6 887.152	17.656
903.08	17.889 969.423	18.969 970.191	18.98 970.536	18.984 971.446	18.999

ExpandedLocal.rep

1003.958	19.5331008.072	19.5961053.832	20.168	1071.21	20.1961091.367	20.493
1104.836	20.9591135.284	20.6171138.462	20.578	1179.495	21.2961205.714	21.647
1230.218	21.816	1239.34	21.885	1270.825	21.943	1272.749
1302.98	21.925	1316.954	21.922	1354.947	21.836	1373.843
1409.862	21.915	1411.513	21.914	1420.515	21.922	1472.986
1508.347	22.023	1519.461	22.041	1541.973	22.081	1557.341
1601.481	22.209	1609.908	22.223	1670.73	22.132	1676.1
1715.787	22.074	1750.587	22.045	1753.711	22.029	1761.801
1800.828	21.727	1820.927	21.557	1852.873	21.238	1880.57
1915.421	20.669	1931.313	20.568	1943.944	20.489	1982.057
2030.014	20.059	2031.945	20.052	2035.015	20.042	2067.115
2134.287	19.958	2137.454	19.859	2172.187	19.974	2194.57
2224.048	20.609	2251.561	20.763	2278.134	20.923	2308.229
2314.518	21.017	2330.522	21.061	2379.896	21.175	2383.643
2414.59	21.327	2450.339	21.501	2457.852	21.538	2501.793
2538.449	21.806	2554.718	21.892	2564.697	21.925	2606.325
2619.045	22.109	2650.135	22.263	2661.954	22.328	2688.271
2775.496	22.036	2783.333	21.977	2798.06	21.875	2813.884
2861.274	21.563	2883.232	21.522	2901.133	21.523	2916.531
2940.655	21.596	2955.445	21.699	2990.082	21.873	3018.97
3034.188	22.091	3046.653	22.107	3075.643	22.093	3116.463
3146.827	22.302	3223.809	22.746	3233.769	23.184	3241.462
3282.916	25.692	3286.335	25.656	3324.371	25.113	3341.214
3386.073	25.413	3406.901	25.483		24.896	3361.07

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-4501	.07	114	.05	182	.07

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	114	182		68	68	68	.1	.3	

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-4501	54.5	10.6	F
245.53406.901		10.6	F

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 10740

INPUT

Description: Data from Land Survey

Station Elevation Data num= 396

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									

ExpandedLocal.rep

-4501	11.163-4494.05	11.156-4443.42	10.49-4424.88	10.385-4416.68	10.519
-4390.3	10.101-4367.22	9.981-4355.72	9.885-4332.72	9.877-4312.93	10.052
-4286.55	10.048-4280.84	10.01-4263.72	9.942-4254.91	9.924-4251.97	9.916
-4249.62	9.906-4217.38	9.837-4194.22	9.802 -4182.8	9.801-4159.97	9.792
-4149.9	9.786-4148.22	9.78-4142.34	9.783-4124.68	9.788-4093.22	9.813
-4081.38	9.801-4061.09	9.778-4048.57	9.751-4035.49	9.754-4015.75	9.725
-4001.96	9.713-3982.94	9.678-3973.73	9.64-3947.24	9.529 -3917.3	9.413
-3884.31	9.453-3851.67	9.498-3821.38	9.526-3786.04	9.569-3767.21	9.65
-3739.83	9.796-3720.41	9.873-3707.71	9.933-3687.59	9.994-3644.66	10.209
-3621.96	10.291-3611.33	10.321-3589.15	10.399-3565.56	10.334-3532.21	10.239
-3524.74	10.212-3520.28	10.18-3502.57	10.082-3489.82	10.009-3462.79	9.669
-3456.62	9.614-3416.81	9.006 -3398.3	8.724-3390.22	8.648-3369.61	8.58
-3347.81	8.476-3323.82	8.304-3319.07	8.266-3290.62	7.904 -3290.1	7.9
-3288.41	7.885-3232.84	7.375-3224.22	7.287-3212.44	7.196-3175.35	6.923
-3157.82	6.868 -3146.6	6.852-3124.62	6.846-3117.86	6.862-3091.42	6.892
-3089.11	6.899-3074.26	6.916-3028.56	6.97-3025.02	6.956-2974.14	6.977
-2937.4	7.127-2925.42	7.18-2916.65	7.253-2892.22	7.613-2884.62	7.79
-2860.1	8.202-2830.42	8.765-2825.82	8.796-2801.67	8.934-2786.94	8.941
-2759.42	9.107-2740.94	8.986-2726.22	8.758-2710.46	8.572-2703.89	8.487
-2693.08	8.319-2660.28	7.779-2626.93	7.252-2598.21	7.018-2593.85	6.968
-2591.24	6.945-2580.86	6.916-2530.22	6.821-2527.98	6.816-2527.69	6.817
-2527.32	6.82-2494.62	7.01-2474.51	7.274-2440.03	7.665-2428.46	7.798
-2410.71	7.919-2375.55	8.091-2362.31	8.131-2337.61	8.119-2329.23	8.098
-2297.79	8.024-2293.44	8.023-2272.28	7.974-2263.08	7.95-2259.91	7.948
-2196.92	7.906-2185.84	8.051-2163.85	8.09-2138.75	7.872-2117.54	7.896
-2085.73	7.765-2064.62	7.794-2034.07	7.857-2031.54	7.865-2014.33	7.928
-1970.95	8.091-1965.39	8.12-1958.19	8.142-1932.31	8.231-1904.02	8.341
-1866.16	8.514-1853.68	8.537-1833.08	8.557-1806.42	8.523 -1800	8.522
-1774.86	8.473-1764.66	8.45-1733.06	8.393-1711.84	8.376-1699.34	8.422
-1690.57	8.39-1640.61	8.228-1631.91	8.202-1622.24	8.177-1600.74	8.126
-1590.74	8.106-1564.48	7.966-1546.57	8.035-1521.01	8.245-1497.05	8.368
-1445.75	8.551-1429.62	8.629-1414.05	8.646-1395.91	8.665-1384.71	8.628
-1337.39	8.524-1328.48	8.505-1325.71	8.509-1275.66	8.572-1250.79	8.603
-1227.33	8.637-1212.55	8.654-1193.61	8.665-1166.61	8.689 -1159.9	8.702
-1149.02	8.764-1112.09	8.95-1092.47	9.129-1060.68	9.27-1058.75	9.275
-1056.76	9.276-1012.88	9.222-991.329	9.195-975.786	9.225-957.614	9.22
-928.169	9.274-923.899	9.286 -910.13	9.32-856.469	9.452-845.883	9.461
-839.061	9.465-802.023	9.42 -790.02	9.404-780.984	9.383-756.887	9.288
-724.88	9.341-723.754	9.339-722.907	9.336-716.896	9.333-690.622	9.308
-686.309	9.288-657.489	9.135-634.157	8.904-591.223	8.485-570.595	8.436
-558.09	8.443-495.721	8.719-492.577	8.735-490.598	8.741-481.903	8.808
-458.692	8.96-449.576	9.096-403.463	9.671-374.444	10.135-359.293	10.639
-339.168	10.553 -326.16	10.589-300.597	10.188-264.994	9.828 -259.04	9.772
-246.91	9.697-226.762	9.554-200.213	9.448-172.703	9.086-146.312	8.904
-127.363	8.803-107.741	8.322 -94.23	7.93 -69.17	7.352 -57.859	7.013
-27.965	7.101 -25.982	7.092 -11.918	7.154 0	6.1 23	5.7
46	5.4 78	5.2 107	6.1 124	5.3 142	3.6
154	1.3 165	3.2 180	6 216	5.2 241	5.5

ExpandedLocal.rep

246.813	6.944	271.16	7.086	309.643	7.358	337.659	7.547	345.729	7.648
370.909	7.94	394.769	7.8	402.832	7.731	404.158	7.729	404.703	7.726
408.764	7.729	470.658	7.547	485.605	7.728	503.907	7.876	513.692	8.133
550.766	8.828	570.406	9.226	602.69	9.691	603.656	9.704	604.268	9.709
636.905	10.652	644.8	10.797	670.155	11.504	684.599	11.891	703.405	12.466
755.689	13.975	769.904	14.393	773.998	14.583	803.153	15.653	818.189	16.209
852.128	16.86	864.272	17.201	883.593	17.6	887.152	17.656	903.08	17.889
969.423	18.969	970.191	18.98	970.536	18.984	971.446	18.999	1003.958	19.533
1008.072	19.596	1053.832	20.168	1071.21	20.196	1091.367	20.493	1104.836	20.959
1135.284	20.617	1138.462	20.578	1179.495	21.296	1205.714	21.647	1230.218	21.816
1239.34	21.885	1270.825	21.943	1272.749	21.947	1272.966	21.947	1302.98	21.925
1316.954	21.922	1354.947	21.836	1373.843	21.851	1403.69	21.908	1409.862	21.915
1411.513	21.914	1420.515	21.922	1472.986	21.955	1499.478	22.004	1508.347	22.023
1519.461	22.041	1541.973	22.081	1557.341	22.124	1594.347	22.194	1601.481	22.209
1609.908	22.223	1670.73	22.132	1676.1	22.122	1680.247	22.113	1715.787	22.074
1750.587	22.045	1753.711	22.029	1761.801	21.989	1785.757	21.856	1800.828	21.727
1820.927	21.557	1852.873	21.238	1880.57	20.948	1891.266	20.831	1915.421	20.669
1931.313	20.568	1943.944	20.489	1982.057	20.311	1996.775	20.225	2030.014	20.059
2031.945	20.052	2035.015	20.042	2067.115	19.968	2126.086	19.929	2134.287	19.958
2137.454	19.859	2172.187	19.974	2194.57	20.442	2207.794	20.503	2224.048	20.609
2251.561	20.763	2278.134	20.923	2308.229	21.002	2313.303	21.016	2314.518	21.017
2330.522	21.061	2379.896	21.175	2383.643	21.174	2385.466	21.183	2414.59	21.327
2450.339	21.501	2457.852	21.538	2501.793	21.658	2516.938	21.704	2538.449	21.806
2554.718	21.892	2564.697	21.925	2606.325	22.064	2616.836	22.098	2619.045	22.109
2650.135	22.263	2661.954	22.328	2688.271	22.392	2716.734	22.523	2775.496	22.036
2783.333	21.977	2798.06	21.875	2813.884	21.772	2816.633	21.754	2861.274	21.563
2883.232	21.522	2901.133	21.523	2916.531	21.541	2927.372	21.559	2940.655	21.596
2955.445	21.699	2990.082	21.873	3018.97	22.025	3023.263	22.063	3034.188	22.091
3046.653	22.107	3075.643	22.093	3116.463	21.859	3117.098	21.866	3146.827	22.302
3223.809	22.746	3233.769	23.184	3241.462	23.657	3277.482	25.779	3282.916	25.692
3286.335	25.656	3324.371	25.113	3341.214	24.896	3361.07	24.485	3386.073	25.413
3406.901	25.483								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-4501	.07	107	.05	180	.07

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:		Left Channel	Right	Coeff Contr.	Expan.
	107	180	58	58	58		.1	.3
Ineffective Flow	num=		2					
Sta L	Sta R	Elev	Permanent					
-4501	121	10.6	F					
1763406.901		10.6	F					

BRIDGE

ExpandedLocal.rep

RIVER: Gum Bayou  
 REACH: Upper

RS: 10711

INPUT

Description: Oak Drive

Gum #51

Distance from Upstream XS = 15

Deck/Roadway Width = 28

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 10

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-352.79	10.6				0	10.6				46	11.1			
103	11.7				136	12.1	10.5			161	12.1	10.5		
175	12.1				204	12.1				264	12.1			
691.7	12.1													

Upstream Bridge Cross Section Data

Station Elevation Data num= 396

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4501	11.163-4494.05	11.156-4443.42	10.49-4424.88	10.385-4416.68	10.519				
-4390.3	10.101-4367.22	9.981-4355.72	9.885-4332.72	9.877-4312.93	10.052				
-4286.55	10.048-4280.84	10.001-4263.72	9.942-4254.91	9.924-4251.97	9.916				
-4249.62	9.906-4217.38	9.837-4194.22	9.802 -4182.8	9.801-4159.97	9.792				
-4149.9	9.786-4148.22	9.78-4142.34	9.783-4124.68	9.788-4093.22	9.813				
-4081.38	9.801-4061.09	9.778-4048.57	9.751-4035.49	9.754-4015.75	9.725				
-4001.96	9.713-3982.94	9.678-3973.73	9.64-3947.24	9.529 -3917.3	9.413				
-3884.31	9.453-3851.67	9.498-3821.38	9.526-3786.04	9.569-3767.21	9.65				
-3739.83	9.796-3720.41	9.873-3707.71	9.933-3687.59	9.994-3644.66	10.209				
-3621.96	10.291-3611.33	10.321-3589.15	10.399-3565.56	10.334-3532.21	10.239				
-3524.74	10.212-3520.28	10.18-3502.57	10.082-3489.82	10.009-3462.79	9.669				
-3456.62	9.614-3416.81	9.006 -3398.3	8.724-3390.22	8.648-3369.61	8.58				
-3347.81	8.476-3323.82	8.304-3319.07	8.266-3290.62	7.904 -3290.1	7.9				
-3288.41	7.885-3232.84	7.375-3224.22	7.287-3212.44	7.196-3175.35	6.923				
-3157.82	6.868 -3146.6	6.852-3124.62	6.846-3117.86	6.862-3091.42	6.892				
-3089.11	6.899-3074.26	6.916-3028.56	6.97-3025.02	6.956-2974.14	6.977				
-2937.4	7.127-2925.42	7.18-2916.65	7.253-2892.22	7.613-2884.62	7.79				
-2860.1	8.202-2830.42	8.765-2825.82	8.796-2801.67	8.934-2786.94	8.941				
-2759.42	9.107-2740.94	8.986-2726.22	8.758-2710.46	8.572-2703.89	8.487				
-2693.08	8.319-2660.28	7.779-2626.93	7.252-2598.21	7.018-2593.85	6.968				
-2591.24	6.945-2580.86	6.916-2530.22	6.821-2527.98	6.816-2527.69	6.817				
-2527.32	6.82-2494.62	7.01-2474.51	7.274-2440.03	7.665-2428.46	7.798				
-2410.71	7.919-2375.55	8.091-2362.31	8.131-2337.61	8.119-2329.23	8.098				
-2297.79	8.024-2293.44	8.023-2272.28	7.974-2263.08	7.95-2259.91	7.948				
-2196.92	7.906-2185.84	8.051-2163.85	8.09-2138.75	7.872-2117.54	7.896				
-2085.73	7.765-2064.62	7.794-2034.07	7.857-2031.54	7.865-2014.33	7.928				



ExpandedLocal.rep

-1970.95	8.091-1965.39	8.12-1958.19	8.142-1932.31	8.231-1904.02	8.341
-1866.16	8.514-1853.68	8.537-1833.08	8.557-1806.42	8.523 -1800	8.522
-1774.86	8.473-1764.66	8.45-1733.06	8.393-1711.84	8.376-1699.34	8.422
-1690.57	8.39-1640.61	8.228-1631.91	8.202-1622.24	8.177-1600.74	8.126
-1590.74	8.106-1564.48	7.966-1546.57	8.035-1521.01	8.245-1497.05	8.368
-1445.75	8.551-1429.62	8.629-1414.05	8.646-1395.91	8.665-1384.71	8.628
-1337.39	8.524-1328.48	8.505-1325.71	8.509-1275.66	8.572-1250.79	8.603
-1227.33	8.637-1212.55	8.654-1193.61	8.665-1166.61	8.689 -1159.9	8.702
-1149.02	8.764-1112.09	8.95-1092.47	9.129-1060.68	9.27-1058.75	9.275
-1056.76	9.276-1012.88	9.222-991.329	9.195-975.786	9.225-957.614	9.22
-928.169	9.274-923.899	9.286 -910.13	9.32-856.469	9.452-845.883	9.461
-839.061	9.465-802.023	9.42 -790.02	9.404-780.984	9.383-756.887	9.288
-724.88	9.341-723.754	9.339-722.907	9.336-716.896	9.333-690.622	9.308
-686.309	9.288-657.489	9.135-634.157	8.904-591.223	8.485-570.595	8.436
-558.09	8.443-495.721	8.719-492.577	8.735-490.598	8.741-481.903	8.808
-458.692	8.96-449.576	9.096-403.463	9.671-374.444	10.135-359.293	10.639
-339.168	10.553 -326.16	10.589-300.597	10.188-264.994	9.828 -259.04	9.772
-246.91	9.697-226.762	9.554-200.213	9.448-172.703	9.086-146.312	8.904
-127.363	8.803-107.741	8.322 -94.23	7.93 -69.17	7.352 -57.859	7.013
-27.965	7.101 -25.982	7.092 -11.918	7.154 0	6.1 23	5.7
46	5.4 78	5.2 107	6.1 124	5.3 142	3.6
154	1.3 165	3.2 180	6 216	5.2 241	5.5
246.813	6.944 271.16	7.086 309.643	7.358 337.659	7.547 345.729	7.648
370.909	7.94 394.769	7.8 402.832	7.731 404.158	7.729 404.703	7.726
408.764	7.729 470.658	7.547 485.605	7.728 503.907	7.876 513.692	8.133
550.766	8.828 570.406	9.226 602.69	9.691 603.656	9.704 604.268	9.709
636.905	10.652 644.8	10.797 670.155	11.504 684.599	11.891 703.405	12.466
755.689	13.975 769.904	14.393 773.998	14.583 803.153	15.653 818.189	16.209
852.128	16.86 864.272	17.201 883.593	17.6 887.152	17.656 903.08	17.889
969.423	18.969 970.191	18.98 970.536	18.984 971.446	18.9991003.958	19.533
1008.072	19.5961053.832	20.168 1071.21	20.1961091.367	20.4931104.836	20.959
1135.284	20.6171138.462	20.5781179.495	21.2961205.714	21.6471230.218	21.816
1239.34	21.8851270.825	21.9431272.749	21.9471272.966	21.947 1302.98	21.925
1316.954	21.9221354.947	21.8361373.843	21.851 1403.69	21.9081409.862	21.915
1411.513	21.9141420.515	21.9221472.986	21.9551499.478	22.0041508.347	22.023
1519.461	22.0411541.973	22.0811557.341	22.1241594.347	22.1941601.481	22.209
1609.908	22.223 1670.73	22.132 1676.1	22.1221680.247	22.1131715.787	22.074
1750.587	22.0451753.711	22.0291761.801	21.9891785.757	21.8561800.828	21.727
1820.927	21.5571852.873	21.238 1880.57	20.9481891.266	20.8311915.421	20.669
1931.313	20.5681943.944	20.4891982.057	20.311996.775	20.2252030.014	20.059
2031.945	20.052035.015	20.042067.115	19.9682126.086	19.9292134.287	19.958
2137.454	19.8592172.187	19.974 2194.57	20.4422207.794	20.5032224.048	20.609
2251.561	20.7632278.134	20.92308.229	21.0022313.303	21.0162314.518	21.017
2330.522	21.0612379.896	21.1752383.643	21.1742385.466	21.183 2414.59	21.327
2450.339	21.5012457.852	21.5382501.793	21.6582516.938	21.7042538.449	21.806
2554.718	21.892564.697	21.9252606.325	22.0642616.836	22.0982619.045	22.109
2650.135	22.2632661.954	22.3282688.271	22.392716.734	22.5232775.496	22.036
2783.333	21.977 2798.06	21.8752813.884	21.772816.633	21.7542861.274	21.563

ExpandedLocal.rep

2883.232	21.5222901.133	21.5232916.531	21.5412927.372	21.5592940.655	21.596
2955.445	21.6992990.082	21.873 3018.97	22.0253023.263	22.0633034.188	22.091
3046.653	22.1073075.643	22.093116.463	21.8593117.098	21.8663146.827	22.302
3223.809	22.7463233.769	23.1843241.462	23.6573277.482	25.7793282.916	25.692
3286.335	25.6563324.371	25.113341.214	24.896 3361.07	24.4853386.073	25.413
3406.901	25.483				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-4501	.07	107	.05	180	.07

Bank Sta: Left Right Coeff Contr. Expan.

107	180	.1	.3
-----	-----	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-4501	121	10.6	F
1763406.901		10.6	F

Downstream Deck/Roadway Coordinates

num= 11

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-4464.33	10.7		0	10.7	42	11.1			
98	11.7		132	12.1	10.5	157	12.1	10.5	
170	12.1		200	12.1	259	12.1			
316	12.1		691.7	12.1					

Downstream Bridge Cross Section Data

Station Elevation Data num= 393

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4501	11.163-4494.05	11.156-4443.42	10.49-4424.88	10.385-4416.68	10.519				
-4390.3	10.101-4367.22	9.981-4355.72	9.885-4332.72	9.877-4312.93	10.052				
-4286.55	10.048-4280.84	10.01-4263.72	9.942-4254.91	9.924-4251.97	9.916				
-4249.62	9.906-4217.38	9.837-4194.22	9.802 -4182.8	9.801-4159.97	9.792				
-4149.9	9.786-4148.22	9.78-4142.34	9.783-4124.68	9.788-4093.22	9.813				
-4081.38	9.801-4061.09	9.778-4048.57	9.751-4035.49	9.754-4015.75	9.725				
-4001.96	9.713-3982.94	9.678-3973.73	9.64-3947.24	9.529 -3917.3	9.413				
-3884.31	9.453-3851.67	9.498-3821.38	9.526-3786.04	9.569-3767.21	9.65				
-3739.83	9.796-3720.41	9.873-3707.71	9.933-3687.59	9.994-3644.66	10.209				
-3621.96	10.291-3611.33	10.321-3589.15	10.399-3565.56	10.334-3532.21	10.239				
-3524.74	10.212-3520.28	10.18-3502.57	10.082-3489.82	10.009-3462.79	9.669				
-3456.62	9.614-3416.81	9.006 -3398.3	8.724-3390.22	8.648-3369.61	8.58				
-3347.81	8.476-3323.82	8.304-3319.07	8.266-3290.62	7.904 -3290.1	7.9				
-3288.41	7.885-3232.84	7.375-3224.22	7.287-3212.44	7.196-3175.35	6.923				
-3157.82	6.868 -3146.6	6.852-3124.62	6.846-3117.86	6.862-3091.42	6.892				
-3089.11	6.899-3074.26	6.916-3028.56	6.97-3025.02	6.956-2974.14	6.977				

ExpandedLocal.rep

-2937.4	7.127-2925.42	7.18-2916.65	7.253-2892.22	7.613-2884.62	7.79
-2860.1	8.202-2830.42	8.765-2825.82	8.796-2801.67	8.934-2786.94	8.941
-2759.42	9.107-2740.94	8.986-2726.22	8.758-2710.46	8.572-2703.89	8.487
-2693.08	8.319-2660.28	7.779-2626.93	7.252-2598.21	7.018-2593.85	6.968
-2591.24	6.945-2580.86	6.916-2530.22	6.821-2527.98	6.816-2527.69	6.817
-2527.32	6.82-2494.62	7.01-2474.51	7.274-2440.03	7.665-2428.46	7.798
-2410.71	7.919-2375.55	8.091-2362.31	8.131-2337.61	8.119-2329.23	8.098
-2297.79	8.024-2293.44	8.023-2272.28	7.974-2263.08	7.95-2259.91	7.948
-2196.92	7.906-2185.84	8.051-2163.85	8.09-2138.75	7.872-2117.54	7.896
-2085.73	7.765-2064.62	7.794-2034.07	7.857-2031.54	7.865-2014.33	7.928
-1970.95	8.091-1965.39	8.12-1958.19	8.142-1932.31	8.231-1904.02	8.341
-1866.16	8.514-1853.68	8.537-1833.08	8.557-1806.42	8.523 -1800	8.522
-1774.86	8.473-1764.66	8.45-1733.06	8.393-1711.84	8.376-1699.34	8.422
-1690.57	8.39-1640.61	8.228-1631.91	8.202-1622.24	8.177-1600.74	8.126
-1590.74	8.106-1564.48	7.966-1546.57	8.035-1521.01	8.245-1497.05	8.368
-1445.75	8.551-1429.62	8.629-1414.05	8.646-1395.91	8.665-1384.71	8.628
-1337.39	8.524-1328.48	8.505-1325.71	8.509-1275.66	8.572-1250.79	8.603
-1227.33	8.637-1212.55	8.654-1193.61	8.665-1166.61	8.689 -1159.9	8.702
-1149.02	8.764-1112.09	8.95-1092.47	9.129-1060.68	9.27-1058.75	9.275
-1056.76	9.276-1012.88	9.222-991.329	9.195-975.786	9.225-957.614	9.22
-928.169	9.274-923.899	9.286 -910.13	9.32-856.469	9.452-845.883	9.461
-839.061	9.465-802.023	9.42 -790.02	9.404-780.984	9.383-756.887	9.288
-724.88	9.341-723.754	9.339-722.907	9.336-716.896	9.333-690.622	9.308
-686.309	9.288-657.489	9.135-634.157	8.904-591.223	8.485-570.595	8.436
-558.09	8.443-495.721	8.719-492.577	8.735-490.598	8.741-481.903	8.808
-458.692	8.96-449.576	9.096-403.463	9.671-374.444	10.135-359.293	10.639
-339.168	10.553 -326.16	10.589-300.597	10.188-264.994	9.828 -259.04	9.772
-246.91	9.697-226.762	9.554-200.213	9.448-172.703	9.086-146.312	8.904
-127.363	8.803-107.741	8.322 -94.23	7.93 -69.17	7.352 -57.859	7.013
-27.965	7.101 -25.982	7.092 -11.918	7.154 0	5.4 35	6.3
73	5.1 107	6 134	3.2 148	2.4 164	3.5
178	6.1 211	5.6 244	6.1 280	5.6 309.643	7.358
337.659	7.547 345.729	7.648 370.909	7.94 394.769	7.8 402.832	7.731
404.158	7.729 404.703	7.726 408.764	7.729 470.658	7.547 485.605	7.728
503.907	7.876 513.692	8.133 550.766	8.828 570.406	9.226 602.69	9.691
603.656	9.704 604.268	9.709 636.905	10.652 644.8	10.797 670.155	11.504
684.599	11.891 703.405	12.466 755.689	13.975 769.904	14.393 773.998	14.583
803.153	15.653 818.189	16.209 852.128	16.86 864.272	17.201 883.593	17.6
887.152	17.656 903.08	17.889 969.423	18.969 970.191	18.98 970.536	18.984
971.446	18.9991003.958	19.5331008.072	19.5961053.832	20.168 1071.21	20.196
1091.367	20.4931104.836	20.9591135.284	20.6171138.462	20.5781179.495	21.296
1205.714	21.6471230.218	21.816 1239.34	21.8851270.825	21.9431272.749	21.947
1272.966	21.947 1302.98	21.9251316.954	21.9221354.947	21.8361373.843	21.851
1403.69	21.9081409.862	21.9151411.513	21.9141420.515	21.9221472.986	21.955
1499.478	22.0041508.347	22.0231519.461	22.0411541.973	22.0811557.341	22.124
1594.347	22.1941601.481	22.2091609.908	22.223 1670.73	22.132 1676.1	22.122
1680.247	22.1131715.787	22.0741750.587	22.0451753.711	22.0291761.801	21.989
1785.757	21.8561800.828	21.7271820.927	21.5571852.873	21.238 1880.57	20.948

ExpandedLocal.rep

1891.266	20.8311915.421	20.6691931.313	20.5681943.944	20.4891982.057	20.31
1996.775	20.2252030.014	20.0592031.945	20.052035.015	20.042067.115	19.968
2126.086	19.9292134.287	19.9582137.454	19.8592172.187	19.974 2194.57	20.442
2207.794	20.5032224.048	20.6092251.561	20.7632278.134	20.92308.229	21.002
2313.303	21.0162314.518	21.0172330.522	21.0612379.896	21.1752383.643	21.174
2385.466	21.183 2414.59	21.3272450.339	21.5012457.852	21.5382501.793	21.658
2516.938	21.7042538.449	21.8062554.718	21.892564.697	21.9252606.325	22.064
2616.836	22.0982619.045	22.1092650.135	22.2632661.954	22.3282688.271	22.39
2716.734	22.5232775.496	22.0362783.333	21.977 2798.06	21.8752813.884	21.77
2816.633	21.7542861.274	21.5632883.232	21.5222901.133	21.5232916.531	21.541
2927.372	21.5592940.655	21.5962955.445	21.6992990.082	21.873 3018.97	22.025
3023.263	22.0633034.188	22.0913046.653	22.1073075.643	22.093116.463	21.859
3117.098	21.8663146.827	22.3023223.809	22.7463233.769	23.1843241.462	23.657
3277.482	25.7793282.916	25.6923286.335	25.6563324.371	25.113341.214	24.896
3361.07	24.4853386.073	25.4133406.901	25.483		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****					
-4501	.07	107	.05	178	.07

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	107	178		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-4501	124.5	10.6	F
164.53406.901		10.6	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 1

Pier Data

Pier Station Upstream= 148 Downstream= 144

Upstream num= 2

Width	Elev	Width	Elev
*****			
1	0	1	10.5

Downstream num= 2

Width	Elev	Width	Elev
*****			
1	0	1	10.5

ExpandedLocal.rep

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: Gum Bayou

REACH: Upper

RS: 10682

INPUT

Description: Data from Land Survey

Station Elevation Data num= 393

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4501	11.163	-4494.05	11.156	-4443.42	10.49	-4424.88	10.385	-4416.68	10.519
-4390.3	10.101	-4367.22	9.981	-4355.72	9.885	-4332.72	9.877	-4312.93	10.052
-4286.55	10.048	-4280.84	10.01	-4263.72	9.942	-4254.91	9.924	-4251.97	9.916
-4249.62	9.906	-4217.38	9.837	-4194.22	9.802	-4182.8	9.801	-4159.97	9.792
-4149.9	9.786	-4148.22	9.78	-4142.34	9.783	-4124.68	9.788	-4093.22	9.813
-4081.38	9.801	-4061.09	9.778	-4048.57	9.751	-4035.49	9.754	-4015.75	9.725
-4001.96	9.713	-3982.94	9.678	-3973.73	9.64	-3947.24	9.529	-3917.3	9.413
-3884.31	9.453	-3851.67	9.498	-3821.38	9.526	-3786.04	9.569	-3767.21	9.65
-3739.83	9.796	-3720.41	9.873	-3707.71	9.933	-3687.59	9.994	-3644.66	10.209
-3621.96	10.291	-3611.33	10.321	-3589.15	10.399	-3565.56	10.334	-3532.21	10.239
-3524.74	10.212	-3520.28	10.18	-3502.57	10.082	-3489.82	10.009	-3462.79	9.669
-3456.62	9.614	-3416.81	9.006	-3398.3	8.724	-3390.22	8.648	-3369.61	8.58
-3347.81	8.476	-3323.82	8.304	-3319.07	8.266	-3290.62	7.904	-3290.1	7.9
-3288.41	7.885	-3232.84	7.375	-3224.22	7.287	-3212.44	7.196	-3175.35	6.923
-3157.82	6.868	-3146.6	6.852	-3124.62	6.846	-3117.86	6.862	-3091.42	6.892
-3089.11	6.899	-3074.26	6.916	-3028.56	6.97	-3025.02	6.956	-2974.14	6.977
-2937.4	7.127	-2925.42	7.18	-2916.65	7.253	-2892.22	7.613	-2884.62	7.79
-2860.1	8.202	-2830.42	8.765	-2825.82	8.796	-2801.67	8.934	-2786.94	8.941
-2759.42	9.107	-2740.94	8.986	-2726.22	8.758	-2710.46	8.572	-2703.89	8.487
-2693.08	8.319	-2660.28	7.779	-2626.93	7.252	-2598.21	7.018	-2593.85	6.968

ExpandedLocal.rep

-2591.24	6.945-2580.86	6.916-2530.22	6.821-2527.98	6.816-2527.69	6.817
-2527.32	6.82-2494.62	7.01-2474.51	7.274-2440.03	7.665-2428.46	7.798
-2410.71	7.919-2375.55	8.091-2362.31	8.131-2337.61	8.119-2329.23	8.098
-2297.79	8.024-2293.44	8.023-2272.28	7.974-2263.08	7.95-2259.91	7.948
-2196.92	7.906-2185.84	8.051-2163.85	8.09-2138.75	7.872-2117.54	7.896
-2085.73	7.765-2064.62	7.794-2034.07	7.857-2031.54	7.865-2014.33	7.928
-1970.95	8.091-1965.39	8.12-1958.19	8.142-1932.31	8.231-1904.02	8.341
-1866.16	8.514-1853.68	8.537-1833.08	8.557-1806.42	8.523 -1800	8.522
-1774.86	8.473-1764.66	8.45-1733.06	8.393-1711.84	8.376-1699.34	8.422
-1690.57	8.39-1640.61	8.228-1631.91	8.202-1622.24	8.177-1600.74	8.126
-1590.74	8.106-1564.48	7.966-1546.57	8.035-1521.01	8.245-1497.05	8.368
-1445.75	8.551-1429.62	8.629-1414.05	8.646-1395.91	8.665-1384.71	8.628
-1337.39	8.524-1328.48	8.505-1325.71	8.509-1275.66	8.572-1250.79	8.603
-1227.33	8.637-1212.55	8.654-1193.61	8.665-1166.61	8.689 -1159.9	8.702
-1149.02	8.764-1112.09	8.95-1092.47	9.129-1060.68	9.27-1058.75	9.275
-1056.76	9.276-1012.88	9.222-991.329	9.195-975.786	9.225-957.614	9.22
-928.169	9.274-923.899	9.286 -910.13	9.32-856.469	9.452-845.883	9.461
-839.061	9.465-802.023	9.42 -790.02	9.404-780.984	9.383-756.887	9.288
-724.88	9.341-723.754	9.339-722.907	9.336-716.896	9.333-690.622	9.308
-686.309	9.288-657.489	9.135-634.157	8.904-591.223	8.485-570.595	8.436
-558.09	8.443-495.721	8.719-492.577	8.735-490.598	8.741-481.903	8.808
-458.692	8.96-449.576	9.096-403.463	9.671-374.444	10.135-359.293	10.639
-339.168	10.553 -326.16	10.589-300.597	10.188-264.994	9.828 -259.04	9.772
-246.91	9.697-226.762	9.554-200.213	9.448-172.703	9.086-146.312	8.904
-127.363	8.803-107.741	8.322 -94.23	7.93 -69.17	7.352 -57.859	7.013
-27.965	7.101 -25.982	7.092 -11.918	7.154 0	5.4 35	6.3
73	5.1 107	6 134	3.2 148	2.4 164	3.5
178	6.1 211	5.6 244	6.1 280	5.6 309.643	7.358
337.659	7.547 345.729	7.648 370.909	7.94 394.769	7.8 402.832	7.731
404.158	7.729 404.703	7.726 408.764	7.729 470.658	7.547 485.605	7.728
503.907	7.876 513.692	8.133 550.766	8.828 570.406	9.226 602.69	9.691
603.656	9.704 604.268	9.709 636.905	10.652 644.8	10.797 670.155	11.504
684.599	11.891 703.405	12.466 755.689	13.975 769.904	14.393 773.998	14.583
803.153	15.653 818.189	16.209 852.128	16.86 864.272	17.201 883.593	17.6
887.152	17.656 903.08	17.889 969.423	18.969 970.191	18.98 970.536	18.984
971.446	18.9991003.958	19.5331008.072	19.5961053.832	20.168 1071.21	20.196
1091.367	20.4931104.836	20.9591135.284	20.6171138.462	20.5781179.495	21.296
1205.714	21.6471230.218	21.816 1239.34	21.8851270.825	21.9431272.749	21.947
1272.966	21.947 1302.98	21.9251316.954	21.9221354.947	21.8361373.843	21.851
1403.69	21.9081409.862	21.9151411.513	21.9141420.515	21.9221472.986	21.955
1499.478	22.0041508.347	22.0231519.461	22.0411541.973	22.0811557.341	22.124
1594.347	22.1941601.481	22.2091609.908	22.223 1670.73	22.132 1676.1	22.122
1680.247	22.1131715.787	22.0741750.587	22.0451753.711	22.0291761.801	21.989
1785.757	21.8561800.828	21.7271820.927	21.5571852.873	21.238 1880.57	20.948
1891.266	20.8311915.421	20.6691931.313	20.5681943.944	20.4891982.057	20.31
1996.775	20.2252030.014	20.0592031.945	20.052035.015	20.042067.115	19.968
2126.086	19.9292134.287	19.9582137.454	19.8592172.187	19.974 2194.57	20.442
2207.794	20.5032224.048	20.6092251.561	20.7632278.134	20.92308.229	21.002

ExpandedLocal.rep

2313.303	21.0162314.518	21.0172330.522	21.0612379.896	21.1752383.643	21.174
2385.466	21.183 2414.59	21.3272450.339	21.5012457.852	21.5382501.793	21.658
2516.938	21.7042538.449	21.8062554.718	21.892564.697	21.9252606.325	22.064
2616.836	22.0982619.045	22.1092650.135	22.2632661.954	22.3282688.271	22.39
2716.734	22.5232775.496	22.0362783.333	21.977 2798.06	21.8752813.884	21.77
2816.633	21.7542861.274	21.5632883.232	21.5222901.133	21.5232916.531	21.541
2927.372	21.5592940.655	21.5962955.445	21.6992990.082	21.873 3018.97	22.025
3023.263	22.0633034.188	22.0913046.653	22.1073075.643	22.093116.463	21.859
3117.098	21.8663146.827	22.3023223.809	22.7463233.769	23.1843241.462	23.657
3277.482	25.7793282.916	25.6923286.335	25.6563324.371	25.113341.214	24.896
3361.07	24.4853386.073	25.4133406.901	25.483		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-4501	.07	107	.05	178	.07

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	107	178		127	127	.1	.3
Ineffective Flow			num=	2			
Sta L	Sta R	Elev	Permanent				
-4501	124.5	10.6	F				
164.53406.901		10.6	F				

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 10555

INPUT

Description: Data from Land Survey

Station Elevation Data num= 386

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4501	11.163-4494.05	11.156-4443.42	10.49-4424.88	10.385-4416.68	10.519				
-4390.3	10.101-4367.22	9.981-4355.72	9.885-4332.72	9.877-4312.93	10.052				
-4286.55	10.048-4280.84	10.01-4263.72	9.942-4254.91	9.924-4251.97	9.916				
-4249.62	9.906-4217.38	9.837-4194.22	9.802 -4182.8	9.801-4159.97	9.792				
-4149.9	9.786-4148.22	9.78-4142.34	9.783-4124.68	9.788-4093.22	9.813				
-4081.38	9.801-4061.09	9.778-4048.57	9.751-4035.49	9.754-4015.75	9.725				
-4001.96	9.713-3982.94	9.678-3973.73	9.64-3947.24	9.529 -3917.3	9.413				
-3884.31	9.453-3851.67	9.498-3821.38	9.526-3786.04	9.569-3767.21	9.65				
-3739.83	9.796-3720.41	9.873-3707.71	9.933-3687.59	9.994-3644.66	10.209				
-3621.96	10.291-3611.33	10.321-3589.15	10.399-3565.56	10.334-3532.21	10.239				
-3524.74	10.212-3520.28	10.18-3502.57	10.082-3489.82	10.009-3462.79	9.669				
-3456.62	9.614-3416.81	9.006 -3398.3	8.724-3390.22	8.648-3369.61	8.58				
-3347.81	8.476-3323.82	8.304-3319.07	8.266-3290.62	7.904 -3290.1	7.9				

ExpandedLocal.rep

-3288.41	7.885-3232.84	7.375-3224.22	7.287-3212.44	7.196-3175.35	6.923
-3157.82	6.868 -3146.6	6.852-3124.62	6.846-3117.86	6.862-3091.42	6.892
-3089.11	6.899-3074.26	6.916-3028.56	6.97-3025.02	6.956-2974.14	6.977
-2937.4	7.127-2925.42	7.18-2916.65	7.253-2892.22	7.613-2884.62	7.79
-2860.1	8.202-2830.42	8.765-2825.82	8.796-2801.67	8.934-2786.94	8.941
-2759.42	9.107-2740.94	8.986-2726.22	8.758-2710.46	8.572-2703.89	8.487
-2693.08	8.319-2660.28	7.779-2626.93	7.252-2598.21	7.018-2593.85	6.968
-2591.24	6.945-2580.86	6.916-2530.22	6.821-2527.98	6.816-2527.69	6.817
-2527.32	6.82-2494.62	7.01-2474.51	7.274-2440.03	7.665-2428.46	7.798
-2410.71	7.919-2375.55	8.091-2362.31	8.131-2337.61	8.119-2329.23	8.098
-2297.79	8.024-2293.44	8.023-2272.28	7.974-2263.08	7.95-2259.91	7.948
-2196.92	7.906-2185.84	8.051-2163.85	8.09-2138.75	7.872-2117.54	7.896
-2085.73	7.765-2064.62	7.794-2034.07	7.857-2031.54	7.865-2014.33	7.928
-1970.95	8.091-1965.39	8.12-1958.19	8.142-1932.31	8.231-1904.02	8.341
-1866.16	8.514-1853.68	8.537-1833.08	8.557-1806.42	8.523 -1800	8.522
-1774.86	8.473-1764.66	8.45-1733.06	8.393-1711.84	8.376-1699.34	8.422
-1690.57	8.39-1640.61	8.228-1631.91	8.202-1622.24	8.177-1600.74	8.126
-1590.74	8.106-1564.48	7.966-1546.57	8.035-1521.01	8.245-1497.05	8.368
-1445.75	8.551-1429.62	8.629-1414.05	8.646-1395.91	8.665-1384.71	8.628
-1337.39	8.524-1328.48	8.505-1325.71	8.509-1275.66	8.572-1250.79	8.603
-1227.33	8.637-1212.55	8.654-1193.61	8.665-1166.61	8.689 -1159.9	8.702
-1149.02	8.764-1112.09	8.95-1092.47	9.129-1060.68	9.27-1058.75	9.275
-1056.76	9.276-1012.88	9.222-991.329	9.195-975.786	9.225-957.614	9.22
-928.169	9.274-923.899	9.286 -910.13	9.32-856.469	9.452-845.883	9.461
-839.061	9.465-802.023	9.42 -790.02	9.404-780.984	9.383-756.887	9.288
-724.88	9.341-723.754	9.339-722.907	9.336-716.896	9.333-690.622	9.308
-686.309	9.288-657.489	9.135-634.157	8.904-591.223	8.485-570.595	8.436
-558.09	8.443-495.721	8.719-492.577	8.735-490.598	8.741-481.903	8.808
-458.692	8.96-449.576	9.096-403.463	9.671-374.444	10.135-359.293	10.639
-339.168	10.553 -326.16	10.589-300.597	10.188-264.994	9.828 -259.04	9.772
-246.91	9.697-226.762	9.554-200.213	9.448-172.703	9.086-146.312	8.904
-127.363	8.803-107.741	8.322 -94.23	7.93 -69.17	7.352 -57.859	7.013
-27.965	7.101 -25.982	7.092 -11.918	7.154 0	4.2 38	4.2
79	4.9 115	5.5 141	4.8 181	4.4 204	4.1
239	5.4 267	5.5 307	5.6 342	5 384	5.1
420	4.7 470.658	7.547 485.605	7.728 503.907	7.876 513.692	8.133
550.766	8.828 570.406	9.226 602.69	9.691 603.656	9.704 604.268	9.709
636.905	10.652 644.8	10.797 670.155	11.504 684.599	11.891 703.405	12.466
755.689	13.975 769.904	14.393 773.998	14.583 803.153	15.653 818.189	16.209
852.128	16.86 864.272	17.201 883.593	17.6 887.152	17.656 903.08	17.889
969.423	18.969 970.191	18.98 970.536	18.984 971.446	18.9991003.958	19.533
1008.072	19.5961053.832	20.168 1071.21	20.1961091.367	20.4931104.836	20.959
1135.284	20.6171138.462	20.5781179.495	21.2961205.714	21.6471230.218	21.816
1239.34	21.8851270.825	21.9431272.749	21.9471272.966	21.947 1302.98	21.925
1316.954	21.9221354.947	21.8361373.843	21.851 1403.69	21.9081409.862	21.915
1411.513	21.9141420.515	21.9221472.986	21.9551499.478	22.0041508.347	22.023
1519.461	22.0411541.973	22.0811557.341	22.1241594.347	22.1941601.481	22.209
1609.908	22.223 1670.73	22.132 1676.1	22.1221680.247	22.1131715.787	22.074



ExpandedLocal.rep

1750.587	22.0451753.711	22.0291761.801	21.9891785.757	21.8561800.828	21.727
1820.927	21.5571852.873	21.238 1880.57	20.9481891.266	20.8311915.421	20.669
1931.313	20.5681943.944	20.4891982.057	20.311996.775	20.2252030.014	20.059
2031.945	20.052035.015	20.042067.115	19.9682126.086	19.9292134.287	19.958
2137.454	19.8592172.187	19.974 2194.57	20.4422207.794	20.5032224.048	20.609
2251.561	20.7632278.134	20.92308.229	21.0022313.303	21.0162314.518	21.017
2330.522	21.0612379.896	21.1752383.643	21.1742385.466	21.183 2414.59	21.327
2450.339	21.5012457.852	21.5382501.793	21.6582516.938	21.7042538.449	21.806
2554.718	21.892564.697	21.9252606.325	22.0642616.836	22.0982619.045	22.109
2650.135	22.2632661.954	22.3282688.271	22.392716.734	22.5232775.496	22.036
2783.333	21.977 2798.06	21.8752813.884	21.772816.633	21.7542861.274	21.563
2883.232	21.5222901.133	21.5232916.531	21.5412927.372	21.5592940.655	21.596
2955.445	21.6992990.082	21.873 3018.97	22.0253023.263	22.0633034.188	22.091
3046.653	22.1073075.643	22.093116.463	21.8593117.098	21.8663146.827	22.302
3223.809	22.7463233.769	23.1843241.462	23.6573277.482	25.7793282.916	25.692
3286.335	25.6563324.371	25.113341.214	24.896 3361.07	24.4853386.073	25.413
3406.901	25.483				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-4501	.07	115	.05	239	.07

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	115	239		509	509	.1	.3
Ineffective Flow			num=	2			
Sta L	Sta R	Elev	Permanent				
-4501	92.59	10.6	F				
259.593406.901		10.6	F				

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 10046

INPUT

Description: Data from Land Survey

Station Elevation Data num= 274

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4618	11.163	-4611.05	11.156	-4560.42	10.49	-4541.88	10.385	-4533.68	10.519
-4507.3	10.101	-4484.22	9.981	-4472.72	9.885	-4449.72	9.877	-4429.93	10.052
-4403.55	10.048	-4397.84	10.01	-4380.72	9.942	-4371.91	9.924	-4368.97	9.916
-4366.62	9.906	-4334.38	9.837	-4311.22	9.802	-4299.8	9.801	-4276.97	9.792
-4266.9	9.786	-4265.22	9.78	-4259.34	9.783	-4241.68	9.788	-4210.22	9.813
-4198.38	9.801	-4178.09	9.778	-4165.57	9.751	-4152.49	9.754	-4132.75	9.725
-4118.96	9.713	-4099.94	9.678	-4090.73	9.64	-4064.24	9.529	-4034.3	9.413

ExpandedLocal.rep

-4001.31	9.453-3968.67	9.498-3938.38	9.526-3903.04	9.569-3884.21	9.65
-3856.83	9.796-3837.41	9.873-3824.71	9.933-3804.59	9.994-3761.66	10.209
-3738.96	10.291-3728.33	10.321-3706.15	10.399-3682.56	10.334-3649.21	10.239
-3641.74	10.212-3637.28	10.18-3619.57	10.082-3606.82	10.009-3579.79	9.669
-3573.62	9.614-3533.81	9.006 -3515.3	8.724-3507.22	8.648-3486.61	8.58
-3464.81	8.476-3440.82	8.304-3436.07	8.266-3407.62	7.904 -3407.1	7.9
-3405.41	7.885-3349.84	7.375-3341.22	7.287-3329.44	7.196-3292.35	6.923
-3274.82	6.868 -3263.6	6.852-3241.62	6.846-3234.86	6.862-3208.42	6.892
-3206.11	6.899-3191.26	6.916-3145.56	6.97-3142.02	6.956-3091.14	6.977
-3054.4	7.127-3042.42	7.18-3033.65	7.253-3009.22	7.613-3001.62	7.79
-2977.1	8.202-2947.42	8.765-2942.82	8.796-2918.67	8.934-2903.94	8.941
-2876.42	9.107-2857.94	8.986-2843.22	8.758-2827.46	8.572-2820.89	8.487
-2810.08	8.319-2777.28	7.779-2743.93	7.252-2715.21	7.018-2710.85	6.968
-2708.24	6.945-2697.86	6.916-2647.22	6.821-2644.98	6.816-2644.69	6.817
-2644.32	6.82-2611.62	7.01-2591.51	7.274-2557.03	7.665-2545.46	7.798
-2527.71	7.919-2492.55	8.091-2479.31	8.131-2454.61	8.119-2446.23	8.098
-2414.79	8.024-2410.44	8.023-2389.28	7.974-2380.08	7.95-2376.91	7.948
-2313.92	7.906-2302.84	8.051-2280.85	8.09-2255.75	7.872-2234.54	7.896
-2202.73	7.765-2181.62	7.794-2151.07	7.857-2148.54	7.865-2131.33	7.928
-2087.95	8.091-2082.39	8.12-2075.19	8.142-2049.31	8.231-2021.02	8.341
-1983.16	8.514-1970.68	8.537-1950.08	8.557-1923.42	8.523 -1917	8.522
-1891.86	8.473-1881.66	8.45-1850.06	8.393-1828.84	8.376-1816.34	8.422
-1807.57	8.39-1757.61	8.228-1748.91	8.202-1739.24	8.177-1717.74	8.126
-1707.74	8.106-1681.48	7.966-1663.57	8.035-1638.01	8.245-1614.05	8.368
-1562.75	8.551-1546.62	8.629-1531.05	8.646-1512.91	8.665-1501.71	8.628
-1454.39	8.524-1445.48	8.505-1442.71	8.509-1392.66	8.572-1367.79	8.603
-1344.33	8.637-1329.55	8.654-1310.61	8.665-1283.61	8.689 -1276.9	8.702
-1266.02	8.764-1229.09	8.95-1209.47	9.129-1177.68	9.27-1175.75	9.275
-1173.76	9.276-1129.88	9.222-1108.32	9.195-1092.78	9.225-1074.61	9.22
-1045.16	9.274-1040.89	9.286-1027.13	9.32-973.469	9.452-962.883	9.461
-956.061	9.465-919.023	9.42 -907.02	9.404-897.984	9.383-873.887	9.288
-841.88	9.341-840.754	9.339-839.907	9.336-833.896	9.333-807.622	9.308
-803.309	9.288-774.489	9.135-751.157	8.904-708.223	8.485-687.595	8.436
-675.09	8.443-612.721	8.719-609.577	8.735-607.598	8.741-598.903	8.808
-575.692	8.96-566.576	9.096-520.463	9.671-491.444	10.135-476.293	10.639
-456.168	10.553 -443.16	10.589-417.597	10.188-381.994	9.828 -376.04	9.772
-363.91	9.697-343.762	9.554-317.213	9.448-289.703	9.086-263.312	8.904
-244.363	8.803-224.741	8.322 -211.23	7.93 -186.17	7.352-174.859	7.013
-144.965	7.101-142.982	7.092-128.918	7.154-110.535	7.227 -85.335	7.328
-78.587	7.361 -74.306	7.344 -20.774	7.485 -12.088	7.471 0	6
11	5.8 30	5.6 40	5.1 50	5.5 52	4.7
60	3.8 68	4.4 81	4.3 87	3.7 96	3.7
106	4 123	3.9 127	5.3 146	5.3 162	5.7
192.643	7.358 220.659	7.547 228.729	7.648 253.909	7.94 277.769	7.8
285.832	7.731 287.158	7.729 287.703	7.726 291.764	7.729 353.658	7.547
368.605	7.728 386.907	7.876 396.692	8.133 433.766	8.828 453.406	9.226
485.69	9.691 486.656	9.704 487.268	9.709 519.905	10.652 527.8	10.797
553.155	11.504 567.599	11.891 586.405	12.466 638.689	13.975	

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -4618 .07 50 .05 127 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 50 127 0 0 0 .1 .3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Lower RS: 9910

INPUT

Description: Data from Land Survey

Station Elevation Data num= 277  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -4668 11.163-4661.05 11.156-4610.42 10.49-4591.88 10.385-4583.68 10.519  
 -4557.3 10.101-4534.22 9.981-4522.72 9.885-4499.72 9.877-4479.93 10.052  
 -4453.55 10.048-4447.84 10.01-4430.72 9.942-4421.91 9.924-4418.97 9.916  
 -4416.62 9.906-4384.38 9.837-4361.22 9.802 -4349.8 9.801-4326.97 9.792  
 -4316.9 9.786-4315.22 9.78-4309.34 9.783-4291.68 9.788-4260.22 9.813  
 -4248.38 9.801-4228.09 9.778-4215.57 9.751-4202.49 9.754-4182.75 9.725  
 -4168.96 9.713-4149.94 9.678-4140.73 9.64-4114.24 9.529 -4084.3 9.413  
 -4051.31 9.453-4018.67 9.498-3988.38 9.526-3953.04 9.569-3934.21 9.65  
 -3906.83 9.796-3887.41 9.873-3874.71 9.933-3854.59 9.994-3811.66 10.209  
 -3788.96 10.291-3778.33 10.321-3756.15 10.399-3732.56 10.334-3699.21 10.239  
 -3691.74 10.212-3687.28 10.18-3669.57 10.082-3656.82 10.009-3629.79 9.669  
 -3623.62 9.614-3583.81 9.006 -3565.3 8.724-3557.22 8.648-3536.61 8.58  
 -3514.81 8.476-3490.82 8.304-3486.07 8.266-3457.62 7.904 -3457.1 7.9  
 -3455.41 7.885-3399.84 7.375-3391.22 7.287-3379.44 7.196-3342.35 6.923  
 -3324.82 6.868 -3313.6 6.852-3291.62 6.846-3284.86 6.862-3258.42 6.892  
 -3256.11 6.899-3241.26 6.916-3195.56 6.97-3192.02 6.956-3141.14 6.977  
 -3104.4 7.127-3092.42 7.18-3083.65 7.253-3059.22 7.613-3051.62 7.79  
 -3027.1 8.202-2997.42 8.765-2992.82 8.796-2968.67 8.934-2953.94 8.941  
 -2926.42 9.107-2907.94 8.986-2893.22 8.758-2877.46 8.572-2870.89 8.487  
 -2860.08 8.319-2827.28 7.779-2793.93 7.252-2765.21 7.018-2760.85 6.968  
 -2758.24 6.945-2747.86 6.916-2697.22 6.821-2694.98 6.816-2694.69 6.817  
 -2694.32 6.82-2661.62 7.01-2641.51 7.274-2607.03 7.665-2595.46 7.798  
 -2577.71 7.919-2542.55 8.091-2529.31 8.131-2504.61 8.119-2496.23 8.098  
 -2464.79 8.024-2460.44 8.023-2439.28 7.974-2430.08 7.95-2426.91 7.948  
 -2363.92 7.906-2352.84 8.051-2330.85 8.09-2305.75 7.872-2284.54 7.896  
 -2252.73 7.765-2231.62 7.794-2201.07 7.857-2198.54 7.865-2181.33 7.928  
 -2137.95 8.091-2132.39 8.12-2125.19 8.142-2099.31 8.231-2071.02 8.341  
 -2033.16 8.514-2020.68 8.537-2000.08 8.557-1973.42 8.523 -1967 8.522

ExpandedLocal.rep

-1941.86	8.473-1931.66	8.45-1900.06	8.393-1878.84	8.376-1866.34	8.422
-1857.57	8.39-1807.61	8.228-1798.91	8.202-1789.24	8.177-1767.74	8.126
-1757.74	8.106-1731.48	7.966-1713.57	8.035-1688.01	8.245-1664.05	8.368
-1612.75	8.551-1596.62	8.629-1581.05	8.646-1562.91	8.665-1551.71	8.628
-1504.39	8.524-1495.48	8.505-1492.71	8.509-1442.66	8.572-1417.79	8.603
-1394.33	8.637-1379.55	8.654-1360.61	8.665-1333.61	8.689 -1326.9	8.702
-1316.02	8.764-1279.09	8.95-1259.47	9.129-1227.68	9.27-1225.75	9.275
-1223.76	9.276-1179.88	9.222-1158.32	9.195-1142.78	9.225-1124.61	9.22
-1095.16	9.274-1090.89	9.286-1077.13	9.32-1023.46	9.452-1012.88	9.461
-1006.06	9.465-969.023	9.42 -957.02	9.404-947.984	9.383-923.887	9.288
-891.88	9.341-890.754	9.339-889.907	9.336-883.896	9.333-857.622	9.308
-853.309	9.288-824.489	9.135-801.157	8.904-758.223	8.485-737.595	8.436
-725.09	8.443-662.721	8.719-659.577	8.735-657.598	8.741-648.903	8.808
-625.692	8.96-616.576	9.096-570.463	9.671-541.444	10.135-526.293	10.639
-506.168	10.553 -493.16	10.589-467.597	10.188-431.994	9.828 -426.04	9.772
-413.91	9.697-393.762	9.554-367.213	9.448-339.703	9.086-313.312	8.904
-294.363	8.803-274.741	8.322 -261.23	7.93 -236.17	7.352-224.859	7.013
-194.965	7.101-192.982	7.092-178.918	7.154-160.535	7.227-135.335	7.328
-128.587	7.361-124.306	7.344 -70.774	7.485 -62.088	7.471 -40.052	7.385
0	5.8 15	5.7 26	5.3 27	4.7 37	3.9
37	4 43	4.9 51	5.8 56	4.7 64	5.5
79	5.9 86	5.5 94	5.5 98	5.7 109	5.7
117	6.1 144	6 168	6.3 170.659	7.547 178.729	7.648
203.909	7.94 227.769	7.8 235.832	7.731 237.158	7.729 237.703	7.726
241.764	7.729 303.658	7.547 318.605	7.728 336.907	7.876 346.692	8.133
383.766	8.828 403.406	9.226 435.69	9.691 436.656	9.704 437.268	9.709
469.905	10.652 477.8	10.797 503.155	11.504 517.599	11.891 536.405	12.466
588.689	13.975 602.904	14.393			

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-4668	.06	15	.05	51	.07

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	15	51		761	761	.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Lower RS: 9149

INPUT

Description: Copy of COE 1.73275\*

Station Elevation Data num= 311

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									

ExpandedLocal.rep

-721	8.27-705.919	8.239-680.186	8.23-662.159	8.094-647.345	7.969
-613.375	7.658-581.663	7.325-567.834	7.264-548.822	7.157-505.228	7.075
-483.141	7.08 -459.3	7.032-442.067	6.958-417.459	6.948-410.625	6.939
-356.189	7.144-351.778	7.161-344.036	7.211-286.096	7.457-283.723	7.457
-220.414	7.549-205.149	7.512-187.574	7.567-173.023	7.544-154.733	7.598
-140.897	7.599-121.892	7.656-108.771	7.7 -89.051	7.76 -64.767	7.866
-56.21	7.881 -33.325	7.903 -18.052	7.89 -.54	7.937 42.312	8.031
61	8.024 75.153	7.986 82.713	7.994 88.801	8.003 90.849	8.006
161.519	8.199 174.44	8.193 206.689	8.1 207.576	8.097 208.764	8.089
212.949	8.067 260.392	7.796 273.85	7.745 300.76	7.637 306.986	7.66
331.702	7.634 340.123	7.671 362.644	7.758 373.26	7.818 385.496	7.912
407.81	9.52 565.62	9.18 723.44	8.63 820.16	8.5 821.28	8.5
881.25	8.43 944.38	8.38 983.06	8.31 1007.5	8.16 1064.52	7.88
1070.62	7.88 1133.75	7.88 1196.88	7.93 1260	7.88 1323.12	7.95
1386.25	7.9 1424.12	7.88 1436.75	7.62 1455.69	7.93 1512.5	7.95
1575.62	7.93 1638.75	7.9 1701.88	7.9 1716.13	7.89 1765	7.66
1828.12	7.37 1891.25	7.12 1954.38	6.8 2017.5	6.51 2080.62	6.13
2143.75	5.99 2206.88	5.72 2270	5.42 2327.02	5.11 2333.12	5.12
2396.25	5.28 2459.38	5.45 2502.14	5.56 2522.5	6.12 2527	3.47
2530	3.17 2533.75	2.85 2537.5	2.44 2545	1.64 2552.81	2.06
2555.42	2.2 2560.62	2.78 2565.83	3.45 2568.44	4.07 2576.25	5.85
2599.45	5.57 2602.3	5.6 2628.35	5.9 2654.4	6.32 2680.44	6.57
2706.49	6.77 2732.54	6.99 2758.59	7.22 2784.64	7.57 2849.76	8.28
2914.88	8.86 2980	9.433008.445	19.1963024.585	19.241 3042.8	19.294
3062.32	19.3323066.862	19.3423074.857	19.3383090.925	19.3323100.054	19.298
3114.987	19.1653141.269	18.7123163.112	18.3353207.682	20.5483211.237	20.57
3213.257	20.6993261.257	20.1953277.356	20.0283282.678	19.9653287.241	19.924
3294.654	19.8793322.935	19.6323329.589	19.6183340.339	19.6253360.643	19.651
3378.779	19.643394.324	19.6623409.206	19.6443430.018	19.6383436.439	19.634
3443.93	19.6373501.407	19.607 3509.15	19.6023527.217	19.6013537.101	19.596
3559.122	19.568 3606.98	19.4763609.094	19.4713610.504	19.4693679.879	19.261
3684.052	19.2533715.573	19.173726.427	19.1393751.268	19.2013759.011	19.197
3777.077	19.2663786.962	19.2923794.376	19.3443822.657	19.4623857.802	19.852
3858.706	19.8553860.364	19.893883.941	20.283894.045	20.4543908.927	20.462
3929.74	203933.913	19.9123943.651	19.8193983.885	19.1424026.938	19.039
4033.858	19.0454036.823	19.0374044.237	19.0124072.517	18.8834076.145	18.88
4106.523	18.8574108.709	18.8554110.697	18.8514114.952	18.844160.646	18.784
4177.493	18.7624186.194	18.764209.792	18.736 4212.46	18.7364213.064	18.735
4271.094	18.6644311.959	18.4724317.362	18.4484352.211	18.3374387.297	18.204
4390.576	18.216 4399.47	18.2284416.124	18.2594435.576	18.324467.219	18.415
4492.199	18.4334492.767	18.432 4494.31	18.434518.315	18.3914546.355	18.304
4569.411	18.2354620.333	18.1724632.068	18.1584663.203	18.1334669.674	18.136
4683.988	18.086 4697.15	18.044702.002	18.0234734.609	17.994771.937	17.929
4773.793	17.9234834.685	17.6124850.436	17.5494873.667	17.3894875.984	17.375
4876.839	17.3564901.532	16.7234911.806	16.5834935.871	16.3014968.506	15.957
4981.741	15.8175003.723	15.685016.708	15.8385029.271	16.0795051.675	16.617
5054.819	16.6595086.642	17.0115097.778	17.093 5121.61	17.2345127.303	17.26
5158.185	17.4175191.544	17.5575211.027	17.6225226.512	17.6735253.024	17.707

ExpandedLocal.rep

5261.479	17.7115266.417	17.708	5281.57	17.653	5310.17	17.5525346.166	17.727
5357.83	17.7365366.689	17.7535397.721	17.8625436.878	17.939	5458.14	17.93	
5488.216	17.8465507.067	17.7865539.086	17.735549.004	17.7055577.457	17.72		
5605.587	17.7195614.114	17.735615.392	17.7335623.398	17.7345637.065	17.733		
5653.082	17.7265717.132	17.6225717.635	17.6215742.567	17.4875752.729	17.423		
5775.335	17.0045791.078	16.769	5808.22	16.7065820.573	16.7355831.918	16.624	
5858.013	16.4785888.501	16.4125895.178	16.4025928.202	16.45956.191	16.4		
5993.041	16.4015996.082	16.4015998.391	16.4016022.354	16.4026033.485	16.403		
6047.789	16.404	6068.58	16.4086073.224	16.4086085.452	16.4126098.659	16.416	
6103.674	16.4196124.094	16.4326138.769	16.4466155.645	16.4756189.249	16.572		
6215.481	16.766244.053	16.899	6251.27	17.0016270.274	17.9786279.147	18.368	
6302.14	18.556341.163	20.446351.466	20.896355.098	21.0446362.685	20.661		
6403.88	19.2496419.525	19.5126429.316	19.56	6454.62	22.2516454.751	22.256	
6454.825	22.266455.095	22.276458.511	22.5996554.552	31.7716556.491	32.103		
6559.903	32.189						

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
-721	.06	2522.5	.05	2576.25	.07			

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	2522.5	2576.25		500	500	500		.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Lower RS: 8649

INPUT

Description: Data from COEtoSTP River Sta 1.638

Station Elevation Data num= 401

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-466	8.27	-450.919	8.239	-425.186	8.23	-407.159	8.094	-392.345	7.969
-358.375	7.658	-326.663	7.325	-312.834	7.264	-293.822	7.157	-250.228	7.075
-228.141	7.08	-204.3	7.032	-187.067	6.958	-162.459	6.948	-155.625	6.939
-101.189	7.144	-96.778	7.161	-89.036	7.211	-31.096	7.457	-28.723	7.457
34.586	7.549	49.851	7.512	67.426	7.567	81.977	7.544	100.267	7.598
114.103	7.599	133.108	7.656	146.229	7.7	165.949	7.76	190.233	7.866
198.79	7.881	221.675	7.903	236.948	7.89	254.46	7.937	297.312	8.031
316	8.024	330.153	7.986	337.713	7.994	343.801	8.003	345.849	8.006
416.519	8.199	429.44	8.193	461.689	8.1	462.576	8.097	463.764	8.089
467.949	8.067	515.392	7.796	528.85	7.745	555.76	7.637	561.986	7.66
586.702	7.634	595.123	7.671	617.644	7.758	628.26	7.818	640.496	7.912
691.738	8.853	693.994	8.886	695.41	8.902	701.591	9.024	727.67	9.409
731.98	9.419	760.806	9.582	763.964	9.498	784.259	8.991	793.661	8.888

ExpandedLocal.rep

803.674	8.805	826.485	8.686	849.392	8.151	881.962	7.093	892.135	7.025
911.548	6.92	924.959	6.811	943.37	6.801	957.784	6.773	973.135	6.826
990.608	6.911	998.939	6.934	1074.811	7.296	1089.082	7.316	1102.482	7.404
1121.907	7.531	1134.304	7.599	1154.731	7.726	1176.487	7.862	1192.833	7.938
1220.381	8.094	1225.149	8.106	1253.205	8.184	1261.594	8.145	1286.03	8.148
1339.831	7.897	1348.859	7.894	1351.679	7.883	1382.209	7.578	1388.883	7.463
1447.624	6.731	1450.153	6.704	1452.528	6.697	1482.977	6.503	1484.35	6.497
1515.802	6.481	1516.172	6.481	1526.342	6.509	1526.467	6.509	1546.315	6.664
1550.624	6.691	1569.161	6.963	1593.189	7.177	1608.847	7.182	1618.129	7.124
1622.159	7.118	1691.227	7.152	1692.946	7.147	1693.693	7.146	1709.962	7.368
1765.228	8.136	1767.764	8.149	1773.607	8.201	1800.995	8.437	1822.011	8.491
1836.762	8.519	1840.191	8.511	1855.986	8.463	1892.46	8.334	1908.296	8.249
1915.538	8.202	1917.27	8.191	1928.647	8.077	1944.316	7.919	1951.857	7.815
1986.88	7.238	1997.396	7.166	2010.083	7.112	2023.263	7.074	2042.935	7.046
2056.489	7.116	2070.57	7.126	2079.692	7.163	2088.474	7.163	2117.878	7.258
2134.013	7.306	2149.302	7.373	2165.185	7.418	2198.876	7.484	2218.912	7.533
2225.091	7.531	2247.935	7.483	2259.8	7.478	2297.853	7.458	2316.169	7.518
2328.596	7.541	2354.415	7.652	2361.096	7.693	2361.682	7.697	2403.826	7.881
2405.321	7.893	2427.871	8.051	2448.96	8.184	2451.12	8.195	2492.599	8.635
2499.439	8.619	2503.339	8.56	2531.13	8.574	2556.545	7.459	2579.877	7.207
2590.612	7.105	2602.852	7.041	2613.861	6.972	2623.516	7.106	2652.609	7.296
2667.155	7.136	2693.057	7.211	2710.794	7.028	2723.393	6.968	2737.116	6.992
2752.122	7.026	2765	5.61	2790	6.36	2792	2.97	2795	2.26
2800	.76	2805	1.46	2810	2.96	2815	6	2840	5.63
2846.348	9.293	2851.635	9.621	2869.597	10.782	2911.682	12.659	2939.343	13.212
2951.148	14.068	2972.628	14.974	2985.84	15.427	3000.905	15.983	3010.194	16.274
3033.113	16.879	3053.18	17.343	3064.208	17.591	3081.238	17.878	3090.914	17.996
3105.3	18.236	3128.648	18.394	3143.777	18.613	3165.023	18.804	3197.032	18.943
3200.348	18.963	3204.117	18.972	32263.445	19.196	3279.585	19.241	3297.8	19.294
3317.32	19.332	3321.862	19.342	3329.857	19.338	3345.925	19.332	3355.054	19.298
3369.987	19.165	3396.269	18.712	3418.112	18.335	3462.682	20.548	3466.237	20.57
3468.257	20.699	3516.257	20.195	3532.356	20.028	3537.678	19.965	3542.241	19.924
3549.654	19.879	3577.935	19.632	3584.589	19.618	3595.339	19.625	3615.643	19.651
3633.779	19.643	3649.324	19.662	3664.206	19.644	3685.018	19.638	3691.439	19.634
3698.93	19.637	3756.407	19.607	3764.15	19.602	3782.217	19.601	3792.101	19.596
3814.122	19.568	3861.98	19.476	3864.094	19.471	3865.504	19.469	3934.879	19.261
3939.052	19.253	3970.573	19.173	3981.427	19.139	4006.268	19.201	4014.011	19.197
4032.077	19.266	4041.962	19.292	4049.376	19.344	4077.657	19.462	4112.802	19.852
4113.706	19.855	4115.364	19.894	4138.941	20.284	4149.045	20.454	4163.927	20.462
4184.74	204188.	913	19.912	4198.651	19.819	4238.885	19.142	4281.938	19.039
4288.858	19.045	4291.823	19.037	4299.237	19.012	4327.517	18.883	4331.145	18.88
4361.523	18.857	4363.709	18.855	4365.697	18.851	4369.952	18.844	4415.646	18.784
4432.493	18.762	4441.194	18.764	4464.792	18.736	4467.46	18.736	4468.064	18.735
4526.094	18.664	4566.959	18.472	4572.362	18.448	4607.211	18.337	4642.297	18.204
4645.576	18.216	4654.47	18.228	4671.124	18.259	4690.576	18.324	4722.219	18.415
4747.199	18.433	4747.767	18.432	4749.31	18.434	4773.315	18.391	4801.355	18.304
4824.411	18.235	4875.333	18.172	4887.068	18.158	4918.203	18.133	4924.674	18.136
4938.988	18.086	4952.15	18.044	4957.002	18.023	4989.609	17.995	5026.937	17.929

ExpandedLocal.rep

5028.793	17.9235089.685	17.6125105.436	17.5495128.667	17.3895130.984	17.375
5131.839	17.3565156.532	16.7235166.806	16.5835190.871	16.3015223.506	15.957
5236.741	15.8175258.723	15.685271.708	15.8385284.271	16.0795306.675	16.617
5309.819	16.6595341.642	17.0115352.778	17.093 5376.61	17.2345382.303	17.26
5413.185	17.4175446.544	17.5575466.027	17.6225481.512	17.6735508.024	17.707
5516.479	17.7115521.417	17.708 5536.57	17.653 5565.17	17.5525601.166	17.727
5612.83	17.7365621.689	17.7535652.721	17.8625691.878	17.939 5713.14	17.93
5743.216	17.8465762.067	17.7865794.086	17.735804.004	17.7055832.457	17.72
5860.587	17.7195869.114	17.735870.392	17.7335878.398	17.7345892.065	17.733
5908.082	17.7265972.132	17.6225972.635	17.6215997.567	17.4876007.729	17.423
6030.335	17.0046046.078	16.769 6063.22	16.7066075.573	16.7356086.918	16.624
6113.013	16.4786143.501	16.4126150.178	16.4026183.202	16.46211.191	16.4
6248.041	16.4016251.082	16.4016253.391	16.4016277.354	16.4026288.485	16.403
6302.789	16.404 6323.58	16.4086328.224	16.4086340.452	16.4126353.659	16.416
6358.674	16.4196379.094	16.4326393.769	16.4466410.645	16.4756444.249	16.572
6470.481	16.766499.053	16.899 6506.27	17.0016525.274	17.9786534.147	18.368
6557.14	18.556596.163	20.446606.466	20.896610.098	21.0446617.685	20.661
6658.88	19.2496674.525	19.5126684.316	19.56 6709.62	22.2516709.751	22.256
6709.825	22.266710.095	22.276713.511	22.5996809.552	31.7716811.491	32.103
6814.903	32.189				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-466	.06	2790	.05	2815	.06

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	2790	2815		117	117	.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Lower RS: 8532

INPUT

Description: Data from COEtoSTP River Sta 1.616

Station Elevation Data num= 401

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-466	8.27	-450.919	8.239	-425.186	8.23	-407.159	8.094	-392.345	7.969
-358.375	7.658	-326.663	7.325	-312.834	7.264	-293.822	7.157	-250.228	7.075
-228.141	7.08	-204.3	7.032	-187.067	6.958	-162.459	6.948	-155.625	6.939
-101.189	7.144	-96.778	7.161	-89.036	7.211	-31.096	7.457	-28.723	7.457
34.586	7.549	49.851	7.512	67.426	7.567	81.977	7.544	100.267	7.598
114.103	7.599	133.108	7.656	146.229	7.7	165.949	7.76	190.233	7.866
198.79	7.881	221.675	7.903	236.948	7.89	254.46	7.937	297.312	8.031
316	8.024	330.153	7.986	337.713	7.994	343.801	8.003	345.849	8.006



ExpandedLocal.rep

416.519	8.199	429.44	8.193	461.689	8.1	462.576	8.097	463.764	8.089
467.949	8.067	515.392	7.796	528.85	7.745	555.76	7.637	561.986	7.66
586.702	7.634	595.123	7.671	617.644	7.758	628.26	7.818	640.496	7.912
691.738	8.853	693.994	8.886	695.41	8.902	701.591	9.024	727.67	9.409
731.98	9.419	760.806	9.582	763.964	9.498	784.259	8.991	793.661	8.888
803.674	8.805	826.485	8.686	849.392	8.151	881.962	7.093	892.135	7.025
911.548	6.92	924.959	6.811	943.37	6.801	957.784	6.773	973.135	6.826
990.608	6.911	998.939	6.934	1074.811	7.296	1089.082	7.316	1102.482	7.404
1121.907	7.531	1134.304	7.599	1154.731	7.726	1176.487	7.862	1192.833	7.938
1220.381	8.094	1225.149	8.106	1253.205	8.184	1261.594	8.145	1286.03	8.148
1339.831	7.897	1348.859	7.894	1351.679	7.883	1382.209	7.578	1388.883	7.463
1447.624	6.731	1450.153	6.704	1452.528	6.697	1482.977	6.503	1484.35	6.497
1515.802	6.481	1516.172	6.481	1526.342	6.509	1526.467	6.509	1546.315	6.664
1550.624	6.691	1569.161	6.963	1593.189	7.177	1608.847	7.182	1618.129	7.124
1622.159	7.118	1691.227	7.152	1692.946	7.147	1693.693	7.146	1709.962	7.368
1765.228	8.136	1767.764	8.149	1773.607	8.201	1800.995	8.437	1822.011	8.491
1836.762	8.519	1840.191	8.511	1855.986	8.463	1892.46	8.334	1908.296	8.249
1915.538	8.202	1917.27	8.191	1928.647	8.077	1944.316	7.919	1951.857	7.815
1986.88	7.238	1997.396	7.166	2010.083	7.112	2023.263	7.074	2042.935	7.046
2056.489	7.116	2070.57	7.126	2079.692	7.163	2088.474	7.163	2117.878	7.258
2134.013	7.306	2149.302	7.373	2165.185	7.418	2198.876	7.484	2218.912	7.533
2225.091	7.531	2247.935	7.483	2259.8	7.478	2297.853	7.458	2316.169	7.518
2328.596	7.541	2354.415	7.652	2361.096	7.693	2361.682	7.697	2403.826	7.881
2405.321	7.893	2427.871	8.051	2448.96	8.184	2451.12	8.195	2492.599	8.635
2499.439	8.619	2503.339	8.56	2531.13	8.574	2556.545	7.459	2579.877	7.207
2590.612	7.105	2602.852	7.041	2613.861	6.972	2623.516	7.106	2652.609	7.296
2667.155	7.136	2693.057	7.211	2710.794	7.028	2723.393	6.968	2737.116	6.992
2752.122	7.026	2765	5.61	2790	6.36	2792	2.97	2795	2.26
2800	.76	2805	1.46	2810	2.96	2815	6	2840	5.63
2846.348	9.293	2851.635	9.621	2869.597	10.782	2911.682	12.659	2939.343	13.212
2951.148	14.068	2972.628	14.974	2985.84	15.427	3000.905	15.983	3010.194	16.274
3033.113	16.879	3053.18	17.343	3064.208	17.591	3081.238	17.878	3090.914	17.996
3105.3	18.236	3128.648	18.394	3143.777	18.613	3165.023	18.804	3197.032	18.943
3200.348	18.963	3204.117	18.972	3263.445	19.196	3279.585	19.241	3297.8	19.294
3317.32	19.332	3321.862	19.342	3329.857	19.338	3345.925	19.332	3355.054	19.298
3369.987	19.165	3396.269	18.712	3418.112	18.335	3462.682	20.548	3466.237	20.57
3468.257	20.699	3516.257	20.195	3532.356	20.028	3537.678	19.965	3542.241	19.924
3549.654	19.879	3577.935	19.632	3584.589	19.618	3595.339	19.625	3615.643	19.651
3633.779	19.643	3649.324	19.662	3664.206	19.644	3685.018	19.638	3691.439	19.634
3698.93	19.637	3756.407	19.607	3764.15	19.602	3782.217	19.601	3792.101	19.596
3814.122	19.568	3861.98	19.476	3864.094	19.471	3865.504	19.469	3934.879	19.261
3939.052	19.253	3970.573	19.173	3981.427	19.139	4006.268	19.201	4014.011	19.197
4032.077	19.266	4041.962	19.292	4049.376	19.344	4077.657	19.462	4112.802	19.852
4113.706	19.855	4115.364	19.894	4138.941	20.284	4149.045	20.454	4163.927	20.462
4184.74	204188.	913	19.912	4198.651	19.819	4238.885	19.142	4281.938	19.039
4288.858	19.045	4291.823	19.037	4299.237	19.012	4327.517	18.883	4331.145	18.88
4361.523	18.857	4363.709	18.855	4365.697	18.851	4369.952	18.844	4415.646	18.784
4432.493	18.762	4441.194	18.764	4464.792	18.736	4467.46	18.736	4468.064	18.735

ExpandedLocal.rep

4526.094	18.6644566.959	18.4724572.362	18.4484607.211	18.3374642.297	18.204
4645.576	18.216 4654.47	18.2284671.124	18.2594690.576	18.324722.219	18.415
4747.199	18.4334747.767	18.432 4749.31	18.434773.315	18.3914801.355	18.304
4824.411	18.2354875.333	18.1724887.068	18.1584918.203	18.1334924.674	18.136
4938.988	18.086 4952.15	18.044957.002	18.0234989.609	17.995026.937	17.929
5028.793	17.9235089.685	17.6125105.436	17.5495128.667	17.3895130.984	17.375
5131.839	17.3565156.532	16.7235166.806	16.5835190.871	16.3015223.506	15.957
5236.741	15.8175258.723	15.685271.708	15.8385284.271	16.0795306.675	16.617
5309.819	16.6595341.642	17.0115352.778	17.093 5376.61	17.2345382.303	17.26
5413.185	17.4175446.544	17.5575466.027	17.6225481.512	17.6735508.024	17.707
5516.479	17.7115521.417	17.708 5536.57	17.653 5565.17	17.5525601.166	17.727
5612.83	17.7365621.689	17.7535652.721	17.8625691.878	17.939 5713.14	17.93
5743.216	17.8465762.067	17.7865794.086	17.735804.004	17.7055832.457	17.72
5860.587	17.7195869.114	17.735870.392	17.7335878.398	17.7345892.065	17.733
5908.082	17.7265972.132	17.6225972.635	17.6215997.567	17.4876007.729	17.423
6030.335	17.0046046.078	16.769 6063.22	16.7066075.573	16.7356086.918	16.624
6113.013	16.4786143.501	16.4126150.178	16.4026183.202	16.46211.191	16.4
6248.041	16.4016251.082	16.4016253.391	16.4016277.354	16.4026288.485	16.403
6302.789	16.404 6323.58	16.4086328.224	16.4086340.452	16.4126353.659	16.416
6358.674	16.4196379.094	16.4326393.769	16.4466410.645	16.4756444.249	16.572
6470.481	16.766499.053	16.899 6506.27	17.0016525.274	17.9786534.147	18.368
6557.14	18.556596.163	20.446606.466	20.896610.098	21.0446617.685	20.661
6658.88	19.2496674.525	19.5126684.316	19.56 6709.62	22.2516709.751	22.256
6709.825	22.266710.095	22.276713.511	22.5996809.552	31.7716811.491	32.103
6814.903	32.189				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-466	.06	2790	.05	2815	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	2790	2815		641	641	.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Lower RS: 7891

INPUT

Description: Data from Land Survey  
 Data from Land Survey

Station Elevation Data num= 259

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2282	8.955-2274.84	8.946-2267.33	8.903-2260.59	8.828-2244.09	8.531				
-2216.52	8.099-2176.55	7.476-2174.39	7.449-2172.46	7.431 -2127.4	7.058				

ExpandedLocal.rep

-2111.98	6.973-2084.33	6.884-2078.25	6.888-2058.22	6.951-2040.27	7.045
-2034.99	7.106 -1996.2	7.557-1985.77	7.742-1979.96	7.835-1959.47	8.144
-1922.67	8.695-1908.08	8.887-1895.59	8.985-1881.66	9.096-1872.36	9.162
-1869.48	9.181-1783.37	9.575-1780.69	9.598-1779.42	9.615-1775.89	9.642
-1756.19	9.722-1734.22	9.813-1731.82	9.82-1685.07	9.809-1658.82	10.063
-1644.82	10.234-1641.91	10.22-1638.89	10.221-1610.14	10.04-1555.84	9.558
-1540.34	9.487-1533.01	9.49-1515.71	9.455-1479.17	9.471-1466.44	9.459
-1462.97	9.46-1460.41	9.466-1443.54	9.481-1417.16	9.515 -1402.5	9.607
-1387.81	9.694-1374.61	9.709-1359.48	9.72-1351.51	9.711-1348.01	9.711
-1339.02	9.728-1302.57	9.747-1278.91	9.744-1273.22	9.731-1249.16	9.702
-1242.61	9.685-1214.51	9.591-1206.31	9.581-1185.16	9.531-1158.72	9.495
-1150.3	9.458-1135.53	9.375-1107.55	9.187-1101.87	9.141-1092.83	8.949
-1052.78	8.385-1034.56	8.21-1005.52	7.98 -999.31	7.894-985.373	7.862
-970.625	7.843-961.863	7.854 -933.59	7.911-915.854	8.17-899.932	8.236
-888.469	8.225-866.274	8.264-848.312	8.184-840.694	8.177-832.795	8.164
-795.739	8.158-754.252	7.836-721.419	7.63-701.134	7.513-688.319	7.373
-659.339	7.149-635.304	6.914-609.246	6.781-602.389	6.76-574.946	6.646
-564.426	6.644 -551.39	6.606-503.643	6.48-498.845	6.472-470.728	6.461
-468.389	6.46-439.424	6.476-437.875	6.477-437.813	6.478-437.503	6.478
-371.983	6.515-366.058	6.509-339.068	6.528-313.741	6.5-295.506	6.482
-285.655	6.481-273.237	6.481 -256.8	6.509-210.687	6.606-205.487	6.613
-203.267	6.616-180.488	6.651-167.593	6.679-135.479	6.735-131.919	6.741
-130.489	6.743-127.141	6.747 -101.68	6.814 -96.245	6.816 -72.283	6.88
-60.571	6.869 -42.885	6.886 0	5 25	3.6 44	2.7
63	3.2 87	2.9 123	2.9 149	1.9 175	2.3
195	2.9 228	2.9 260	.7 281	2.7 304	2.7
328	3.1 353	2.8 371	3.6 395	2.7 418	3.4
454	3.3 479	1.7 505	3.3 529	2.2 550	1.5
589	2.4 628	3.4 653	4.3 654.479	16.193 684.999	16.606
690.618	16.663 697.164	16.717 726.757	17.001 752.159	16.935 762.896	16.913
775.405	16.843 835.175	16.507 844.044	16.382 853.645	16.264 881.615	15.913
907.453	15.466 926.716	15.296 943.592	14.901 964.614	14.9 979.731	14.449
994.327	14.6541010.126	15.2381031.897	16.2661044.151	16.507 1087.96	17.697
1088.148	17.7021088.217	17.7031088.367	17.7061124.287	18.4011155.121	18.773
1160.426	18.831166.607	18.875 1187.1	18.9851196.565	19.0531211.821	19.098
1240.894	19.1221245.664	19.131258.464	19.1451267.955	19.1511287.453	19.067
1302.945	18.5631323.507	17.2421337.935	18.5861364.034	20.0871372.926	19.976
1389.561	19.8031434.435	19.7121439.299	19.6681441.581	19.6971447.897	19.708
1477.896	19.6721491.669	19.647 1525.02	19.6491547.877	19.705 1568.25	19.788
1582.867	19.8051583.241	19.8041593.782	19.7771617.842	19.7291619.323	19.721
1623.334	19.7031652.817	19.5461677.743	19.3521687.792	19.3341721.487	18.661
1722.767	18.6751747.028	18.5251757.742	18.3641772.569	18.6811792.716	19.334
1812.71	19.107 1823.65	18.8711836.466	18.8991862.666	18.7021891.926	19.044
1897.641	19.2041899.162	19.211907.398	19.2481925.814	19.3581932.616	19.359
1947.387	19.3791967.591	19.4032002.086	19.4432002.513	19.4432002.674	19.443
2002.847	19.4442037.541	19.4462053.518	19.4352072.515	19.4282079.059	19.419
2107.49	19.3312127.076	19.32142.465	19.3082164.865	19.31 2177.44	19.302
2181.222	19.2912191.462	19.2512206.763	19.1882212.415	19.1532243.743	18.963

ExpandedLocal.rep

2282.365 18.5382283.386 18.532 2317.34 17.62334.468 17.6272352.315 17.725  
 2360.008 17.7152380.838 17.84 2411.09 18.2512422.264 18.234

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2282 .06 228 .05 281 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 228 281 78 78 78 .1 .3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Lower RS: 7813

INPUT

Description: Data from Land Survey

Station Elevation Data num= 259  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -2417 8.955-2409.84 8.946-2402.33 8.903-2395.59 8.828-2379.09 8.531  
 -2351.52 8.099-2311.55 7.476-2309.39 7.449-2307.46 7.431 -2262.4 7.058  
 -2246.98 6.973-2219.33 6.884-2213.25 6.888-2193.22 6.951-2175.27 7.045  
 -2169.99 7.106 -2131.2 7.557-2120.77 7.742-2114.96 7.835-2094.47 8.144  
 -2057.67 8.695-2043.08 8.887-2030.59 8.985-2016.66 9.096-2007.36 9.162  
 -2004.48 9.181-1918.37 9.575-1915.69 9.598-1914.42 9.615-1910.89 9.642  
 -1891.19 9.722-1869.22 9.813-1866.82 9.82-1820.07 9.809-1793.82 10.063  
 -1779.82 10.234-1776.91 10.22-1773.89 10.221-1745.14 10.04-1690.84 9.558  
 -1675.34 9.487-1668.01 9.49-1650.71 9.455-1614.17 9.471-1601.44 9.459  
 -1597.97 9.46-1595.41 9.466-1578.54 9.481-1552.16 9.515 -1537.5 9.607  
 -1522.81 9.694-1509.61 9.709-1494.48 9.72-1486.51 9.711-1483.01 9.711  
 -1474.02 9.728-1437.57 9.747-1413.91 9.744-1408.22 9.731-1384.16 9.702  
 -1377.61 9.685-1349.51 9.591-1341.31 9.581-1320.16 9.531-1293.72 9.495  
 -1285.3 9.458-1270.53 9.375-1242.55 9.187-1236.87 9.141-1227.83 8.949  
 -1187.78 8.385-1169.56 8.21-1140.52 7.98-1134.31 7.894-1120.37 7.862  
 -1105.62 7.843-1096.86 7.854-1068.59 7.911-1050.85 8.17-1034.93 8.236  
 -1023.46 8.225-1001.27 8.264-983.312 8.184-975.694 8.177-967.795 8.164  
 -930.739 8.158-889.252 7.836-856.419 7.63-836.134 7.513-823.319 7.373  
 -794.339 7.149-770.304 6.914-744.246 6.781-737.389 6.76-709.946 6.646  
 -699.426 6.644 -686.39 6.606-638.643 6.48-633.845 6.472-605.728 6.461  
 -603.389 6.46-574.424 6.476-572.875 6.477-572.813 6.478-572.503 6.478  
 -506.983 6.515-501.058 6.509-474.068 6.528-448.741 6.5-430.506 6.482  
 -420.655 6.481-408.237 6.481 -391.8 6.509-345.687 6.606-340.487 6.613  
 -338.267 6.616-315.488 6.651-302.593 6.679-270.479 6.735-266.919 6.741  
 -265.489 6.743-262.141 6.747 -236.68 6.814-231.245 6.816-207.283 6.88  
 -195.571 6.869-177.885 6.886-132.142 6.815-124.222 6.815 -119.09 6.816

ExpandedLocal.rep

-95.048	6.768	-88.548	6.758	-83.705	6.759	-52.874	6.741	-40.494	6.746
-17.2	6.854	-1.499	6.892	0	4.7	26	3.8	41	5
66	4.5	91	5	114	4.2	135	4.7	147	1.2
153	.5	157	1.2	182	2.9	194	3	225	3.9
249	3.6	262	3.4	292	3.8	316	3.5	323	3.1
328	3.7	354	2.1	389	3.3	416	3	438	3.3
473	3.1	506	2.7	522	3.5	574	3.3	591.757	17.001
617.159	16.935	627.896	16.913	640.405	16.843	700.175	16.507	709.044	16.382
718.645	16.264	746.615	15.913	772.453	15.466	791.716	15.296	808.592	14.901
829.614	14.9	844.731	14.449	859.327	14.654	875.126	15.238	896.897	16.266
909.151	16.507	952.96	17.697	953.148	17.702	953.217	17.703	953.367	17.706
989.287	18.401	1020.121	18.773	1025.426	18.831	1031.607	18.875	1052.1	18.985
1061.565	19.053	1076.821	19.098	1105.894	19.122	1110.664	19.131	1123.464	19.145
1132.955	19.151	1152.453	19.067	1167.945	18.563	1188.507	17.242	1202.935	18.586
1229.034	20.087	1237.926	19.976	1254.561	19.803	1299.435	19.712	1304.299	19.668
1306.581	19.697	1312.897	19.708	1342.896	19.672	1356.669	19.647	1390.02	19.649
1412.877	19.705	1433.25	19.788	1447.867	19.805	1448.241	19.804	1458.782	19.777
1482.842	19.729	1484.323	19.721	1488.334	19.703	1517.817	19.546	1542.743	19.352
1552.792	19.334	1586.487	18.661	1587.767	18.675	1612.028	18.525	1622.742	18.364
1637.569	18.681	1657.716	19.334	1677.71	19.107	1688.65	18.871	1701.466	18.899
1727.666	18.702	1756.926	19.044	1762.641	19.204	1764.162	19.211	1772.398	19.248
1790.814	19.358	1797.616	19.359	1812.387	19.379	1832.591	19.403	1867.086	19.443
1867.513	19.443	1867.674	19.443	1867.847	19.444	1902.541	19.446	1918.518	19.435
1937.515	19.428	1944.059	19.419	1972.49	19.331	1992.076	19.320	2007.465	19.308
2029.865	19.31	2042.44	19.302	2046.222	19.291	2056.462	19.251	2071.763	19.188
2077.415	19.153	2108.743	18.963	2147.365	18.538	2148.386	18.532		

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
-2417	.06	-1.499	.05	591.757	.06			

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	-1.499	591.757		76	76	76		.1	.3

Ineffective Flow num= 3

Sta L	Sta R	Elev	Permanent
-2417	228.03	9.8	F
258.97	404.06	9.8	F
433.97	582.36	9.8	F

CULVERT

RIVER: Gum Bayou  
 REACH: Lower RS: 7775

INPUT  
 Description: Gum #53

ExpandedLocal.rep

Distance from Upstream XS = 7  
 Deck/Roadway Width = 62  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 15

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-1758.74	10.1				0	10.1				34	10.2			
82	9.8				138	10.2				182	10.6			
241	11				277	11.6				312	11.8			
353	11.9				398	11.7				458	11.6			
518	11.4				576	11.9				649	12.2			

Upstream Bridge Cross Section Data

Station Elevation Data num= 259

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2417	8.955-2409.84	8.946-2402.33	8.903-2395.59	8.828-2379.09	8.531				
-2351.52	8.099-2311.55	7.476-2309.39	7.449-2307.46	7.431 -2262.4	7.058				
-2246.98	6.973-2219.33	6.884-2213.25	6.888-2193.22	6.951-2175.27	7.045				
-2169.99	7.106 -2131.2	7.557-2120.77	7.742-2114.96	7.835-2094.47	8.144				
-2057.67	8.695-2043.08	8.887-2030.59	8.985-2016.66	9.096-2007.36	9.162				
-2004.48	9.181-1918.37	9.575-1915.69	9.598-1914.42	9.615-1910.89	9.642				
-1891.19	9.722-1869.22	9.813-1866.82	9.82-1820.07	9.809-1793.82	10.063				
-1779.82	10.234-1776.91	10.22-1773.89	10.221-1745.14	10.04-1690.84	9.558				
-1675.34	9.487-1668.01	9.49-1650.71	9.455-1614.17	9.471-1601.44	9.459				
-1597.97	9.46-1595.41	9.466-1578.54	9.481-1552.16	9.515 -1537.5	9.607				
-1522.81	9.694-1509.61	9.709-1494.48	9.72-1486.51	9.711-1483.01	9.711				
-1474.02	9.728-1437.57	9.747-1413.91	9.744-1408.22	9.731-1384.16	9.702				
-1377.61	9.685-1349.51	9.591-1341.31	9.581-1320.16	9.531-1293.72	9.495				
-1285.3	9.458-1270.53	9.375-1242.55	9.187-1236.87	9.141-1227.83	8.949				
-1187.78	8.385-1169.56	8.21-1140.52	7.98-1134.31	7.894-1120.37	7.862				
-1105.62	7.843-1096.86	7.854-1068.59	7.911-1050.85	8.17-1034.93	8.236				
-1023.46	8.225-1001.27	8.264-983.312	8.184-975.694	8.177-967.795	8.164				
-930.739	8.158-889.252	7.836-856.419	7.63-836.134	7.513-823.319	7.373				
-794.339	7.149-770.304	6.914-744.246	6.781-737.389	6.76-709.946	6.646				
-699.426	6.644 -686.39	6.606-638.643	6.48-633.845	6.472-605.728	6.461				
-603.389	6.46-574.424	6.476-572.875	6.477-572.813	6.478-572.503	6.478				
-506.983	6.515-501.058	6.509-474.068	6.528-448.741	6.5-430.506	6.482				
-420.655	6.481-408.237	6.481 -391.8	6.509-345.687	6.606-340.487	6.613				
-338.267	6.616-315.488	6.651-302.593	6.679-270.479	6.735-266.919	6.741				
-265.489	6.743-262.141	6.747 -236.68	6.814-231.245	6.816-207.283	6.88				
-195.571	6.869-177.885	6.886-132.142	6.815-124.222	6.815 -119.09	6.816				
-95.048	6.768 -88.548	6.758 -83.705	6.759 -52.874	6.741 -40.494	6.746				
-17.2	6.854 -1.499	6.892 0	4.7 26	3.8 41	5				
66	4.5 91	5 114	4.2 135	4.7 147	1.2				
153	.5 157	1.2 182	2.9 194	3 225	3.9				
249	3.6 262	3.4 292	3.8 316	3.5 323	3.1				

ExpandedLocal.rep

328	3.7	354	2.1	389	2.1	416	1.1	438	1.6
473	3.1	506	2.7	522	3.5	574	3.3	591.757	17.001
617.159	16.935	627.896	16.913	640.405	16.843	700.175	16.507	709.044	16.382
718.645	16.264	746.615	15.913	772.453	15.466	791.716	15.296	808.592	14.901
829.614	14.9	844.731	14.449	859.327	14.654	875.126	15.238	896.897	16.266
909.151	16.507	952.96	17.697	953.148	17.702	953.217	17.703	953.367	17.706
989.287	18.4011020	1020.121	18.7731025	1025.426	18.831031	1031.607	18.875	1052.1	18.985
1061.565	19.0531076	1076.821	19.0981105	1089.894	19.1221110	1096.664	19.1311123	1096.664	19.145
1132.955	19.1511152	1152.453	19.0671167	1167.945	18.5631188	1188.507	17.2421202	1202.935	18.586
1229.034	20.0871237	1237.926	19.9761254	1254.561	19.8031299	1299.435	19.7121304	1299.435	19.668
1306.581	19.6971312	1312.897	19.7081342	1342.896	19.6721356	1356.669	19.647	1390.02	19.649
1412.877	19.705	1433.25	19.7881447	1447.867	19.8051448	1448.241	19.8041458	1458.782	19.777
1482.842	19.7291484	1484.323	19.7211488	1488.334	19.7031517	1487.817	19.5461542	1487.817	19.352
1552.792	19.3341586	1586.487	18.6611587	1587.767	18.6751612	1612.028	18.5251622	1622.742	18.364
1637.569	18.6811657	1657.716	19.334	1677.71	19.107	1688.65	18.8711701	1688.65	18.899
1727.666	18.7021756	1756.926	19.0441762	1762.641	19.2041764	1764.162	19.211772	1772.398	19.248
1790.814	19.3581797	1797.616	19.3591812	1812.387	19.3791832	1832.591	19.4031867	1867.086	19.443
1867.513	19.4431867	1867.674	19.4431867	1867.847	19.4441902	1867.541	19.4461918	1867.513	19.435
1937.515	19.4281944	1944.059	19.419	1972.49	19.3311992	1972.076	19.32007	1944.059	19.308
2029.865	19.31	2042.44	19.3022046	2046.222	19.2912056	2056.462	19.2512071	2071.763	19.188
2077.415	19.1532108	2108.743	18.9632147	2147.365	18.5382148	2148.386	18.532		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2417	.05	135	.05	182	.05

Bank Sta: Left Right Coeff Contr. Expan.

-1.499	591.757		.1	.3
--------	---------	--	----	----

Ineffective Flow num= 3

Sta L	Sta R	Elev	Permanent
-2417	228.03	9.8	F
258.97	404.06	9.8	F
433.97	582.36	9.8	F

Downstream Deck/Roadway Coordinates

num= 12

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-1758.74	10.1		0	10.1	39	10.2								
87	9.8		143	10.2	188	10.6								
247	11		282	11.6	317	11.8								
358	11.9		404	11.7	463	11.6								

Downstream Bridge Cross Section Data

Station Elevation Data num= 253

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev

ExpandedLocal.rep

-2417	8.955-2409.84	8.946-2402.33	8.903-2395.59	8.828-2379.09	8.531
-2351.52	8.099-2311.55	7.476-2309.39	7.449-2307.46	7.431 -2262.4	7.058
-2246.98	6.973-2219.33	6.884-2213.25	6.888-2193.22	6.951-2175.27	7.045
-2169.99	7.106 -2131.2	7.557-2120.77	7.742-2114.96	7.835-2094.47	8.144
-2057.67	8.695-2043.08	8.887-2030.59	8.985-2016.66	9.096-2007.36	9.162
-2004.48	9.181-1918.37	9.575-1915.69	9.598-1914.42	9.615-1910.89	9.642
-1891.19	9.722-1869.22	9.813-1866.82	9.82-1820.07	9.809-1793.82	10.063
-1779.82	10.234-1776.91	10.22-1773.89	10.221-1745.14	10.04-1690.84	9.558
-1675.34	9.487-1668.01	9.49-1650.71	9.455-1614.17	9.471-1601.44	9.459
-1597.97	9.46-1595.41	9.466-1578.54	9.481-1552.16	9.515 -1537.5	9.607
-1522.81	9.694-1509.61	9.709-1494.48	9.72-1486.51	9.711-1483.01	9.711
-1474.02	9.728-1437.57	9.747-1413.91	9.744-1408.22	9.731-1384.16	9.702
-1377.61	9.685-1349.51	9.591-1341.31	9.581-1320.16	9.531-1293.72	9.495
-1285.3	9.458-1270.53	9.375-1242.55	9.187-1236.87	9.141-1227.83	8.949
-1187.78	8.385-1169.56	8.21-1140.52	7.98-1134.31	7.894-1120.37	7.862
-1105.62	7.843-1096.86	7.854-1068.59	7.911-1050.85	8.17-1034.93	8.236
-1023.46	8.225-1001.27	8.264-983.312	8.184-975.694	8.177-967.795	8.164
-930.739	8.158-889.252	7.836-856.419	7.63-836.134	7.513-823.319	7.373
-794.339	7.149-770.304	6.914-744.246	6.781-737.389	6.76-709.946	6.646
-699.426	6.644 -686.39	6.606-638.643	6.48-633.845	6.472-605.728	6.461
-603.389	6.46-574.424	6.476-572.875	6.477-572.813	6.478-572.503	6.478
-506.983	6.515-501.058	6.509-474.068	6.528-448.741	6.5-430.506	6.482
-420.655	6.481-408.237	6.481 -391.8	6.509-345.687	6.606-340.487	6.613
-338.267	6.616-315.488	6.651-302.593	6.679-270.479	6.735-266.919	6.741
-265.489	6.743-262.141	6.747 -236.68	6.814-231.245	6.816-207.283	6.88
-195.571	6.869-177.885	6.886-132.142	6.815-124.222	6.815 -119.09	6.816
-95.048	6.768 -88.548	6.758 -83.705	6.759 -52.874	6.741 -40.494	6.746
-17.2	6.854 -1.499	6.892 0	4.9 31	4.9 55	2.8
71	3.6 89	3.7 112	4 125	1.3 136	1.5
159	3.7 191	3.9 221	4.8 245	1.5 302	1.1
313	3.9 329	3.8 353	3.5 395	4.2 414	4.5
434.083	15.157 482.839	15.878 483.34	15.885 483.525	15.886 483.924	15.889
519.479	16.193 549.999	16.606 555.618	16.663 562.164	16.717 591.757	17.001
617.159	16.935 627.896	16.913 640.405	16.843 700.175	16.507 709.044	16.382
718.645	16.264 746.615	15.913 772.453	15.466 791.716	15.296 808.592	14.901
829.614	14.9 844.731	14.449 859.327	14.654 875.126	15.238 896.897	16.266
909.151	16.507 952.96	17.697 953.148	17.702 953.217	17.703 953.367	17.706
989.287	18.4011020.121	18.7731025.426	18.831031.607	18.875 1052.1	18.985
1061.565	19.0531076.821	19.0981105.894	19.1221110.664	19.131123.464	19.145
1132.955	19.1511152.453	19.0671167.945	18.5631188.507	17.2421202.935	18.586
1229.034	20.0871237.926	19.9761254.561	19.8031299.435	19.7121304.299	19.668
1306.581	19.6971312.897	19.7081342.896	19.6721356.669	19.647 1390.02	19.649
1412.877	19.705 1433.25	19.7881447.867	19.8051448.241	19.8041458.782	19.777
1482.842	19.7291484.323	19.7211488.334	19.7031517.817	19.5461542.743	19.352
1552.792	19.3341586.487	18.6611587.767	18.6751612.028	18.5251622.742	18.364
1637.569	18.6811657.716	19.334 1677.71	19.107 1688.65	18.8711701.466	18.899
1727.666	18.7021756.926	19.0441762.641	19.2041764.162	19.211772.398	19.248
1790.814	19.3581797.616	19.3591812.387	19.3791832.591	19.4031867.086	19.443



ExpandedLocal.rep

1867.513 19.4431867.674 19.4431867.847 19.4441902.541 19.4461918.518 19.435  
 1937.515 19.4281944.059 19.419 1972.49 19.3311992.076 19.32007.465 19.308  
 2029.865 19.31 2042.44 19.3022046.222 19.291

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2417 .05 112 .05 159 .05

Bank Sta: Left Right Coeff Contr. Expan.  
 -1.499 434.083 .1 .3

Ineffective Flow num= 3  
 Sta L Sta R Elev Permanent  
 -2417 96.5 9.8 F  
 120.5 266.5 9.8 F  
 290 424 9.8 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 4

Culvert Name Shape Rise Span  
 Culvert #4 Circular 6  
 FHWA Chart # 1 - Concrete Pipe Culvert  
 FHWA Scale # 1 - Square edge entrance with headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 1 7 62 .012 .012 0 .7

Upstream Elevation = 3.7  
 Centerline Station = 238  
 Downstream Elevation = 3.9  
 Centerline Station = 103

Culvert Name Shape Rise Span  
 Culvert #3 Circular 6  
 FHWA Chart # 1 - Concrete Pipe Culvert  
 FHWA Scale # 1 - Square edge entrance with headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef

7 62 .012 .012 0 .7

1

Upstream Elevation = 3.5
Centerline Station = 249
Downstream Elevation = 3.8
Centerline Station = 114

Culvert Name Shape Rise Span
Culvert #2 Circular 6
FHWA Chart # 1 - Concrete Pipe Culvert
FHWA Scale # 1 - Square edge entrance with headwall
Solution Criteria = Highest U.S. EG
Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef
Exit Loss Coef
7 62 .012 .012 0 .7

1

Upstream Elevation = 1.2
Centerline Station = 414
Downstream Elevation = 1.5
Centerline Station = 273

Culvert Name Shape Rise Span
Culvert #1 Circular 6
FHWA Chart # 1 - Concrete Pipe Culvert
FHWA Scale # 1 - Square edge entrance with headwall
Solution Criteria = Highest U.S. EG
Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef
Exit Loss Coef
7 62 .012 .012 0 .7

1

Upstream Elevation = 1.2
Centerline Station = 424
Downstream Elevation = 1.3
Centerline Station = 284

CROSS SECTION

RIVER: Gum Bayou
REACH: Lower RS: 7737

INPUT

Description: Data from Land Survey

Station Elevation Data num= 253

Table with 10 columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains two rows of station and elevation data.

ExpandedLocal.rep

-2246.98	6.973-2219.33	6.884-2213.25	6.888-2193.22	6.951-2175.27	7.045
-2169.99	7.106 -2131.2	7.557-2120.77	7.742-2114.96	7.835-2094.47	8.144
-2057.67	8.695-2043.08	8.887-2030.59	8.985-2016.66	9.096-2007.36	9.162
-2004.48	9.181-1918.37	9.575-1915.69	9.598-1914.42	9.615-1910.89	9.642
-1891.19	9.722-1869.22	9.813-1866.82	9.82-1820.07	9.809-1793.82	10.063
-1779.82	10.234-1776.91	10.22-1773.89	10.221-1745.14	10.04-1690.84	9.558
-1675.34	9.487-1668.01	9.49-1650.71	9.455-1614.17	9.471-1601.44	9.459
-1597.97	9.46-1595.41	9.466-1578.54	9.481-1552.16	9.515 -1537.5	9.607
-1522.81	9.694-1509.61	9.709-1494.48	9.72-1486.51	9.711-1483.01	9.711
-1474.02	9.728-1437.57	9.747-1413.91	9.744-1408.22	9.731-1384.16	9.702
-1377.61	9.685-1349.51	9.591-1341.31	9.581-1320.16	9.531-1293.72	9.495
-1285.3	9.458-1270.53	9.375-1242.55	9.187-1236.87	9.141-1227.83	8.949
-1187.78	8.385-1169.56	8.21-1140.52	7.98-1134.31	7.894-1120.37	7.862
-1105.62	7.843-1096.86	7.854-1068.59	7.911-1050.85	8.17-1034.93	8.236
-1023.46	8.225-1001.27	8.264-983.312	8.184-975.694	8.177-967.795	8.164
-930.739	8.158-889.252	7.836-856.419	7.63-836.134	7.513-823.319	7.373
-794.339	7.149-770.304	6.914-744.246	6.781-737.389	6.76-709.946	6.646
-699.426	6.644 -686.39	6.606-638.643	6.48-633.845	6.472-605.728	6.461
-603.389	6.46-574.424	6.476-572.875	6.477-572.813	6.478-572.503	6.478
-506.983	6.515-501.058	6.509-474.068	6.528-448.741	6.5-430.506	6.482
-420.655	6.481-408.237	6.481 -391.8	6.509-345.687	6.606-340.487	6.613
-338.267	6.616-315.488	6.651-302.593	6.679-270.479	6.735-266.919	6.741
-265.489	6.743-262.141	6.747 -236.68	6.814-231.245	6.816-207.283	6.88
-195.571	6.869-177.885	6.886-132.142	6.815-124.222	6.815 -119.09	6.816
-95.048	6.768 -88.548	6.758 -83.705	6.759 -52.874	6.741 -40.494	6.746
-17.2	6.854 -1.499	6.892 0	4.9 31	4.9 55	2.8
71	3.6 89	3.7 112	4 125	1.3 136	1.5
159	3.7 191	3.9 221	4.8 245	4.4 302	3.8
313	3.9 329	3.8 353	3.5 395	4.2 414	4.5
434.083	15.157 482.839	15.878 483.34	15.885 483.525	15.886 483.924	15.889
519.479	16.193 549.999	16.606 555.618	16.663 562.164	16.717 591.757	17.001
617.159	16.935 627.896	16.913 640.405	16.843 700.175	16.507 709.044	16.382
718.645	16.264 746.615	15.913 772.453	15.466 791.716	15.296 808.592	14.901
829.614	14.9 844.731	14.449 859.327	14.654 875.126	15.238 896.897	16.266
909.151	16.507 952.96	17.697 953.148	17.702 953.217	17.703 953.367	17.706
989.287	18.4011020.121	18.7731025.426	18.831031.607	18.875 1052.1	18.985
1061.565	19.0531076.821	19.0981105.894	19.1221110.664	19.131123.464	19.145
1132.955	19.1511152.453	19.0671167.945	18.5631188.507	17.2421202.935	18.586
1229.034	20.0871237.926	19.9761254.561	19.8031299.435	19.7121304.299	19.668
1306.581	19.6971312.897	19.7081342.896	19.6721356.669	19.647 1390.02	19.649
1412.877	19.705 1433.25	19.7881447.867	19.8051448.241	19.8041458.782	19.777
1482.842	19.7291484.323	19.7211488.334	19.7031517.817	19.5461542.743	19.352
1552.792	19.3341586.487	18.6611587.767	18.6751612.028	18.5251622.742	18.364
1637.569	18.6811657.716	19.334 1677.71	19.107 1688.65	18.8711701.466	18.899
1727.666	18.7021756.926	19.0441762.641	19.2041764.162	19.211772.398	19.248
1790.814	19.3581797.616	19.3591812.387	19.3791832.591	19.4031867.086	19.443
1867.513	19.4431867.674	19.4431867.847	19.4441902.541	19.4461918.518	19.435
1937.515	19.4281944.059	19.419 1972.49	19.3311992.076	19.32007.465	19.308

ExpandedLocal.rep

2029.865 19.31 2042.44 19.3022046.222 19.291

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2417 .06 -1.499 .05 434.083 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 -1.499 434.083 81 81 81 .1 .3

Ineffective Flow num= 3  
 Sta L Sta R Elev Permanent  
 -2417 96.5 9.8 F  
 120.5 266.5 9.8 F  
 290 424 9.8 F

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Lower RS: 7656

INPUT

Description: Data from Land Survey

Station Elevation Data num= 241  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -2352 8.955-2344.84 8.946-2337.33 8.903-2330.59 8.828-2314.09 8.531  
 -2286.52 8.099-2246.55 7.476-2244.39 7.449-2242.46 7.431 -2197.4 7.058  
 -2181.98 6.973-2154.33 6.884-2148.25 6.888-2128.22 6.951-2110.27 7.045  
 -2104.99 7.106 -2066.2 7.557-2055.77 7.742-2049.96 7.835-2029.47 8.144  
 -1992.67 8.695-1978.08 8.887-1965.59 8.985-1951.66 9.096-1942.36 9.162  
 -1939.48 9.181-1853.37 9.575-1850.69 9.598-1849.42 9.615-1845.89 9.642  
 -1826.19 9.722-1804.22 9.813-1801.82 9.82-1755.07 9.809-1728.82 10.063  
 -1714.82 10.234-1711.91 10.22-1708.89 10.221-1680.14 10.04-1625.84 9.558  
 -1610.34 9.487-1603.01 9.49-1585.71 9.455-1549.17 9.471-1536.44 9.459  
 -1532.97 9.46-1530.41 9.466-1513.54 9.481-1487.16 9.515 -1472.5 9.607  
 -1457.81 9.694-1444.61 9.709-1429.48 9.72-1421.51 9.711-1418.01 9.711  
 -1409.02 9.728-1372.57 9.747-1348.91 9.744-1343.22 9.731-1319.16 9.702  
 -1312.61 9.685-1284.51 9.591-1276.31 9.581-1255.16 9.531-1228.72 9.495  
 -1220.3 9.458-1205.53 9.375-1177.55 9.187-1171.87 9.141-1162.83 8.949  
 -1122.78 8.385-1104.56 8.21-1075.52 7.98-1069.31 7.894-1055.37 7.862  
 -1040.62 7.843-1031.86 7.854-1003.59 7.911-985.854 8.17-969.932 8.236  
 -958.469 8.225-936.274 8.264-918.312 8.184-910.694 8.177-902.795 8.164  
 -865.739 8.158-824.252 7.836-791.419 7.63-771.134 7.513-758.319 7.373  
 -729.339 7.149-705.304 6.914-679.246 6.781-672.389 6.76-644.946 6.646  
 -634.426 6.644 -621.39 6.606-573.643 6.48-568.845 6.472-540.728 6.461  
 -538.389 6.46-509.424 6.476-507.875 6.477-507.813 6.478-507.503 6.478  
 -441.983 6.515-436.058 6.509-409.068 6.528-383.741 6.5-365.506 6.482

ExpandedLocal.rep

-355.655	6.481-343.237	6.481	-326.8	6.509-280.687	6.606-275.487	6.613
-273.267	6.616-250.488	6.651-237.593	6.679-205.479	6.735-201.919	6.741	6.741
-200.489	6.743-197.141	6.747	-171.68	6.814-166.245	6.816-142.283	6.88
-130.571	6.869-112.885	6.886	-67.142	6.815	-59.222	6.815
-30.048	6.768	-23.548	6.758	-18.705	6.759	0
65	2.7	99	2.2	137	2.6	160
209	3.4	222	3.2	241	3.5	273
323	3.8	375	3.7	400	3.1	425
490	3.6	525	1.9	556	2.2	583
628	1.9	658	1.7	688	2.5	717
765.175	16.507	774.044	16.382	783.645	16.264	811.615
856.716	15.296	873.592	14.901	894.614	14.9	909.731
940.126	15.238	961.897	16.266	974.151	16.507	1017.96
1018.217	17.703	1018.367	17.706	1054.287	18.401	1085.121
1096.607	18.875	1117.1	18.985	1126.565	19.053	1141.821
1175.664	19.131	1188.464	19.145	1197.955	19.151	1217.453
1253.507	17.242	1267.935	18.586	1294.034	20.087	1302.926
1364.435	19.712	1369.299	19.668	1371.581	19.697	1377.897
1421.669	19.647	1455.02	19.649	1477.877	19.705	1498.25
1513.241	19.804	1523.782	19.777	1547.842	19.729	1549.323
1582.817	19.546	1607.743	19.352	1617.792	19.334	1651.487
1677.028	18.525	1687.742	18.364	1702.569	18.681	1722.716
1753.65	18.871	1766.466	18.899	1792.666	18.702	1821.926
1829.162	19.211	1837.398	19.248	1855.814	19.358	1862.616
1897.591	19.403	1932.086	19.443	1932.513	19.443	1932.674
1967.541	19.446	1983.518	19.435	2002.515	19.428	2009.059
2057.076	19.3				19.419	2037.49

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2352	.06	160	.05	209	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	160	209		4910	4910	.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Lower RS: 2746

INPUT

Description: Data from COEtoSTP River Sta 0.52

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
312	10.261	333.726	10.143	341.468	10.1	349.992	10.141	378.046	9.975

ExpandedLocal.rep

387.92	9.788	422.366	9.403	453.79	9.095	475.962	8.837	496.388	8.63
511.006	8.472	527.274	8.293	587.051	7.412	593.985	7.307	596.952	7.253
599.646	7.212	620.178	6.943	642.784	6.717	643.966	6.707	655.671	6.652
688.286	6.496	691.582	6.489	695.619	6.487	759.533	6.43	789.18	6.44
800.565	6.442	811.232	6.461	821.246	6.471	852.436	6.465	865.566	6.484
875.662	6.498	886.777	6.521	912.756	6.559	945.339	6.611	954.206	6.616
984.374	6.607	1018.508	6.588	1021.271	6.586	1033.086	6.578	1036.57	6.574
1039.858	6.573	1042.968	6.575	1051.356	6.577	1087.509	6.581	1107.898	6.577
1130.102	6.571	1132.051	6.569	1161.964	6.551	1176.592	6.55	1192.49	6.547
1227.118	6.552	1247.218	6.544	1275.626	6.546	1310.216	6.551	1340.098	6.519
1354.757	6.505	1372.642	6.493	1386.538	6.502	1421.924	6.454	1456.199	6.453
1469.658	6.446	1488.381	6.461	1518.166	6.483	1553.776	6.507	1572.299	6.536
1577.463	6.532	1599.57	6.521	1612.937	6.507	1618.052	6.504	1619.753	6.505
1623.15	6.502	1654.745	6.491	1686.447	6.516	1693.098	6.505	1763.204	6.513
1764.825	6.513	1769.676	6.512	1790.892	6.517	1801.518	6.518	1812.155	6.516
1864.237	6.506	1874.904	6.503	1888.686	6.519	16.203	6.485	1948.29	6.471
1968.895	6.485	1989.466	6.517	2021.677	6.542	2053.996	6.514	2058	1.93
2083	1.23	2085	-.07	2095	-3.27	2100	-3.37	2105	-2.77
2113	.33	2115	1.53	2140	2.232	2147.277	6.502	2170.538	6.478
2205.143	6.461	2206.515	6.462	2265.024	6.598	2274.882	6.619	2277.566	6.624
2293.999	6.701	2311.644	6.772	2314.526	6.797	2345.721	7.605	2365.919	9.69
2384.175	11.252	2413.877	14.324	2415.341	14.403	2447.954	15.324	2460.69	15.875
2482.032	16.681	2494.015	16.554	2516.109	17.928	2533.583	17.988	2550.187	18.582
2573.832	18.674	2584.265	18.735	2600.437	18.661	2631.682	18.596	2660.764	18.581
2679.765	18.582	2686.879	18.565	2705.702	18.541	2721.462	18.542	2734.07	18.541
2756.045	18.534	2783.514	192790.	628	19.032	2816.205	18.623	2856.731	18.579
2859.794	18.572	2862.244	18.568	2865.92	18.565	2903.744	18.488	2919.954	18.427
2960.48	18.344	2961.18	18.343	2963.429	18.338	2965.754	18.331	2994.618	18.245
3026.676	18.144	3029.258	18.142	3032.293	18.156	3062.173	18.229	3087.599	18.391
3099.303	18.489	3128.002	18.693	3133.599	18.716	3153.612	18.705	3193.831	18.795
3211.28	18.752	3226.746	18.8	3233.58	18.813	3259.66	18.763	3260.145	18.76
3290.34	18.703	3295.101	18.705	3298.432	18.711	3330.58	18.777	3376.538	18.882
3401.537	18.941	3462.737	18.766	3468.089	18.747	3472.495	18.702	3494.783	18.463
3507.973	18.582	3519.695	18.122	3543.452	18.344	3570.184	17.727	3586.703	17.855
3633.226	17.896	3645.963	17.905	3649.483	17.905	3678.242	17.694	3718.714	17.408
3738.387	17.309	3775.469	17.114	3787.945	17.077	3813.072	17.01	3822.56	16.973
3841.272	16.998	3857.175	17.008	3859.013	17.012	3869.437	17.035	3894.741	17.192
3913.987	17.692	3970.204	19.348	3975.635	19.168	3980.415	19.057	4010.964	18.322
4045.667	17.171	4046.844	17.227	4055.498	17.682	4118.283	20.856	4124.246	21.122
4146.527	20.784								

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 312 .05 2058 .05 2140 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 2058 2140 0 0 0 .1 .3

ExpandedLocal.rep

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 5808

INPUT

Description: Copy of COE 1.1

Station Elevation Data num= 5  
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
\*\*\*\*\*  
100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3  
Sta n Val Sta n Val Sta n Val  
\*\*\*\*\*  
100 .1 100 .04 127 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
100 127 245 245 245 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 5563

INPUT

Description: Copy of COE 1.05363\*

Station Elevation Data num= 5  
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
\*\*\*\*\*  
100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3  
Sta n Val Sta n Val Sta n Val  
\*\*\*\*\*  
100 .1 100 .04 127 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
100 127 245 245 245 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 5318

ExpandedLocal.rep

INPUT

Description: Copy of COE 1.00727\*

Station Elevation Data num= 5									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
100	24.5	109	11.5	114	10.1	118.5	10.9	127	24.5

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
100	.1	100	.04	127	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	127		244	244		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 5074

INPUT

Description: Copy of COE 0.960909\*

Station Elevation Data num= 5									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
100	24.5	109	11.5	114	10.1	118.5	10.9	127	24.5

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
100	.1	100	.04	127	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	127		245	245		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 4829

INPUT

Description: Copy of COE 0.914545\*

Station Elevation Data num= 5									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
100	24.5	109	11.5	114	10.1	118.5	10.9	127	24.5



ExpandedLocal.rep

100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
100 .1 100 .04 127 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
100 127 245 245 245 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal
REACH: Main RS: 4584

INPUT
Description: Copy of COE 0.868181\*

Station Elevation Data num= 5
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
\*\*\*\*\*
100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
100 .1 100 .04 127 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
100 127 245 245 245 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal
REACH: Main RS: 4339

INPUT
Description: Copy of COE 0.821818\*

Station Elevation Data num= 5
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
\*\*\*\*\*
100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
100 .1 100 .04 127 .1

ExpandedLocal.rep

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
100	127	245	245	245		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 4094

INPUT

Description: Copy of COE 0.775454\*

Station Elevation Data num= 5

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
100	24.5	109	11.5	114	10.1	118.5	10.9	127	24.5

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
100	.1	100	.04	127	.1

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
100	127	244	244	244		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 3850

INPUT

Description: Copy of COE 0.729090\*

Station Elevation Data num= 5

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
100	24.5	109	11.5	114	10.1	118.5	10.9	127	24.5

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
100	.1	100	.04	127	.1

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
100	127	245	245	245		.1	.3

CROSS SECTION

ExpandedLocal.rep

RIVER: Poor Boy Canal  
REACH: Main RS: 3605

INPUT

Description: Copy of COE .682727\*

Station Elevation Data num= 5

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
100	24.5	109	11.5	114	10.1	118.5	10.9	127	24.5

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
100	.1	100	.04	127	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	127		245	245		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 3360

INPUT

Description: Copy of COE 0.636363\*

Station Elevation Data num= 5

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
100	24.5	109	11.5	114	10.1	118.5	10.9	127	24.5

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
100	.1	100	.04	127	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	127		245	245		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 3115

INPUT

Description: Copy of COE 0.59

ExpandedLocal.rep

Station Elevation Data num= 5  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 100 .1 100 .04 127 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 100 127 53 53 53 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 3062

INPUT

Description: Copy of COE 0.58

Station Elevation Data num= 5  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 100 .1 100 .04 127 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 100 127 158 158 158 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 100 105 26 F  
 123 127 26 F

CULVERT

RIVER: Poor Boy Canal  
 REACH: Main RS: 2983

INPUT

Description: Data from Army Corps Model  
 Distance from Upstream XS = 4  
 Deck/Roadway Width = 150

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 2

Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

\*\*\*\*\*

0 26 150 26

Upstream Bridge Cross Section Data

Station Elevation Data num= 5

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*

100 24.5 109 10.1 114 10.1 119 10.1 127 24.5

Manning's n Values num= 2

Sta n Val Sta n Val

\*\*\*\*\*

100 .04 127 .1

Bank Sta: Left Right Coeff Contr. Expan.

100 127 .1 .3

Ineffective Flow num= 2

Sta L Sta R Elev Permanent

100 105 26 F

123 127 26 F

Downstream Deck/Roadway Coordinates

num= 2

Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

\*\*\*\*\*

0 26 150 26

Downstream Bridge Cross Section Data

Station Elevation Data num= 5

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*

100 24.5 109 9.82 114 9.82 119 9.82 127 24.5

Manning's n Values num= 2

Sta n Val Sta n Val

\*\*\*\*\*

100 .04 127 .1

Bank Sta: Left Right Coeff Contr. Expan.

100 127 .1 .3

Ineffective Flow num= 2

Sta L Sta R Elev Permanent

100 107 26 F

121 127 26 F

ExpandedLocal.rep

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name Shape Rise Span  
 Culvert #1 Box 10 10  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 1 4 150 .012 .012 0 .5  
 Upstream Elevation = 10.1  
 Centerline Station = 114  
 Downstream Elevation = 9.82  
 Centerline Station = 114

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 2904

INPUT

Description: Copy of COE 0.55

Station Elevation Data num= 5  

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
100	24.5	109	11.5	114	10.1	118.5	10.9	127	24.5

Manning's n Values num= 3  

Sta	n Val	Sta	n Val	Sta	n Val
100	.1	100	.04	127	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 100 127 53 53 53 .1 .3  
 Ineffective Flow num= 2  

Sta L	Sta R	Elev	Permanent
100	107	26	F

121 127 26 F

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 2851

INPUT

Description: Copy of COE 0.54

Station Elevation Data		num=		5							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
100	24.5	109	11.5	114	10.1	118.5	10.9	127	24.5		

Manning's n Values		num=		3							
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
100	.1	100	.04	127	.1						

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	127		180	180		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 2671

INPUT

Description: Copy of COE 0.505833\*

Station Elevation Data		num=		11							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
91.67	24.33	133.33	24.11	138.83	16.86	143.06	11.39	144.88	10.82		
148.46	9.91	151.82	10.56	153.38	10.93	156.98	16.09	162.67	24.1		
208.08	24.12										

Manning's n Values		num=		3							
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
91.67	.1	133.33	.04	162.67	.1						

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	133.33	162.67		181	181		.1	.3

CROSS SECTION

ExpandedLocal.rep

RIVER: Poor Boy Canal  
 REACH: Main RS: 2490

INPUT

Description: Copy of COE 0.471666\*

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
83.33	24.16	166.67	23.71	172.58	16.57	177.11	11.27	179.08	10.62
182.92	9.71	186.56	10.47	188.25	10.96	192.17	16	198.33	23.7
289.17	23.74								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
83.33	.1	166.67	.04	198.33	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	166.67	198.33		180	180		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 2310

INPUT

Description: Copy of COE 0.4375\*

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
75	23.98	200	23.32	206.32	16.28	211.17	11.16	213.27	10.42
217.38	9.52	221.3	10.38	223.13	10.99	227.35	15.91	234	23.3
370.25	23.36								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
75	.1	200	.04	234	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	200	234		180	180		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal



ExpandedLocal.rep

REACH: Main RS: 2130

INPUT

Description: Copy of COE 0.40333\*

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
66.67	23.81	233.33	22.92	240.06	16	245.23	11.05	247.46	10.22
251.83	9.32	256.05	10.3	258.01	11.02	262.53	15.82	269.67	22.9
451.33	22.98								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
66.67	.1	233.33	.04	269.67	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	233.33	269.67		181	181		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal

REACH: Main RS: 1949

INPUT

Description: Copy of COE 0.369166\*

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
58.33	23.64	266.67	22.53	273.8	15.71	279.28	10.93	281.65	10.02
286.29	9.13	290.79	10.21	292.88	11.05	297.72	15.73	305.33	22.5
532.42	22.6								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
58.33	.1	266.67	.04	305.33	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	266.67	305.33		180	180		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal

REACH: Main RS: 1769

ExpandedLocal.rep

INPUT

Description: Copy of COE 0.0335\*

Station Elevation Data num= 11									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
50	23.47	300	22.14	307.55	15.42	313.34	10.82	315.85	9.81
320.75	8.94	325.54	10.12	327.76	11.08	332.9	15.64	341	22.1
613.5	22.22								

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
50	.1	300	.04	341	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	300	341		181	181		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 1588

INPUT

Description: Copy of COE 0.300833

Station Elevation Data num= 11									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
41.67	23.29	333.33	21.74	341.29	15.14	347.4	10.71	350.04	9.61
355.21	8.74	360.28	10.04	362.64	11.11	368.08	15.55	376.67	21.7
694.58	21.84								

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
41.67	.1	333.33	.04	376.67	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	333.33	376.67		180	180		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 1408

INPUT

Description: Copy of COE 0.266666\*

ExpandedLocal.rep

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
33.33	23.12	366.67	21.35	375.03	14.85	381.45	10.59	384.23	9.41
389.67	8.55	395.02	9.95	397.51	11.14	403.27	15.46	412.33	21.3
775.67	21.46								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
33.33	.1	366.67	.04	412.33	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	366.67	412.33		180	180		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 1228

INPUT  
 Description: Copy of COE 0.2325\*

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
25	22.95	400	20.95	408.77	14.56	415.51	10.48	418.42	9.21
424.12	8.35	429.77	9.86	432.39	11.17	438.45	15.37	448	20.9
856.75	21.08								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
25	.1	400	.04	448	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	400	448		181	181		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 1047

INPUT  
 Description: Copy of COE 0.198333\*

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-----	------	-----	------	-----	------	-----	------	-----	------

ExpandedLocal.rep

```
*****
 16.67  22.77  433.33  20.56  442.52  14.27  449.57  10.37  452.62    9
 458.58   8.16  464.51   9.77  467.27   11.2  473.63  15.28  483.67   20.5
 937.83   20.7
```

```
Manning's n Values      num=      3
  Sta  n Val    Sta  n Val    Sta  n Val
*****
 16.67    .1  433.33    .04  483.67    .1
```

```
Bank Sta: Left   Right   Lengths: Left Channel   Right   Coeff Contr.   Expan.
          433.33  483.67                180    180           180           .1           .3
```

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 867

INPUT  
 Description: Copy of COE 0.164166\*

```
Station Elevation Data      num=      11
  Sta  Elev    Sta  Elev    Sta  Elev    Sta  Elev    Sta  Elev
*****
   8.33   22.6  466.67   20.16  476.26   13.99  483.62   10.25  486.81    8.8
 493.04   7.96  499.26   9.69  502.14   11.23  508.82   15.19  519.33   20.1
1018.92  20.32
```

```
Manning's n Values      num=      3
  Sta  n Val    Sta  n Val    Sta  n Val
*****
   8.33    .1  466.67    .04  519.33    .1
```

```
Bank Sta: Left   Right   Lengths: Left Channel   Right   Coeff Contr.   Expan.
          466.67  519.33                181    181           181           .1           .3
```

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 686

INPUT  
 Description: Copy of COE 0.13

```
Station Elevation Data      num=      9
  Sta  Elev    Sta  Elev    Sta  Elev    Sta  Elev    Sta  Elev
*****
    0   22.43   500   19.77   510   13.7   521    8.6   527.5   7.77
```

ExpandedLocal.rep

534 9.6 544 15.1 555 19.7 1100 19.94

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .1 500 .04 555 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 500 555 52 52 52 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 470.55 23.7 F  
 584.45 1100 23.7 F

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 634

INPUT

Description: Copy of COE 0.12

Station Elevation Data num= 9  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 22.43 500 19.77 510 13.7 521 7.77 527.5 7.77  
 534 7.77 544 15.1 555 19.7 1100 19.94

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .1 500 .04 555 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 500 555 53 53 53 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 516.5 23.7 F  
 538.5 1100 23.7 F

CULVERT

RIVER: Poor Boy Canal  
 REACH: Main RS: 607

INPUT

Description: Data from Army Corps Model

ExpandedLocal.rep

Distance from Upstream XS = 6  
Deck/Roadway Width = 41  
Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 2

Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

\*\*\*\*\*  
0 23.7 1200 23.7

Upstream Bridge Cross Section Data

Station Elevation Data num= 9

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*  
0 22.43 500 19.77 510 13.7 521 7.77 527.5 7.77  
534 7.77 544 15.1 555 19.7 1100 19.94

Manning's n Values

num= 3

Sta n Val Sta n Val Sta n Val

\*\*\*\*\*  
0 .1 500 .04 555 .1

Bank Sta: Left Right Coeff Contr. Expan.

500 555 .1 .3

Ineffective Flow

num= 2

Sta L Sta R Elev Permanent

0 516.5 23.7 F  
538.5 1100 23.7 F

Downstream Deck/Roadway Coordinates

num= 2

Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

\*\*\*\*\*  
0 23.7 1200 23.7

Downstream Bridge Cross Section Data

Station Elevation Data num= 9

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*  
0 22.43 500 19.77 510 13.7 521 7.77 527.5 7.77  
534 7.77 544 15.1 555 19.7 1100 19.94

Manning's n Values

num= 3

Sta n Val Sta n Val Sta n Val

\*\*\*\*\*  
0 .1 500 .04 555 .1

Bank Sta: Left Right Coeff Contr. Expan.

500 555 .1 .3

ExpandedLocal.rep

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 519.5 23.7 F  
 535.5 1100 23.7 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name Shape Rise Span  
 Culvert #1 Box 10 10  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef

1	6	41	.013	.013	0	.5
---	---	----	------	------	---	----

Upstream Elevation = 8.01  
 Centerline Station = 527.5  
 Downstream Elevation = 8.01  
 Centerline Station = 527.5

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 581

INPUT

Description: Copy of COE 0.11

Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	22.43	500	19.77	510	13.7	521	7.77	527.5	7.77
534	7.77	544	15.1	555	19.7	1100	19.94		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	500	.04	555	.1

ExpandedLocal.rep

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	500	555		53	53		.1	.3
Ineffective Flow	num=		2					
Sta L	Sta R	Elev	Permanent					
0	519.5	23.7	F					
535.5	1100	23.7	F					

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 528

INPUT

Description: Copy of COE 0.1

Station Elevation Data	num=		16							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	
*****										
0	17.6	20	18.4	40	15.9	60	20.4	80	20.1	
100	19.8	105	7.4	113	6.9	123	8.6	138	15.2	
140	19.9	160	20.4	180	20.6	200	19.8	220	19	
240	18.7									

Manning's n Values	num=		3							
Sta	n Val	Sta	n Val	Sta	n Val					
*****										
0	.1	100	.04	140	.1					

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	140		87	87		.1	.3
Ineffective Flow	num=		2					
Sta L	Sta R	Elev	Permanent					
0	88.685	23.7	F					
151.735	240	23.7	F					

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 441

INPUT

Description: Copy of COE 0.0835\*

Station Elevation Data	num=		16							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	
*****										
0	17.6	20	18.4	40	15.9	60	20.4	80	20.1	
100	19.8	105	6.88	113	6.38	123	8.08	138	14.97	



ExpandedLocal.rep

140 19.9 160 20.4 180 20.6 200 19.8 220 19  
240 18.7

Manning's n Values num= 3  
Sta n Val Sta n Val Sta n Val  
\*\*\*\*\*  
0 .1 100 .04 140 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
100 140 87 87 87 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 354

INPUT  
Description: Copy of COE 0.067\*

Station Elevation Data num= 16  
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
\*\*\*\*\*  
0 17.6 20 18.4 40 15.9 60 20.4 80 20.1  
100 19.8 105 6.37 113 5.87 123 7.57 138 14.73  
140 19.9 160 20.4 180 20.6 200 19.8 220 19  
240 18.7

Manning's n Values num= 3  
Sta n Val Sta n Val Sta n Val  
\*\*\*\*\*  
0 .1 100 .04 140 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
100 140 87 87 87 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 267

INPUT  
Description: Copy of COE 0.0505\*

Station Elevation Data num= 16  
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
\*\*\*\*\*  
0 17.6 20 18.4 40 15.9 60 20.4 80 20.1  
100 19.8 105 5.85 113 5.35 123 7.05 138 14.5

ExpandedLocal.rep

140	19.9	160	20.4	180	20.6	200	19.8	220	19
240	18.7								

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .1 100 .04 140 .1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	100	140		87 87	87	.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 180

INPUT  
 Description: Copy of COE 0.034\*

Station Elevation Data num= 16  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 17.6 20 18.4 40 15.9 60 20.4 80 20.1  
 100 19.8 105 5.33 113 4.83 123 6.53 138 14.27  
 140 19.9 160 20.4 180 20.6 200 19.8 220 19  
 240 18.7

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .1 100 .04 140 .1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	100	140		87 87	87	.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 92

INPUT  
 Description: Copy of COE .0175\*

Station Elevation Data num= 16  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 17.6 20 18.4 40 15.9 60 20.4 80 20.1  
 100 19.8 105 4.82 113 4.32 123 6.02 138 14.03

ExpandedLocal.rep

140 19.9 160 20.4 180 20.6 200 19.8 220 19  
240 18.7

Manning's n Values num= 3  
Sta n Val Sta n Val Sta n Val  
\*\*\*\*\*  
0 .1 100 .04 140 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
100 140 87 87 87 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 5

INPUT  
Description: Copy of COE 0.001

Station Elevation Data num= 16  
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
\*\*\*\*\*  
0 17.6 20 18.4 40 15.9 60 20.4 80 20.1  
100 19.8 105 4.3 113 3.8 123 5.5 138 13.8  
140 19.9 160 20.4 180 20.6 200 19.8 220 19  
240 18.7

Manning's n Values num= 3  
Sta n Val Sta n Val Sta n Val  
\*\*\*\*\*  
0 .1 100 .04 140 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
100 140 0 0 0 .1 .3

CROSS SECTION

RIVER: Reine Canal  
REACH: Main RS: 8003

INPUT  
Description: Pilot Channel added (Sta 28-29) for stability

Station Elevation Data num= 14  
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
\*\*\*\*\*  
0 13.6 13 14.3 22 7.6 24 5 27 4  
28 3 29 3 30 4.3 35 7.8 45 15.1

ExpandedLocal.rep

65 15.3 95 15.6 121 15.6 122 16

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
0 .1 13 .04 45 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
13 45 1154 1154 1154 .1 .3

CROSS SECTION

RIVER: Reine Canal
REACH: Main RS: 6849

INPUT

Description:

Station Elevation Data num= 9
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
\*\*\*\*\*
0 14.6 5 13.8 14 7.9 16 5.6 20 5.2
24 5.5 27 8.5 37 14.5 43 15.2

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
0 .1 5 .04 37 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
5 37 403 403 403 .1 .3

CROSS SECTION

RIVER: Reine Canal
REACH: Main RS: 6446

INPUT

Description: US Rue Rochelle

Station Elevation Data num= 16
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
\*\*\*\*\*
485 16.1 492 15.8 500 10.3 503 6.9 511 7
518 7.1 520 9.7 527 15 550 15.4 575 15.1
600 15.1 625 15 650 15.1 675 15.1 700 14.9
725 15.3

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 485 .1 492 .04 527 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 492 527 60 60 60 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 485 499 13.84 F  
 519 725 13.84 F

CULVERT

RIVER: Reine Canal  
 REACH: Main RS: 6412

INPUT

Description: Rue Rochelle Crossing  
 Crossing from SELA model  
 Distance from Upstream XS = 1  
 Deck/Roadway Width = 58  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 2  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 450 13.84 6 550 13.84 6

Upstream Bridge Cross Section Data

Station Elevation Data num= 15  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 485 16.1 492 15.8 500 6.9 511 6.9 518 7.1  
 520 9.7 527 15 550 15.4 575 15.1 600 15.1  
 625 15 650 15.1 675 15.1 700 14.9 725 15.3

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 485 .1 492 .06 527 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 492 527 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 485 499 13.84 F

519 725 13.84 F

Downstream Deck/Roadway Coordinates

num= 2

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
400	13.84		6		600	13.84		6	

Downstream Bridge Cross Section Data

Station Elevation Data num= 20

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
435	15.3	437	16	450	16.1	475	15.8	494	15.2
500	6.8	506	6.8	510	6.8	518	6.8	525	14.5
530	15	540	15.6	550	15.6	550.5	15.2	575	15.3
598	15.5	598.5	15.9	600	15.9	602	15.9	606	16

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
435	.1		494	.06		525	.1	

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	494	525		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
435	499.5	13.84	F
518.5	606	13.84	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name	Shape	Rise	Span
Culvert #1	Box	5	8

FHWA Chart # 10- 90 degree headwall; Chamfered or beveled inlet  
 FHWA Scale # 1 - Inlet edges chamfered 3/4 inch  
 Solution Criteria = Highest U.S. EG

Culvert	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
1		58	.013	.013	0		.5

ExpandedLocal.rep

Number of Barrels = 2  
 Upstream Elevation = 7.6  
 Centerline Stations  
     Sta.    Sta.  
     504    514  
 Downstream Elevation = 7.2  
 Centerline Stations  
     Sta.    Sta.  
     504    514

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main                    RS: 6386

INPUT

Description: DS Rue Rochelle

Station Elevation Data          num=      20

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
435	15.3	437	16	450	16.1	475	15.8	494	15.2
500	10.5	506	7	510	6.8	516	6.9	525	14.5
530	15	540	15.6	550	15.6	550.5	15.2	575	15.3
598	15.5	598.5	15.9	600	15.9	602	15.9	606	16

Manning's n Values          num=      3

Sta	n Val	Sta	n Val	Sta	n Val
435	.1	494	.04	525	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	494	525		1205	1205	.1	.3

Ineffective Flow          num=      2

Sta L	Sta R	Elev	Permanent
435	499.5	13.84	F
518.5	606	13.84	F

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main                    RS: 5181

INPUT

Description:

Station Elevation Data          num=      13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-----	------	-----	------	-----	------	-----	------	-----	------

ExpandedLocal.rep

```
*****
      0   16.2   20   16.9   29   16.8   32   19.3   37   16.8
     41   15.2   47   10.8   50    7.5   58    6.6   65    8.9
     77   14.3  100   15.1  127   15.4
```

Manning's n Values num= 3

```
Sta n Val Sta n Val Sta n Val
*****
      0    .1  41   .06  77    .1
```

```
Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
          41    77          1583 1583 1583          .1    .3
```

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main RS: 3598

INPUT

Description:

Station Elevation Data num= 11

```
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
*****
      0  19.2  13  19.4  21  17.6  27  11.9  33   7.3
     41   5.7  52   7.1  62  17.8  70  18.5  98  17.7
    129  17.5
```

Manning's n Values num= 3

```
Sta n Val Sta n Val Sta n Val
*****
      0    .1  21   .04  62    .1
```

```
Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
          21    62          910  910  910          .1    .3
```

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main RS: 2688

INPUT

Description: US I-10 North  
 Section from SELA model

Station Elevation Data num= 13

```
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
*****
```



ExpandedLocal.rep

500	18.6	507	17.7	520	16.3	531	10.7	545	9.3
550	6.6	560	6.6	567	7.1	578	11.8	592	14.8
597	16.9	606	17.9	620	19.2				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
500	.1	520	.07	597	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	520	597		64	64	.1	.3

BRIDGE

RIVER: Reine Canal

REACH: Main RS: 2642

INPUT

Description: I-10 North

Bridge from SELA model

Distance from Upstream XS = 14.5

Deck/Roadway Width = 35

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 2

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
0	21.9	18.4	100	21.9	18.4

Upstream Bridge Cross Section Data

Station Elevation Data num= 24

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	17.59	.01	17.59	9.5	17.59	20	13	20.01	13
21	13	21.01	13	32.7	6	40	6	40.01	6
41	6	41.01	6	60	6	60.01	6	61	6
61.01	6	64.2	6	80	13	80.01	13	81	13
81.01	13	90.5	17.59	100	17.59	100.01	17.59		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	9.5	.04	90.5	.1

Bank Sta:	Left	Right	Coeff Contr.	Expan.
	9.5	90.5	.1	.3

ExpandedLocal.rep

Downstream Deck/Roadway Coordinates

num= 2		Sta Hi Cord Lo Cord			
0	21.9	18.4	100	21.9	18.4

Downstream Bridge Cross Section Data

Station Elevation Data		num= 24		Sta		Elev		Sta		Elev	
0	17.59	.01	17.59	9.5	17.59	20	13	20.01	13		
21	13	21.01	13	32.7	6	40	6	40.01	6		
41	6	41.01	6	60	6	60.01	6	61	6		
61.01	6	64.2	6	80	13	80.01	13	81	13		
81.01	13	90.5	17.59	100	17.59	100.01	17.59				

Manning's n Values

num= 3		Sta		n Val	
0	.1	9.5	.04	90.5	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	9.5	90.5	.1	.3	

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 4

Pier Data

Pier Station	Upstream=	Downstream=
	20.5	20.5
Upstream	num= 2	
Width	Elev	Width Elev
1	14	1 18.4
Downstream	num= 2	
Width	Elev	Width Elev
1	14	1 18.4

Pier Data

Pier Station	Upstream=	Downstream=
	40.5	40.5
Upstream	num= 2	

```

      Width  Elev    Width  Elev
*****
      1      14      1      18.4
Downstream  num=      2
      Width  Elev    Width  Elev
*****
      1      14      1      18.4

```

Pier Data

```

Pier Station    Upstream=    60.5    Downstream=    60.5
Upstream      num=      2
      Width  Elev    Width  Elev
*****
      1      14      1      18.4
Downstream    num=      2
      Width  Elev    Width  Elev
*****
      1      14      1      18.4

```

Pier Data

```

Pier Station    Upstream=    80.5    Downstream=    80.5
Upstream      num=      2
      Width  Elev    Width  Elev
*****
      1      14      1      18.4
Downstream    num=      2
      Width  Elev    Width  Elev
*****
      1      14      1      18.4

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

ExpandedLocal.rep

RIVER: Reine Canal  
 REACH: Main RS: 2624

INPUT

Description: DS I-10 North  
 Section from SELA model

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
493	17.9	500	17	509	13.2	520	12.2	530	10.1
534	9	542	5.9	551	7.9	558	11.9	573	13.6
584	17.2	592	18.2	600	20.4				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
493	.078	493	.04	584	.078

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	493	584		26	26	.1	.3

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main RS: 2598

INPUT

Description: US I-10 South  
 Section from Sela model

Station Elevation Data num= 19

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
500	20.5	505.6	18.4	507.1	18.4	517.3	17.7	526.5	12.6
531.5	11.2	541.7	11.2	546	7.1	549.8	7.5	559	6.7
566.5	6.9	568.1	7.4	577.2	11.1	587	13.3	590.5	14.1
600.6	17.1	606	18	607.7	18.1	622	20.5		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
500	.078	517.3	.04	622	.078

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	517.3	622		64	64	.1	.3

BRIDGE

ExpandedLocal.rep

RIVER: Reine Canal  
 REACH: Main RS: 2566

INPUT

Description: I-10 South  
 Bridge from Sela model  
 Distance from Upstream XS = 6  
 Deck/Roadway Width = 52  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 2

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
0	22.8	19.3	100	22.8	19.3

Upstream Bridge Cross Section Data

Station Elevation Data num= 24

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	17.59	.01	17.59	9.5	17.59	20	13	20.01	13
21	13	21.01	13	32.7	6	40	6	40.01	6
41	6	41.01	6	60	6	60.01	6	61	6
61.01	6	64.2	6	80	13	80.01	13	81	13
81.01	13	90.5	17.59	100	17.59	100.01	17.59		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	9.5	.04	90.5	.1

Bank Sta: Left Right Coeff Contr. Expan.  
 9.5 90.5 .1 .3

Downstream Deck/Roadway Coordinates

num= 2

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
0	22.8	19.3	100	22.8	19.3

Downstream Bridge Cross Section Data

Station Elevation Data num= 24

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	17.59	.01	17.59	9.5	17.59	20	13	20.01	13
21	13	21.01	13	32.7	6	40	6	40.01	6
41	6	41.01	6	60	6	60.01	6	61	6

ExpandedLocal.rep

61.01	6	64.2	6	80	13	80.01	13	81	13
81.01	13	90.5	17.59	100	17.59	100.01	17.59		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
0	.1	9.5	.04	90.5	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	9.5	90.5		.1	.3

Upstream Embankment side slope	=	0	horiz. to 1.0 vertical
Downstream Embankment side slope	=	0	horiz. to 1.0 vertical
Maximum allowable submergence for weir flow	=	.98	
Elevation at which weir flow begins	=		
Energy head used in spillway design	=		
Spillway height used in design	=		
Weir crest shape	=	Broad Crested	

Number of Piers = 4

Pier Data

Pier Station	Upstream=	20.5	Downstream=	20.5
Upstream	num=	2		
Width	Elev	Width	Elev	
*****	*****	*****	*****	*****
1	10	1	19.3	
Downstream	num=	2		
Width	Elev	Width	Elev	
*****	*****	*****	*****	*****
1	10	1	19.3	

Pier Data

Pier Station	Upstream=	40.5	Downstream=	40.5
Upstream	num=	2		
Width	Elev	Width	Elev	
*****	*****	*****	*****	*****
1	10	1	19.3	
Downstream	num=	2		
Width	Elev	Width	Elev	
*****	*****	*****	*****	*****
1	10	1	19.3	

Pier Data

Pier Station	Upstream=	60.5	Downstream=	60.5
Upstream	num=	2		
Width	Elev	Width	Elev	
*****	*****	*****	*****	*****

```

      1      10      1      19.3
Downstream      num=      2
      Width  Elev      Width  Elev
*****
      1      10      1      19.3

```

Pier Data

```

Pier Station      Upstream=      80.5      Downstream=      80.5
Upstream      num=      2
      Width  Elev      Width  Elev
*****
      1      10      1      19.3
Downstream      num=      2
      Width  Elev      Width  Elev
*****
      1      10      1      19.3

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: Reine Canal

REACH: Main RS: 2534

INPUT

Description: DS I-10 South

Section from SELA model

```

Station Elevation Data      num=      16
      Sta      Elev      Sta      Elev      Sta      Elev      Sta      Elev      Sta      Elev
*****
      483      19.3      493      18.6      500      17.2      510      12.9      519      10.5
      526      8.3      532      7.6      532.6      8.3      540      6.6      552      8.7
      561      11.8      569      12.1      584      17.6      592      17.9      592.5      17.9

```

ExpandedLocal.rep

600 19.4

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 483 .078 483 .04 600 .078

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 483 600 79 79 79 .1 .3

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main RS: 2455

INPUT  
 Description: US I-10 Frontage Road  
 Section from SELA model

Station Elevation Data num= 12  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 500 18.3 517.6 15 520.7 13.3 538.2 10.2 542.4 7.2  
 550.6 6.9 556.8 7.6 562 12.2 569.2 14.7 576.5 17.1  
 578.5 18.3 582.7 18.8

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 500 .085 520.7 .04 562 .085

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 520.7 562 37 37 37 .1 .3

BRIDGE

RIVER: Reine Canal  
 REACH: Main RS: 2437

INPUT  
 Description: I-10 Frontage Road  
 Bridge from SELA model  
 Distance from Upstream XS = 5  
 Deck/Roadway Width = 27  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates  
 num= 6



ExpandedLocal.rep

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
450		17.4			500	20.9	17.4			500	20.9	17.8		
576	20.9		17.8		576	20.9	17.3			600	17.4			

Upstream Bridge Cross Section Data

Station Elevation Data num= 22

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
450	17.4	500	17.4	500.01	17.4	509	13.9	519	9.9
519.01	9.9	520	9.9	520.01	9.9	520.09	9.706	521	7.5
528	6.6	536	7.6	537	13.7	538.01	13.74	539.01	13.78
557	14.5	557.01	14.5	558	14.5	558.01	14.5	576	17.3
576.01	17.3	600	17.3						

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
450	.1	520	.04	537	.1

Bank	Sta: Left	Right	Coeff	Contr.	Expan.
	520.01	537	.1		.3

Downstream Deck/Roadway Coordinates

num= 6

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
450		17.4			500	20.9	17.4			500	20.9	17.8		
576	20.9		17.8		576	20.9	17.3			600	17.4			

Downstream Bridge Cross Section Data

Station Elevation Data num= 22

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
450	17.4	500	17.4	500.01	17.4	509	13.9	519	9.9
519.01	9.9	520	9.9	520.01	9.9	520.09	9.706	521	7.5
528	6.6	536	7.6	537	13.7	538.01	13.74	539.01	13.78
557	14.5	557.01	14.5	558	14.5	558.01	14.5	576	17.3
576.01	17.3	600	17.3						

Manning's n Values

num= 4

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
450	.1	500	.04	500.01	.04	576	.1

Bank	Sta: Left	Right	Coeff	Contr.	Expan.
	500	576	.1		.3

ExpandedLocal.rep

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 3

Pier Data

Pier Station Upstream= 519.5 Downstream= 519.5  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 13 1 17.8  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 13 1 17.8

Pier Data

Pier Station Upstream= 538.5 Downstream= 538.5  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 13 1 17.8  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 13 1 17.8

Pier Data

Pier Station Upstream= 557.5 Downstream= 557.5  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 13 1 17.8  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 13 1 17.8

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

ExpandedLocal.rep

High Flow Method  
Energy Only

Additional Bridge Parameters

- Add Friction component to Momentum
- Do not add Weight component to Momentum
- Class B flow critical depth computations use critical depth inside the bridge at the upstream end
- Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: Reine Canal  
REACH: Main RS: 2418

INPUT

Description: DS I-10 Frontage Road  
Section from SELA model

Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
500	18.5	514	17.1	532	8.8	540	6.9	552	7.7
556	11.8	566	13.1	575	16.8	580	19.3		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
500	.085	514	.04	575	.085

Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	514	575	331	331	331		.1	.3

CROSS SECTION

RIVER: Reine Canal  
REACH: Main RS: 2087

INPUT

Description:

Station Elevation Data num= 33

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	18.7	16	25.3	31	21.2	37	16.6	49	16.2
54	11.5	61	8.2	62	6.1	66	5.7	70	6.3
72	9.5	80	12.6	87	15.7	102	15.8	123	14.5

ExpandedLocal.rep

126	11.4	133	10.3	144	7.2	159	3.1	381	3.6
540	4.5	604	4.5	673	5.4	713	6	736	6.8
752	7.8	775	8.9	810	9.8	839	10	903	12.1
908	13.9	930	14	1120	14.5				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	49	.04	87	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	49	87		146	146		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
102	1120	15.8	F

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main RS: 1941

INPUT

Description:

Station Elevation Data num= 33

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	18.7	16	25.3	31	21.2	37	16.6	49	16.2
54	11.5	61	8.2	62	6.1	66	5.7	70	6.3
72	9.5	80	12.6	87	15.7	102	15.8	123	14.5
126	11.4	133	10.3	144	7.2	159	3.1	381	3.6
540	4.5	604	4.5	673	5.4	713	6	736	6.8
752	7.8	775	8.9	810	9.8	839	10	903	12.1
908	13.9	930	14	1120	14.5				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	49	.04	87	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	49	87		330	330		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
102	1120	15.8	F

CROSS SECTION

ExpandedLocal.rep

RIVER: Reine Canal  
 REACH: Main RS: 1611

INPUT

Description:

Station Elevation Data num= 33

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	18.7	16	25.3	31	21.2	37	16.6	49	16.2
54	11.5	61	8.2	62	6.1	66	5.7	70	6.3
72	9.5	80	12.6	87	15.7	102	15.8	123	14.5
126	11.4	133	10.3	144	7.2	159	3.1	381	3.6
540	4.5	604	4.5	673	5.4	713	6	736	6.8
752	7.8	775	8.9	810	9.8	839	10	903	12.1
908	13.9	930	14	1120	14.5				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	49	.04	87	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	49	87		61	61	.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
102	1120	15.8	F

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main RS: 1550

INPUT

Description:

Station Elevation Data num= 19

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	15.6	15	15.6	35	13.7	41	9.7	48	7.3
55	5.6	58	6.4	60	9	65	12	71	15.7
86	14.7	140	15.7	170	16.6	197	16	225	15.6
309	16.4	395	15.1	510	15.5	815	15.9		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	35	.04	71	.06

ExpandedLocal.rep

Bank Sta: Left    Right    Lengths: Left Channel    Right    Coeff Contr.    Expan.  
                  35        71                    451    451        451                    .1        .3

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main                    RS: 1099

INPUT

Description:

Station Elevation Data    num=        19  
       Sta    Elev        Sta    Elev        Sta    Elev        Sta    Elev        Sta    Elev  
 \*\*\*\*\*  
       0    15.6        15    15.6        35    13.7        41    9.7        48    7.3  
       55    5.1        58    6.4        60    9        65    12        71    15.7  
       86    14.7        140    15.7        170    16.6        197    16        225    15.6  
       309    16.4        395    15.1        510    15.5        815    15.9

Manning's n Values            num=        3  
       Sta    n Val        Sta    n Val        Sta    n Val  
 \*\*\*\*\*  
       0    .06        35    .04        71    .06

Bank Sta: Left    Right    Lengths: Left Channel    Right    Coeff Contr.    Expan.  
                  35        71                    879    879        879                    .1        .3

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main                    RS: 220

INPUT

Description:

Station Elevation Data    num=        16  
       Sta    Elev        Sta    Elev        Sta    Elev        Sta    Elev        Sta    Elev  
 \*\*\*\*\*  
       -50    13.33        0    13.33        13    11.3        19    9.3        23    7.5  
       26    5.2        31    4.1        35    4.5        37    7.7        41    8.8  
       47    12.2        54    11.8        76    11.8        88    12.4        118    12.9  
       211    15.4

Manning's n Values            num=        3  
       Sta    n Val        Sta    n Val        Sta    n Val  
 \*\*\*\*\*  
       -50    .06        13    .04        47    .1

ExpandedLocal.rep

Bank Sta: Left    Right    Lengths: Left Channel    Right    Coeff Contr.    Expan.  
                  13       47                        0       0                        0                        .1                        .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper                        RS: 41958

INPUT

Description: Data from Survey

Station Elevation Data    num=       10  
       Sta    Elev       Sta    Elev       Sta    Elev       Sta    Elev       Sta    Elev  
 \*\*\*\*\*  
       -919    27         0    28.1       11    26.7       25    23.2       32    23.5  
       43    26.1       53    27.1       68    28.2       435    26.9       1016    27.2

Manning's n Values            num=       3  
       Sta    n Val       Sta    n Val       Sta    n Val  
 \*\*\*\*\*  
       -919    .06       11    .05       43    .06

Bank Sta: Left    Right    Lengths: Left Channel    Right    Coeff Contr.    Expan.  
                  11       43                        47       47                        47                        .1                        .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper                        RS: 41911

INPUT

Description: Data from Survey

Station Elevation Data    num=       8  
       Sta    Elev       Sta    Elev       Sta    Elev       Sta    Elev       Sta    Elev  
 \*\*\*\*\*  
       0    27.7       20    27.3       36    26.5       46    23.3       54    23.1  
       66    26.5       81    27.1       102    27.3

Manning's n Values            num=       3  
       Sta    n Val       Sta    n Val       Sta    n Val  
 \*\*\*\*\*  
       0    .06       36    .05       66    .06

Bank Sta: Left    Right    Lengths: Left Channel    Right    Coeff Contr.    Expan.  
                  36       66                        70       70                        70                        .1                        .3

Ineffective Flow            num=       2

ExpandedLocal.rep

Sta L	Sta R	Elev	Permanent
0	25.9	27.2	F
75.12	102	27.2	F

CULVERT

RIVER: W-15 Main  
 REACH: Upper RS: 41876

INPUT

Description: W-15 #34  
 Cherrywood Lane  
 Distance from Upstream XS = 18.5  
 Deck/Roadway Width = 33  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 4

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0		27.4			38		27.4			116		27.3		
169		27.2												

Upstream Bridge Cross Section Data

Station Elevation Data num= 8

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	27.7	20	27.3	36	26.5	45.4	23	56	23
66	26.5	81	27.1	102	27.3				

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	36	.05	66	.06

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	36	66		.1	.3

Ineffective Flow

num= 2

Sta L	Sta R	Elev	Permanent
0	25.9	27.2	F
75.12	102	27.2	F

Downstream Deck/Roadway Coordinates

num= 4

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0		27.4			5		27.4			50		27.4		
128		27.3												



ExpandedLocal.rep

Downstream Bridge Cross Section Data

Station Elevation Data num= 8

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	27.5	17	26.9	29	26	41	21.4	50	22
63	26.5	73	27.5	95	27.3				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	29	.05	63	.06

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	29	63		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	28.19	27.2	F
60.87	95	27.2	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 3

Culvert Name	Shape	Rise	Span	Exit Loss Coef		
Culvert #3	Pipe Arch	2	3.23			
FHWA Chart # 34- 18 inch corner radius; Corrugated metal						
FHWA Scale # 1 - 90 Degree headwall						
Solution Criteria = Highest U.S. EG						
Culvert	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef
1	18.5	33	.012	.012	0	.7

Upstream Elevation = 23  
 Centerline Station = 46  
 Downstream Elevation = 22.9  
 Centerline Station = 39

Culvert Name	Shape	Rise	Span
Culvert #2	Pipe Arch	3.5	5.74
FHWA Chart # 34- 18 inch corner radius; Corrugated metal			
FHWA Scale # 1 - 90 Degree headwall			

ExpandedLocal.rep

Solution Criteria = Highest U.S. EG

Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
Exit Loss Coef

18.5 33 .012 .012 0 .7

1

Upstream Elevation = 23.1  
Centerline Station = 50.5  
Downstream Elevation = 23  
Centerline Station = 44.5

Culvert Name Shape Rise Span  
Culvert #1 Pipe Arch 2 3.23  
FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
FHWA Scale # 1 - 90 Degree headwall

Solution Criteria = Highest U.S. EG

Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
Exit Loss Coef

18.5 33 .012 .012 0 .7

1

Upstream Elevation = 23  
Centerline Station = 55  
Downstream Elevation = 23  
Centerline Station = 50

CROSS SECTION

RIVER: W-15 Main  
REACH: Upper RS: 41841

INPUT

Description: Data from Survey

Station Elevation Data num= 8

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	27.5	17	26.9	29	26	41	21.4	50	22
63	26.5	73	27.5	95	27.3				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	29	.05	63	.06

Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	29	63	1615	1615	1615		.1	.3
Ineffective Flow	num= 2							
	Sta L	Sta R	Elev	Permanent				
	0	28.19	27.2	F				

60.87 95 27.2 F

CROSS SECTION

RIVER: W-15 Main

REACH: Upper RS: 40226

INPUT

Description: Data from Survey

Station Elevation Data num= 17

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1281	28.1	0	25.6	15	25.9	31	26.9	44	26.8
53	25.8	57	22.7	62	21.5	68	20.7	73	21
78	25.4	86	26.8	96	27.7	99	26	113	25.7
125	26.2	1142	28.1						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1281	.06	53	.05	78	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	53	78		1164	1164	.1	.3

CROSS SECTION

RIVER: W-15 Main

REACH: Upper RS: 39062

INPUT

Description: Data from Survey

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-610	28.4	0	25.1	21	25.2	35	25.8	57	25
70	21.3	83	21.1	95	25	120	25.6	147	25.5
1245	29.4								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-610	.06	57	.05	95	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	57	95		196	196	.1	.3

ExpandedLocal.rep

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 38866

INPUT

Description: Data from Survey

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-610	28.4	0	25.3	20	26.2	29	26.8	44	26.6
54	23	64	21.1	79	20.6	84	23	91	26.4
100	25.7	115	25.7	138	25.8	1245	29.4		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-610	.06	44	.05	91	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	44	91		70	70		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-610	42.5	27.3	F
96.5	1245	27.3	F

CULVERT

RIVER: W-15 Main  
 REACH: Upper RS: 38831

INPUT

Description: Hwy. Department Road

W-15 #32

Distance from Upstream XS = 17.5

Deck/Roadway Width = 35

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 6

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
-610	27.3		0	27.3		69	27.4	
116	27.4		168	27.3		1245	27.3	

Upstream Bridge Cross Section Data

ExpandedLocal.rep

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-610	28.4	0	25.3	20	26.2	29	26.8	44	26.6
54	23	60	20.8	79	20.6	84	23	91	26.4
100	25.7	115	25.7	138	25.8	1245	29.4		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-610	.06	44	.05	91	.06

Bank Sta: Left Right Coeff Contr. Expan.

44	91		.1	.3
----	----	--	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-610	42.5	27.3	F
96.5	1245	27.3	F

Downstream Deck/Roadway Coordinates num= 6

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-610	27.3				0	27.3				64	27.4			
110	27.4				163	27.3				1245	27.3			

Downstream Bridge Cross Section Data

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-610	28.4	0	25.3	14	25.5	27	26.1	39	26.5
50	22.9	54	19.9	69	20.7	83	26	99	26.5
114	26.6	125	25.5	1245	29.4				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-610	.06	39	.05	83	.06

Bank Sta: Left Right Coeff Contr. Expan.

39	83		.1	.3
----	----	--	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-610	44.25	27.3	F
77.75	1245	27.3	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical



Centerline Station = 67

CROSS SECTION

RIVER: W-15 Main

REACH: Upper

RS: 38796

INPUT

Description: Data from Survey

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-610	28.4	0	25.3	14	25.5	27	26.1	39	26.5
52	22.9	57	19.9	69	21	83	26	99	26.5
114	26.6	125	25.5	1245	29.4				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-610	.06	39	.05	83	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	39	83		1854	1854		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-610	44.25	27.3	F
77.75	1245	27.3	F

CROSS SECTION

RIVER: W-15 Main

REACH: Upper

RS: 36942

INPUT

Description: Data from Survey

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1295	28.3	0	24.1	14	25.7	27	27.9	43	24.9
48	21.3	54	19.7	62	20.9	67	25	85	25.6
90	27.3	96	25.1	108	24.9	375	25.5		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1295	.06	43	.05	67	.06

ExpandedLocal.rep

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
43	67	134	134	134		.1	.3

CULVERT

RIVER: W-15 Main  
 REACH: Upper RS: 36875

INPUT  
 Description: Hwy. 11  
 W-15 #31

Actually has 14 - 3' span by 3.03' rise  
 culverts but for hec-ras modeling, had to simplify to 1 42' span  
 by 3.03' rise culvert.

Distance from Upstream XS = 46  
 Deck/Roadway Width = 42  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num=	6								
Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
*****									
-1295		29		0	29		49		29
75		29		130	28.8		375		28.8

Upstream Bridge Cross Section Data

Station	Elevation	Data	num=	14					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-1295	28.3	0	24.1	14	25.7	27	25	30.5	23.75
48	21.3	54	19.7	62	20	82.5	20	85	25.6
90	27.3	96	25.1	108	24.9	375	25.5		

Manning's n	Values	num=	3		
Sta	n Val	Sta	n Val	Sta	n Val
*****					
-1295	.06	27	.05	90	.06

Bank Sta: Left	Right	Coeff	Contr.	Expan.
27	90		.1	.3

Downstream Deck/Roadway Coordinates

num=	8								
Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
*****									
-1295		29		0	29		5		29



ExpandedLocal.rep

63 29 90 29 116 29  
 171 28.8 375 28.8

Downstream Bridge Cross Section Data

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1295	28.8	0	27.1	16	24.9	19.5	23.5	28	22.5
37	20.3	40	19.6	47	21.1	51	21	67	19.7
86	24.8	109	24.3	375	25.5				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1295	.06	16	.05	86	.06

Bank Sta: Left Right Coeff Contr. Expan.  
 16 86 .1 .3

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 2

Culvert Name	Shape	Rise	Span
Culvert #14	Box	3.03	43

FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG

Culvert	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
1	46	42	.012	.012	0		.4

Upstream Elevation = 23.7  
 Centerline Station = 53  
 Downstream Elevation = 23.6  
 Centerline Station = 42

Culvert Name	Shape	Rise	Span
Culvert #15	Box	3.03	3

FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG

ExpandedLocal.rep

Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 46 42 .012 .012 0 .4

1

Upstream Elevation = 20.1  
 Centerline Station = 77.75  
 Downstream Elevation = 20  
 Centerline Station = 66.75

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 36808

INPUT

Description: Data from Survey

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1295	28.3	0	27.1	16	24.9	27	24.7	34	23.4
37	20.3	40	19.6	47	21.1	51	22	56	25
86	24.8	109	24.3	375	25.5				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1295	.06	34	.05	56	.06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 34 56 102 102 102 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 36792

INPUT

Description: Data from Survey

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1295	28.3	0	27.1	16	24.9	27	24.7	34	23.4
37	20.3	40	19.6	47	21.1	51	22	56	25
86	24.8	109	24.3	375	25.5				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1295	.06	34	.05	56	.06

ExpandedLocal.rep

Sta	n Val	Sta	n Val	Sta	n Val
-1295	.06	34	.05	56	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	34	56		102	102		.1	.3

BRIDGE

RIVER: W-15 Main  
 REACH: Upper RS: 36741

INPUT

Description: Railroad Crossing  
 W-15 #30  
 Distance from Upstream XS = 44  
 Deck/Roadway Width = 14  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 7

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-1295		31.3			0		31.3			16		31.4		27.5
99		31.3		27.5	127		31.3			163		31.3		
375		31.3												

Upstream Bridge Cross Section Data

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1295	28.3	0	27.1	16	24.9	27	24.7	34	23.4
37	20.3	40	19.6	47	19.8	51	20	65	20.3
86	24	109	24.3	375	25.5				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1295	.06	34	.05	86	.06

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	34	86		.1	.3

Downstream Deck/Roadway Coordinates

num= 7

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-1295		31.3			0		31.3			16		31.4		27.5

ExpandedLocal.rep

99 31.3 27.5 127 31.3 163 31.3  
 375 31.3

Downstream Bridge Cross Section Data

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1295	28.3	0	24.4	22	24.7	45	24.9	52	21.5
56	20.5	59	19.9	62	20.4	70	20.2	73	20
87	23	112	24.1	375	25.5				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1295	.06	45	.05	87	.06

Bank Sta: Left Right Coeff Contr. Expan.  
 45 87 .1 .3

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 7

Pier Data

Pier Station Upstream= 25 Downstream= 28

Upstream num= 2

Width	Elev	Width	Elev
1	0	1	27.5

Downstream num= 2

Width	Elev	Width	Elev
1	0	1	27.5

Pier Data

Pier Station Upstream= 35 Downstream= 38

Upstream num= 2

Width	Elev	Width	Elev
1	0	1	27.5

Downstream num= 2

Width	Elev	Width	Elev

\*\*\*\*\*  
1 0 1 27.5

Pier Data

Pier Station Upstream= 45.5 Downstream= 49

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 27.5

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 27.5

Pier Data

Pier Station Upstream= 56 Downstream= 59

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1.1 0 1.1 27.5

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1.1 0 1.1 27.5

Pier Data

Pier Station Upstream= 66 Downstream= 70

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 27.5

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 27.5

Pier Data

Pier Station Upstream= 78 Downstream= 80

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1.05 0 1.05 27.5

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1.05 0 1.05 27.5

Pier Data

Pier Station Upstream= 89 Downstream= 90

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 27.5

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 27.5

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main

REACH: Upper

RS: 36690

INPUT

Description: Data from Survey

Station Elevation Data num= 13

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*

-1295 28.3 0 24.4 22 24.7 45 24.9 52 21.5

56 20.5 59 19.9 62 20.4 70 22.2 73 23.5

87 24 112 24.1 375 25.5

Manning's n Values num= 3

Sta n Val Sta n Val Sta n Val

\*\*\*\*\*

-1295 .06 45 .05 73 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
45 73 362 362 362 .1 .3

ExpandedLocal.rep

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 36328

INPUT

Description: Data from Survey

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1265	26.4	0	23.9	16	23.2	30	23.2	44	23.4
47	20	51	19.5	57	21	60	23.2	72	24.1
88	23.7	112	23.7	728	29.4				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1265	.06	44	.05	60	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	44	60		887	887		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 35441

INPUT

Description: Data from the survey

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1789	25.6	0	23.3	9	25.4	22	25.3	34	23.7
48	23.2	51	19.5	55	18.6	61	20	65	20.8
67	23.5	77	24.8	92	25.4	97	27.3	133	24.1
825	29.2								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1789	.06	48	.05	67	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	48	67		1266	1266		.1	.3

ExpandedLocal.rep

CROSS SECTION

RIVER: W-15 Main  
REACH: Upper RS: 34175

INPUT

Description: Data from Survey

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1524	24.4	0	23.5	20	23.4	25	26.5	32	26.1
36	23.3	45	22.1	49	19.1	53	18.4	57	19.1
61	22.1	75	23.5	81	25.6	91	23.8	118	24.6
1018	24								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1524	.06	45	.05	61	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	45	61		467	467		.1	.3

LATERAL STRUCTURE

RIVER: W-15 Main  
REACH: Upper RS: 34100

INPUT

Description:

Lateral structure position = Right overbank

Distance from Upstream XS =

Deck/Roadway Width = 25

Weir Coefficient = 2.6

Weir Flow Reference = Water Surface

Weir Embankment Coordinates num = 2

Sta	Elev	Sta	Elev
0	24	465	24

Weir crest shape = Broad Crested

CROSS SECTION



ExpandedLocal.rep

RIVER: W-15 Main  
REACH: Upper

RS: 33708

INPUT

Description: Data from Survey

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1027	25.3	0	22.4	13	22.5	24	25.1	32	22.1
43	21.4	46	18.3	48	17.9	54	18.4	56	21.5
82	22.3	88	22.4	108	22.4	250	24		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1027	.06	43	.05	56	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	43	56		677	677		.1	.3

LATERAL STRUCTURE

RIVER: W-15 Main  
REACH: Upper

RS: 33500

INPUT

Description: NE Inlet

Lateral structure position = Right overbank

Distance from Upstream XS =

Deck/Roadway Width = 25

Weir Coefficient = 2.6

Weir Flow Reference = Water Surface

Weir Embankment Coordinates num = 6

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	24	10	24	14.4	21.8	49.4	21.8	53.8	24
675	24								

Weir crest shape = Broad Crested

CROSS SECTION

RIVER: W-15 Main  
REACH: Upper

RS: 33031

ExpandedLocal.rep

INPUT

Description: Data from Survey

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1027	25.3	0	22.4	13	22.5	24	25.1	32	22.1
43	21.4	46	17.7	48	17.4	54	17.8	56	21.5
82	22.3	88	22.4	108	22.4	348	24		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1027	.06	43	.05	56	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	43	56		853	853		.1	.3

LATERAL STRUCTURE

RIVER: W-15 Main

REACH: Upper RS: 33000

INPUT

Description: SE Inlet

Lateral structure position = Right overbank

Distance from Upstream XS =

Deck/Roadway Width = 25

Weir Coefficient = 2.6

Weir Flow Reference = Water Surface

Weir Embankment Coordinates num = 2

Sta	Elev	Sta	Elev
0	24	851	24

Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name Shape Rise Span  
 Culvert #1 Arch 2.5833 4.25

FHWA Chart # 41- Arch; Corrugated metal

FHWA Scale # 1 - 90 Degree headwall

Solution Criteria = Highest U.S. EG

Culvert Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef
	96	.012	.012	0	.7

ExpandedLocal.rep

1

Number of Barrels = 2  
 Upstream Elevation = 20.4  
 Centerline Stations  
     Sta.    Sta.  
     800    810  
 Downstream Elevation = 20  
 Centerline Stations  
     Sta.    Sta.  
     800    810

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper                      RS: 32178

INPUT

Description: Data from Survey

Station Elevation Data      num=      12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1606	26.2	0	22.2	23	22.2	41	20.5	45	17.4
49	16.8	54	17.4	58	19.6	64	22	98	22.3
127	22.9	325	24						

Manning's n Values      num=      3

Sta	n Val	Sta	n Val	Sta	n Val
-1606	.085	41	.05	64	.07

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	41	64		20	20		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper                      RS: 32158

INPUT

Description: Data from Survey

Station Elevation Data      num=      12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1606	26.2	0	22.2	23	22.2	41	20.5	45	17.4
49	16.8	54	17.4	58	19.6	64	22	98	22.3
127	22.9	325	24						

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1606 .085 41 .05 64 .07

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 41 64 70 70 70 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -1606 21.98 24 F  
 77.02 325 24 F

CULVERT

RIVER: W-15 Main  
 REACH: Upper RS: 32123

INPUT

Description: Haas Road  
 W-15 #28  
 Distance from Upstream XS = 21  
 Deck/Roadway Width = 42  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates  
 num= 8

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-1606	24.1				0	24.1				8	24.1			
60	24.1				111	24				162	24.1			
219	24				325	24								

Upstream Bridge Cross Section Data

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1606	26.2	0	22.2	23	22.2	41	20.5	44.5	17.4
49	16.8	54	17.4	58	19.6	64	22	98	22.3
127	22.9	325	24						

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1606 .1 41 .05 64 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 41 64 .1 .3

ExpandedLocal.rep

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -1606 21.98 24 F  
 77.02 325 24 F

Downstream Deck/Roadway Coordinates

num= 7  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 -101 24.1 0 24.1 42 24.1  
 94 24.1 146 24 197 24.1  
 2000 24.1

Downstream Bridge Cross Section Data

Station Elevation Data num= 13  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -101 22 0 22.6 23 23.9 51 22.6 58 19.7  
 62.5 17.7 68 17 73 17.4 76 19.5 88 22.4  
 122 23.8 161 23.1 2000 24.7

Manning's n Values

num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -101 .1 51 .05 88 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 51 88 1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -101 50.48 24 F  
 84.52 2000 24 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 2

Culvert Name Shape Rise Span  
 Culvert #1 Pipe Arch 4 6.03  
 FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
 FHWA Scale # 1 - 90 Degree headwall  
 Solution Criteria = Highest U.S. EG

ExpandedLocal.rep

Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 21 42 .012 .012 0 .7

1

Upstream Elevation = 17.8  
 Centerline Station = 46  
 Downstream Elevation = 17.7  
 Centerline Station = 64

Culvert Name Shape Rise Span  
 Culvert #2 Pipe Arch 4 6.03  
 FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
 FHWA Scale # 1 - 90 Degree headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 21 42 .012 .012 0 .7

1

Upstream Elevation = 17.8  
 Centerline Station = 53  
 Downstream Elevation = 17.7  
 Centerline Station = 71

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 32088

INPUT

Description: Data from Survey

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-101	22	0	22.6	23	23.9	51	22.6	58	19.7
63	17.7	68	17	73	17.4	76	19.5	88	22.4
122	22.8	161	23.1	1000	23.8	2000	24.7		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-101	.085	51	.05	88	.07

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 51 88 309 309 309 1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -101 50.48 24 F

84.52 2000 24 F

CROSS SECTION

RIVER: W-15 Main
REACH: Upper RS: 31779

INPUT

Description: Data from Survey

Station Elevation Data num= 17

Table with 11 columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains station and elevation data for 17 points.

Manning's n Values num= 3

Table with 6 columns: Sta, n Val, Sta, n Val, Sta, n Val. Contains Manning's n values for 3 points.

Summary table with 8 columns: Bank Sta, Left, Right, Lengths, Left Channel, Right, Coeff Contr., Expan. Contains summary data for the cross-section.

CROSS SECTION

RIVER: W-15 Main
REACH: Upper RS: 30955

INPUT

Description: Data from Survey

Station Elevation Data num= 12

Table with 11 columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains station and elevation data for 12 points.

Manning's n Values num= 3

Table with 6 columns: Sta, n Val, Sta, n Val, Sta, n Val. Contains Manning's n values for 3 points.

Summary table with 8 columns: Bank Sta, Left, Right, Lengths, Left Channel, Right, Coeff Contr., Expan. Contains summary data for the cross-section.

ExpandedLocal.rep

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 29994

INPUT

Description: Data from Survey

Station Elevation Data num= 17

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-706	23.3	0	21.9	14	21.6	25	20.7	35	16.2
37	15.6	41	15.8	47	20.6	56	22.5	66	22.2
75	20	81	17.2	83	17	87	17.6	90	19.4
106	21	728	24.1						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-706	.06	25	.05	47	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	25	47	1001	1001	1001	.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
66	728	22.2	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 28993

INPUT

Description: Data from Survey

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-580	22.8	0	21.4	12	20.7	13	20.3	17	16
22	15.4	27	16.1	38	20.8	49	21.6	70	22.1
400	21.5								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-580	.15	13	.015	38	.15



ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 13 38 530 530 530 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 28463

INPUT

Description: Data from Survey

Station Elevation Data num= 11  

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-581	22.8	0	22.2	26	21.8	35	21.4	50	15.8
54	15.2	60	16	70	20.5	88	21.3	110	21.3
400	21.5								

Manning's n Values num= 3  

Sta	n Val	Sta	n Val	Sta	n Val
-581	.15	35	.015	70	.15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 35 70 533 533 533 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 27930

INPUT

Description: Data from Survey

Station Elevation Data num= 9  

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-20	23.4	0	22.8	10	21.5	16	18.1	19	15.2
24	14.4	28	15	42	23.2	85	23.4		

Manning's n Values num= 3  

Sta	n Val	Sta	n Val	Sta	n Val
-20	.15	10	.015	42	.15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 10 42 133 133 133 .1 .3

ExpandedLocal.rep

BRIDGE

RIVER: W-15 Main  
 REACH: Upper RS: 27864

INPUT

Description: Bluefield Drive

W-15 #26

Distance from Upstream XS = 52

Deck/Roadway Width = 29

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 5

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-22		23.7			2		23.3		22.9	40		23.5		22.9
62		23.1			118		22.5							

Upstream Bridge Cross Section Data

Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-20	23.4	0	22.8	10	21.5	16	18.1	19	15.2
24	14.4	28	15	42	23.2	85	23.4		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-20	.15	10	.015	42	.15

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	10	42		.1	.3

Downstream Deck/Roadway Coordinates

num= 5

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0		23.5			13		23.3		22.9	52		23.5		22.9
73		23.1			129		22.4							

Downstream Bridge Cross Section Data

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	22.9	20	21.4	28	17.7	35	14.5	38	14.3
41	14.6	47	19.4	52	21.8	76	23.4	121	23.2

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .15 20 .015 52 .15

Bank Sta: Left Right Coeff Contr. Expan.  
 20 52 .1 .3

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 3

Pier Data

Pier Station Upstream= 13 Downstream= 23.5

Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 .833 0 .833 22.9

Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 .833 0 .833 22.9

Pier Data

Pier Station Upstream= 24 Downstream= 34

Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 .833 0 .833 22.9

Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 .833 0 .833 22.9

Pier Data

Pier Station Upstream= 33 Downstream= 44

Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 .833 0 .833 22.9

Downstream num= 2  
 Width Elev Width Elev

\*\*\*\*\*  
.833      0      .833      22.9

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth  
inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main

REACH: Upper

RS: 27797

INPUT

Description: Data from Survey

Station Elevation Data      num=      10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	22.9	20	21.4	28	17.7	35	14.5	38	14.3
41	14.6	47	19.4	52	21.8	76	23.4	121	23.2

Manning's n Values      num=      3

Sta	n Val	Sta	n Val	Sta	n Val
0	.15	20	.015	52	.15

Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	20	52	789	789	789		.1	.3

CROSS SECTION

RIVER: W-15 Main

REACH: Upper

RS: 27008

INPUT

ExpandedLocal.rep

Description: Data from Survey

Station Elevation Data num= 11									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-896	23.1	0	20	28	19.7	50	19.2	56	14.5
60	13.6	64	14.5	69	19.7	92	20.8	119	20.6
175	21.5								

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
-896	.1	50	.05	69	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	50	69		620	620		.1	.3

CROSS SECTION

RIVER: W-15 Main  
REACH: Upper RS: 26388

INPUT

Description: Data from Survey

Station Elevation Data num= 13									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1313	22.2	0	19.4	26	19.7	47	19.7	51	15.3
54	13.5	60	12.6	63	13.3	66	15.1	69	20.1
85	20.2	113	19.8	348	21.6				

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
-1313	.1	47	.05	69	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	47	69		640	640		.1	.3

CROSS SECTION

RIVER: W-15 Main  
REACH: Upper RS: 25748

INPUT

Description: Data from Survey

Station Elevation Data num= 13	
--------------------------------	--

ExpandedLocal.rep

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-951	23.3	0	21.3	51	19.8	100	18.4	103	15.5
105	12.7	110	12.2	116	13.1	119	15.8	121	19.2
140	19.9	160	19.7	366	20.1				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-951	.075	100	.05	121	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	121		650	650		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 25098

INPUT  
 Description: 100' DS confluence with Edens Canal  
 Data from Survey

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1624	20.3	0	18.9	31	19.2	47	18.9	54	13.9
59	13.4	61	11.3	64	9.4	69	11.9	71	14.2
76	20.4	96	21.3	116	20.4	300	20.4		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1624	.1	47	.05	76	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	47	76		786	786		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 24312

INPUT  
 Description: Data from Survey  
 Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-----	------	-----	------	-----	------	-----	------	-----	------

ExpandedLocal.rep

```
*****
-983  21.7    0   18.6   13  18.1   19  19.2   26  18.7
   32  17.1   36  11.3   46  11.1   55   13   58  17.5
   62  19.8   74  20.1  100  20.2  131  19.3  175  20.6
```

```
Manning's n Values      num=      3
Sta  n Val   Sta  n Val   Sta  n Val
*****
-983    .1    26    .05    62    .15
```

```
Bank Sta: Left  Right  Lengths: Left Channel  Right  Coeff Contr.  Expan.
          26    62          650    650    650          .1    .3
```

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 23662

INPUT

Description: Data from Survey

```
Station Elevation Data      num=      15
Sta  Elev   Sta  Elev   Sta  Elev   Sta  Elev   Sta  Elev
*****
-983  21.7    0   19.2   19  19.3   51  16.8   54  14.2
   56  11.8   64   9.2   73  11.6   75  15.2   78  18.7
   82  20.1   96  20.4  111  20.5  130  19.3  400   21
```

```
Manning's n Values      num=      3
Sta  n Val   Sta  n Val   Sta  n Val
*****
-983    .1    51    .05    78    .15
```

```
Bank Sta: Left  Right  Lengths: Left Channel  Right  Coeff Contr.  Expan.
          51    78          56    56    56          .1    .3
```

```
Ineffective Flow      num=      2
Sta L  Sta R   Elev Permanent
-983   41.5    21      F
  87.5   400    21      F
```

BRIDGE

RIVER: W-15 Main  
 REACH: Upper RS: 23634

INPUT

Description:

ExpandedLocal.rep

Distance from Upstream XS = 12.5  
 Deck/Roadway Width = 31  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 8

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-983		21.3			-17		21.3			18		21.3		
54	21.15		19.9		75	21.15		19.9		111		21		
164	21.1				400	21.1								

Upstream Bridge Cross Section Data

Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-983	21.7	0	19.2	19	19.3	51	16.8	54	14.2
56	11.8	64	9.2	73	11.6	75	15.2	78	18.7
82	20.1	96	20.4	111	20.5	130	19.3	400	21

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-983	.1	51	.05	78	.15

Bank Sta: Left Right Coeff Contr. Expan.  
 51 78 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-983	41.5	21	F
87.5	400	21	F

Downstream Deck/Roadway Coordinates

num= 7

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-983		21.3			13		21.3			42		21.15		19.9
63	21.15		19.9		99	21				152		21.1		
400	21.1													

Downstream Bridge Cross Section Data

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-983	21.7	0	19.7	14	19.6	31	19	39	14.6
43	12.2	53	9.6	62	11.5	65	15.7	71	19
85	19.8	110	19.7	400	21				

Manning's n Values

num= 3



Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
-983	.1	31	.05	71	.15

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	31	71		.1	.3

Ineffective Flow	num=	2	
Sta L	Sta R	Elev	Permanent
-983	35.75	21	F
69.25	400	21	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
Maximum allowable submergence for weir flow = .98  
Elevation at which weir flow begins =  
Energy head used in spillway design =  
Spillway height used in design =  
Weir crest shape = Broad Crested

Number of Piers = 2

Pier Data

Pier Station	Upstream=	61	Downstream=	48
--------------	-----------	----	-------------	----

Upstream	num=	2	
Width	Elev	Width	Elev
*****	*****	*****	*****
1	0	1	19.9

Downstream	num=	2	
Width	Elev	Width	Elev
*****	*****	*****	*****
1	0	1	19.9

Pier Data

Pier Station	Upstream=	68	Downstream=	55
--------------	-----------	----	-------------	----

Upstream	num=	2	
Width	Elev	Width	Elev
*****	*****	*****	*****
1	0	1	19.9

Downstream	num=	2	
Width	Elev	Width	Elev
*****	*****	*****	*****
1	0	1	19.9

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

ExpandedLocal.rep

High Flow Method  
Energy Only

Additional Bridge Parameters

- Add Friction component to Momentum
- Do not add Weight component to Momentum
- Class B flow critical depth computations use critical depth inside the bridge at the upstream end
- Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main  
REACH: Upper RS: 23606

INPUT

Description: Data from Survey

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-983	21.7	0	19.7	14	19.6	31	19	39	14.6
43	12.2	53	9.6	62	11.5	65	15.7	71	19
85	19.8	110	19.7	400	21				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-983	.1	31	.05	71	.15

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	31	71		144	144		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-983	35.75	21	F
69.25	400	21	F

CROSS SECTION

RIVER: W-15 Main  
REACH: Upper RS: 23462

INPUT

Description: Data from Survey

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-----	------	-----	------	-----	------	-----	------	-----	------

ExpandedLocal.rep

```
*****
-600  21.5    0   20.4    23  19.6    41  17.4    47  11.3
  52  10.8    59  11.6    62  14.6    70   18    87  19.5
 108  19.5   316  21.45
```

Manning's n Values num= 3

```
Sta  n Val  Sta  n Val  Sta  n Val
*****
-600  .07    41  .05    70  .06
```

```
Bank Sta: Left  Right  Lengths: Left Channel  Right  Coeff Contr.  Expan.
          41    70          0    0    0          .1    .3
```

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 22961

INPUT

Description: Data from Survey

```
Station Elevation Data num= 12
Sta  Elev  Sta  Elev  Sta  Elev  Sta  Elev  Sta  Elev
*****
-330  20.5    0   19    21  18.5    42  17.9    47  10.7
  52  10.6    62  12.6    66  16.4    69  18.6    90  19.8
 121  19.8   325  21.3
```

Manning's n Values num= 3

```
Sta  n Val  Sta  n Val  Sta  n Val
*****
-330  .06    42  .05    69  .06
```

```
Bank Sta: Left  Right  Lengths: Left Channel  Right  Coeff Contr.  Expan.
          42    69          676  676    676          .1    .3
```

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 22285

INPUT

Description: Data from Survey

```
Station Elevation Data num= 11
Sta  Elev  Sta  Elev  Sta  Elev  Sta  Elev  Sta  Elev
*****
-1200  21.5    0   18.3    23  17.9    47  16.6    52  11
```

ExpandedLocal.rep

56	10.4	64	11.8	68	16.8	81	17.8	98	17.8
1312	21.7								

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1200 .1 47 .05 68 .1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	47	68		58 58	58	.1	.3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -1200 -30 23.38 F  
 142 1312 23.38 F

BRIDGE

RIVER: W-15 Main  
 REACH: Mid RS: 22250

INPUT

Description: Brownsitch Road (SELA Model)  
 Distance from Upstream XS = 14  
 Deck/Roadway Width = 30  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num=	5								
Sta Hi Cord	Lo Cord	Sta Hi Cord	Lo Cord	Sta Hi Cord	Lo Cord	Sta Hi Cord	Lo Cord		
*****									
-1200	23.38	21	23.38	19.75	35	23.38	20.3		
91	23.38	19.75	1312	23.38					

Upstream Bridge Cross Section Data

Station Elevation Data	num=	11							
Sta Elev	Sta Elev	Sta Elev	Sta Elev	Sta Elev	Sta Elev	Sta Elev	Sta Elev		
*****									
-1200	21.5	0	18.3	23	17.9	47	16.6	52	11
56	10.4	64	11.8	68	16.8	81	17.8	98	17.8
1312	21.7								

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1200 .1 47 .05 68 .1

Bank Sta:	Left	Right	Coeff Contr.	Expan.
	47	68	.1	.3

ExpandedLocal.rep

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -1200 -30 23.38 F  
 142 1312 23.38 F

Downstream Deck/Roadway Coordinates

num= 5  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 -1200 23.38 3 23.38 19.75 17 23.38 20.3  
 73 23.38 19.75 1312 23.38

Downstream Bridge Cross Section Data

Station Elevation Data num= 13  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1200 21.5 0 18.2 18 17.3 32 16.1 38 13.3  
 40 11.4 44 10.5 50 11.3 53 13.9 60 15.9  
 73 19.4 109 18.6 1312 21.7

Manning's n Values

num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1200 .1 32 .05 60 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 32 60 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -1200 -26 23.38 F  
 102 1312 23.38 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy  
 Selected Low Flow Methods = Highest Energy Answer

High Flow Method  
 Energy Only

ExpandedLocal.rep

Additional Bridge Parameters

Add Friction component to Momentum  
 Do not add Weight component to Momentum  
 Class B flow critical depth computations use critical depth  
 inside the bridge at the upstream end  
 Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 22227

INPUT

Description: Data from Survey

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1200	21.5	0	18.2	18	17.3	32	16.1	38	13.3
40	11.4	44	10.5	50	11.3	53	13.9	60	15.9
73	19.4	109	18.6	1312	21.7				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1200	.1	32	.05	60	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	32	60		750	750		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1200	-26	23.38	F
102	1312	23.38	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 21477

INPUT

Description: Sela 6.853

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	19.9	25	19.15	48	13.86	55	12.71	58	11.21
78	11.21	81	12.81	83	14.04	95	18.98	120	19.23

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .1 25 .05 95 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 25 95 148 148 148 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 0 8 23.25 F

CULVERT

RIVER: W-15 Main  
 REACH: Mid RS: 21400

INPUT

Description: Hammon Exit (Sela)  
 Distance from Upstream XS = 51.5  
 Deck/Roadway Width = 45  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 2  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 0 23.25 120 23.25

Upstream Bridge Cross Section Data

Station Elevation Data num= 10  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 19.9 25 19.15 48 13.86 53 11.21 65 11.21  
 75 11.21 81 11.21 83 11.21 95 18.98 120 19.23

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .1 25 .05 95 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 25 95 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 0 8 23.25 F

Downstream Deck/Roadway Coordinates

ExpandedLocal.rep

num= 2

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
*****									
0	23.25				120	23.25			

Downstream Bridge Cross Section Data

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
0	19.9	25	19.15	48	13.86	53	11.1	65	11.1
75	11.1	81	11.1	83	11.21	95	18.98	120	19.23

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
*****								
0	.1		25	.05		95	.1	

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	25	95		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	28.5	23.25	F
99.5	120	23.25	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 3

Culvert Name	Shape	Rise	Span			
Culvert #1	Box	6	8			
FHWA Chart # 8 - flared wingwalls						
FHWA Scale # 1 - Wingwall flared 30 to 75 deg.						
Solution Criteria = Highest U.S. EG						
Culvert Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	
Exit Loss Coef						
	51.5	45	.013	.013	0	.5

1  
 Upstream Elevation = 11.25  
 Centerline Station = 57  
 Downstream Elevation = 11.2  
 Centerline Station = 57





	25	95		301	301	301		.1	.3
Ineffective Flow		num=	2						
Sta L	Sta R	Elev	Permanent						
0	28.5	23.25	F						
99.5	120	23.25	F						

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 21028

INPUT

Description: Sela 6.768  
 Pilot Channel Placed by TJF b/c flow going to critical  
 and causing stability problems

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	19.83	25	17.9	37	12.73	43	10.88	43.1	10
43.3	10	44	10.88	49	12.37	55	12.74	65	13.73
75	15.27	110	18.08						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	25	.05	75	.1

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
25	75	158	158	158	.1	.3	

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	24	26	F
62	110	26	F

CULVERT

RIVER: W-15 Main  
 REACH: Mid RS: 21000

INPUT

Description: I-12 (From Sela model)  
 Distance from Upstream XS = 14  
 Deck/Roadway Width = 130  
 Weir Coefficient = 3  
 Upstream Deck/Roadway Coordinates  
 num= 2

ExpandedLocal.rep

Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord
*****	*****	*****	*****	*****	*****
0	25.74		110	25.74	

Upstream Bridge Cross Section Data

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0	19.83	25	17.9	31	10.88	37	10.88	43	10.88
47	10.88	49	10.88	55	10.88	65	10.88	75	15.27
110	18.08								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
0	.1	25	.05	75	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	25	75		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	24	26	F
62	110	26	F

Downstream Deck/Roadway Coordinates

num= 2

Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord
*****	*****	*****	*****	*****	*****
0	25.74		110	25.74	

Downstream Bridge Cross Section Data

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0	19.83	25	17.9	31	10.88	37	10.88	43	10.88
47	10.88	49	10.88	55	10.88	75	15.27	110	18.08

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
0	.1	25	.05	75	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	25	75		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	27.5	25.74	F
58.5	110	25.74	F

ExpandedLocal.rep

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 3

Culvert Name      Shape      Rise      Span  
 Culvert #1          Box          6          8  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n   Bottom n   Depth Blocked   Entrance Loss Coef  
 Exit Loss Coef  
                          14      130      .013      .013              0                      .5  
 1  
 Upstream      Elevation = 11.03  
                     Centerline Station = 34.8  
 Downstream      Elevation = 10.67  
                     Centerline Station = 34.8

Culvert Name      Shape      Rise      Span  
 Culvert #2          Box          6          8  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n   Bottom n   Depth Blocked   Entrance Loss Coef  
 Exit Loss Coef  
                          14      130      .013      .013              0                      .5  
 1  
 Upstream      Elevation = 10.88  
                     Centerline Station = 43  
 Downstream      Elevation = 10.65  
                     Centerline Station = 43

Culvert Name      Shape      Rise      Span  
 Culvert #3          Box          6          8  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n   Bottom n   Depth Blocked   Entrance Loss Coef  
 Exit Loss Coef  
                          14      130      .013      .013              0                      .5  
 1

Upstream Elevation = 10.91  
Centerline Station = 51.2  
Downstream Elevation = 10.67  
Centerline Station = 51.2

CROSS SECTION

RIVER: W-15 Main  
REACH: Mid RS: 20870

INPUT

Description: Sela 6.738

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	19.83	25	17.9	37	12.73	43	10.65	48	10.65
52	12.37	55	12.74	65	13.73	75	15.27	110	18.08

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	25	.05	75	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	25	75		43	43		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	27.5	25.74	F
58.5	110	25.74	F

CROSS SECTION

RIVER: W-15 Main  
REACH: Mid RS: 20827

INPUT

Description: Sela 6.73

Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	20	211	17.52	236	16.26	241	12.59	249	10.54
250	10.54	258	12.54	263	17.89	288	20.35		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

ExpandedLocal.rep

0 .1 241 .05 258 .1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	241	258		179	179		.1	.3
Ineffective Flow	num=		1					
Sta L	Sta R	Elev	Permanent					
0	160	22.33	F					

CULVERT

RIVER: W-15 Main  
REACH: Mid RS: 20700

INPUT

Description: I-12 On Ramp (from Sela)  
Distance from Upstream XS = 49.5  
Deck/Roadway Width = 80  
Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 2

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0	22.33	288	22.33						

\*\*\*\*\*

Upstream Bridge Cross Section Data

Station Elevation Data num= 8

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	20	211	17.52	236	16.26	240.9	10.54	250	10.54
258.6	10.54	263	17.89	288	20.35				

\*\*\*\*\*

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	236	.05	263	.1

\*\*\*\*\*

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	236	263		.1	.3
Ineffective Flow	num=		1		
Sta L	Sta R	Elev	Permanent		
0	160	22.33	F		

Downstream Deck/Roadway Coordinates

num= 2

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0	22.33	288	22.33						

\*\*\*\*\*

ExpandedLocal.rep

Downstream Bridge Cross Section Data

Station Elevation Data num= 8

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	20	211	17.52	236	16.26	240.9	10.48	250	10.48
258.6	10.48	263	17.89	288	20.35				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	236	.05	263	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	236	263		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
0	200	22.33	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 3

Culvert Name	Shape	Rise	Span	Exit Loss Coef		
Culvert #1	Box	8	6			
FHWA Chart # 8 - flared wingwalls						
FHWA Scale # 1 - Wingwall flared 30 to 75 deg.						
Solution Criteria = Highest U.S. EG						
Culvert	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef
1	49.5	80	.013	.013	0	.5

Upstream Elevation = 10.54  
 Centerline Station = 243.85  
 Downstream Elevation = 10.48  
 Centerline Station = 243.85

Culvert Name	Shape	Rise	Span
Culvert #2	Box	8	6
FHWA Chart # 8 - flared wingwalls			
FHWA Scale # 1 - Wingwall flared 30 to 75 deg.			
Solution Criteria = Highest U.S. EG			

ExpandedLocal.rep

Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 49.5 80 .013 .013 0 .5

1

Upstream Elevation = 10.56  
 Centerline Station = 249.75  
 Downstream Elevation = 10.49  
 Centerline Station = 249.75

Culvert Name Shape Rise Span  
 Culvert #3 Box 8 6  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 49.5 80 .013 .013 0 .5

1

Upstream Elevation = 10.58  
 Centerline Station = 255.65  
 Downstream Elevation = 10.49  
 Centerline Station = 255.65

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 20648

INPUT

Description: Sela 6.696

Station Elevation Data num= 9  

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	20	211	17.52	236	16.26	241	12.59	249	10.48
250	10.48	258	12.54	263	17.89	288	20.35		

Manning's n Values num= 3  

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	241	.05	258	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 241 258 651 651 651 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 0 200 22.33 F



ExpandedLocal.rep

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 19997

INPUT

Description: Data from Survey

Station Elevation Data num= 23

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	18.3	25	18.6	50	19.4	56	14.7	58	12.7
61	9.3	65	8.7	70	9.7	73	12.5	79	15.4
85	18.5	89	20.8	100	20.8	106	23	112	24.6
118	22.8	125	20.8	167	19	209	19	302	18.8
364	18.2	433	17	500	17				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	50	.05	89	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	50	89		979	979	.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
112	500	24.6	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 19018

INPUT

Description: Data from Survey

Station Elevation Data num= 21

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	18.5	27	18.1	44	18.6	47	16.5	48	15
55	11.2	57	9	62	8.4	68	11.3	71	13.1
76	15.6	79	18.5	86	19.5	95	19.9	108	25.7
125	20.2	149	18.2	194	18.2	277	18.9	346	19.3
579	18.3								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

ExpandedLocal.rep

0 .06 44 .05 79 .06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	44	79		720	720		.1	.3
Ineffective Flow	num=		1					
Sta L	Sta R	Elev	Permanent					
108	579	25.7	F					

CROSS SECTION

RIVER: W-15 Main  
REACH: Mid RS: 18298

INPUT

Description: Data from Survey

Station Elevation Data	num=		24						
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
0	17.5	27	18	41	17.4	45	14.5	52	11
54	7.9	57	7.5	62	7.6	63	10.1	69	13.9
72	17.9	83	20.2	102	20.4	132	21	135	23
141	20.4	167	19.8	192	19.3	244	19.4	294	19.9
351	19.5	434	19.3	513	17.9	591	16.6		

Manning's n Values	num=		3						
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
*****									
0	.06	41	.05	72	.06				

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	41	72		842	842		.1	.3
Ineffective Flow	num=		1					
Sta L	Sta R	Elev	Permanent					
135	591	23	F					

CROSS SECTION

RIVER: W-15 Main  
REACH: Mid RS: 17456

INPUT

Description: Data from Survey

Station Elevation Data	num=		18						
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
0	16.5	6	16.4	11	12.8	16	9.4	17	6.8

ExpandedLocal.rep

25	6.4	28	6.8	32	9.7	41	10.4	83	14.5
103	14.9	109	15.1	152	15.3	177	15.6	207	16
275	16.2	355	16.3	481	16.8				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	6	.05	32	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	6	32		235	235		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 17221

INPUT

Description: Copy of SELA 17221

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1000	19.13	1020	18.71	1030	15.36	1046	12.82	1067	10.43
1074	6.53	1084	6.94	1089	9.52	1096	13.2	1112	18.77
1126	19.81								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
1000	.1	1020	.05	1112	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1020	1112		20	20		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 17201

INPUT

Description: Copy of SELA 17201

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1000	19.13	1020	18.71	1030	15.36	1046	12.82	1067	10.43
1074	6.53	1084	6.94	1089	9.52	1096	13.2	1112	18.77

ExpandedLocal.rep

1126 19.81

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 1000 .1 1020 .05 1112 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1020 1112 220 220 220 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 1000 1011 19.13 F

BRIDGE

RIVER: W-15 Main  
 REACH: Mid RS: 17091

INPUT

Description: I-10 Twin Span  
 Distance from Upstream XS = 10  
 Deck/Roadway Width = 200  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 4  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 1000 19.13 1020 20.75 18.4 1120 20.75 18.4  
 1126 19.81

Upstream Bridge Cross Section Data

Station Elevation Data num= 11  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 1000 19.13 1020 18.71 1030 15.36 1046 12.82 1067 10.43  
 1074 6.53 1084 6.94 1089 9.52 1096 13.2 1112 18.77  
 1126 19.81

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 1000 .1 1020 .05 1112 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 1020 1112 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent

ExpandedLocal.rep

1000 1011 19.13 F

Downstream Deck/Roadway Coordinates

num= 4

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
1000	19.13				1020	20.75	18.4			1120	20.75	18.4		
1126	19.81													

Downstream Bridge Cross Section Data

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1000	19.13	1020	18.71	1030	15.36	1046	12.82	1067	10.43
1074	6.53	1084	6.94	1089	9.52	1096	13.2	1112	18.77
1126	19.81								

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
1000	.1		1020	.05		1112	.1	

Bank Sta: Left Right Coeff Contr. Expan.  
 1020 1112 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
1000	1016	19.13	F
1114	1126	19.13	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 4

Pier Data

Pier Station Upstream= 1038 Downstream= 1038

Upstream num= 2

Width	Elev	Width	Elev
1.3	0	1.3	18.4

Downstream num= 2

Width	Elev	Width	Elev

1.3 0 1.3 18.4

Pier Data

Pier Station Upstream= 1056 Downstream= 1056

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1.3 0 1.3 18.4

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1.3 0 1.3 18.4

Pier Data

Pier Station Upstream= 1074 Downstream= 1074

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1.3 0 1.3 18.4

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1.3 0 1.3 18.4

Pier Data

Pier Station Upstream= 1092 Downstream= 1092

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1.3 0 1.3 18.4

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1.3 0 1.3 18.4

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth

ExpandedLocal.rep  
 inside the bridge at the upstream end  
 Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 16981

INPUT

Description: Copy of SELA 16981

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1000	19.13	1020	18.71	1030	15.36	1046	12.82	1067	10.43
1074	6.53	1084	6.94	1089	9.52	1096	13.2	1112	18.77
1126	19.81								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
1000	.1	1020	.05	1112	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1020	1112		55	55	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
1000	1016	19.13	F
1114	1126	19.13	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 16926

INPUT

Description: Copy of SELA 16926

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1000	18.44	1027	18.05	1034	10.35	1045	10.08	1061	6.85
1071	5.7	1078	7.15	1087	8.77	1097	15.84	1105	17.47
1121	18.23								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

ExpandedLocal.rep

1000 .1 1027 .05 1097 .1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1027	1097		50	50		.1	.3
Ineffective Flow			num=	2				
Sta L	Sta R	Elev	Permanent					
1000	1018	18.23	F					
1111	1121	18.23	F					

BRIDGE

RIVER: W-15 Main  
 REACH: Mid RS: 16901

INPUT

Description: I-10 Service Road  
 Distance from Upstream XS = 10  
 Deck/Roadway Width = 30  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num=	4								
Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
*****	*****								
1000	18.44				1027	19.75	17.3		
1121	18.23				1102	19.75	17.3		

Upstream Bridge Cross Section Data

Station Elevation Data	num=		11						
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****	*****								
1000	18.44	1027	18.05	1034	10.35	1045	10.08	1061	6.85
1071	5.7	1078	7.15	1087	8.77	1097	15.84	1105	17.47
1121	18.23								

Manning's n Values

num=	3		
Sta	n Val	Sta	n Val
*****	*****		
1000	.1	1027	.05
		1097	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	1027	1097		.1	.3

Ineffective Flow			num=	2	
Sta L	Sta R	Elev	Permanent		
1000	1018	18.23	F		
1111	1121	18.23	F		

Downstream Deck/Roadway Coordinates



ExpandedLocal.rep

num= 4

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
1000	18.44				1055	19.7	17			1130	19.7	17		
1148	17.65													

Downstream Bridge Cross Section Data

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1000	18.44	1030	18.78	1043	18.56	1063	17.37	1075	14.95
1083	10.81	1091	7.01	1098	6.6	1104	7.88	1109	12.32
1111	14.57	1121	16.95	1135	17.82	1148	17.65		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
1000	.1	1075	.05	1111	.1

Bank Sta: Left Right Coeff Contr. Expan.  
 1075 1111 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
1000	1060	17.65	F
1126	1148	17.65	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 3

Pier Data

Pier Station Upstream= 1057 Downstream= 1081

Upstream num= 2

Width	Elev	Width	Elev
.667	0	.667	17.3

Downstream num= 2

Width	Elev	Width	Elev
.667	0	.667	17.3

Pier Data

Pier Station Upstream= 1071 Downstream= 1098

Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 .667 0 .667 17.3

Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 .667 0 .667 17.3

Pier Data

Pier Station Upstream= 1088 Downstream= 1115

Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 .667 0 .667 17.3

Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 .667 0 .667 17.3

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth  
inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main

REACH: Mid RS: 16876

INPUT

Description: Copy of SELA 16876

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									

ExpandedLocal.rep

1000	18.44	1030	18.78	1043	18.56	1063	17.37	1075	14.95
1083	10.81	1091	7.01	1098	6.6	1104	7.88	1109	12.32
1111	14.57	1121	16.95	1135	17.82	1148	17.65		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
1000	.1	1075	.05	1111	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1075	1111		394	394		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
1000	1060	17.65	F
1126	1148	17.65	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 16482

INPUT

Description: Copy of SELA 16481.7\* (modified from lidar)

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-985	16.6	-487	15.5	0	12.8	8	11.08	14	5.95
18	4.57	21	4.39	24	4.49	25	5.29	28	9
35	11.85	400	14.54						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-985	.1	0	.05	35	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	0	35		394	394		.1	.3

LATERAL STRUCTURE

RIVER: W-15 Main  
 REACH: Mid RS: 16480

INPUT

Description:  
 Lateral structure position = Right overbank

ExpandedLocal.rep

Distance from Upstream XS =  
Deck/Roadway Width = 20  
Weir Coefficient = 3.5  
Weir Flow Reference = Water Surface

Weir Embankment Coordinates num = 3  
Sta Elev Sta Elev Sta Elev  
\*\*\*\*\*  
0 16.66 394 15.87 787 15.59

Weir crest shape = Broad Crested

CROSS SECTION

RIVER: W-15 Main  
REACH: Mid RS: 16088

INPUT

Description:

Station Elevation Data num= 12  
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
\*\*\*\*\*  
-985 16.6 -487 15.5 0 12.8 8 11.08 14 5.95  
18 4.57 21 4.39 24 4.49 25 5.29 28 9  
35 11.85 400 14.54

Manning's n Values num= 3  
Sta n Val Sta n Val Sta n Val  
\*\*\*\*\*  
-985 .1 0 .05 35 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
0 35 395 395 395 .1 .3

CROSS SECTION

RIVER: W-15 Main  
REACH: Mid RS: 15693

INPUT

Description:

Station Elevation Data num= 12  
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
\*\*\*\*\*  
-985 16.6 -487 15.5 0 12.8 8 11.08 14 5.95  
18 4.57 21 4.39 24 4.49 25 5.29 28 9

ExpandedLocal.rep

35 11.85 400 14.54

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -985 .1 0 .05 35 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 0 35 394 394 394 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 15299

INPUT

Description: Copy of SELA 15299

Station Elevation Data num= 13  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1000 15.1 -555 13.89 -200 13.3 0 9.26 5 6.93  
 9 5.41 11 4.79 15 4.31 18 4.92 20 6.58  
 24 9.69 73 13.1 86 13.2

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1000 .1 0 .05 24 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 0 24 37 37 37 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -1000 -10 13.13 F  
 34 86 13.13 F

BRIDGE

RIVER: W-15 Main  
 REACH: Mid RS: 15280

INPUT

Description: Hidden Oaks Bridge  
 Distance from Upstream XS = 10  
 Deck/Roadway Width = 17  
 Weir Coefficient = 2.6

ExpandedLocal.rep

Upstream Deck/Roadway Coordinates

num= 11

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
-1000	15.11		-145	15.11		-66	14.91	
0	15.91		0	15.91	14.58	24	15.77	14.44
24	15.77		26	15.77		70	13.7	
113	13.13		160	13.46				

Upstream Bridge Cross Section Data

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1000	15.1	-555	13.89	-200	13.3	0	9.26	5	6.93
9	5.41	11	4.79	15	4.31	18	4.92	20	6.58
24	9.69	73	13.1	86	13.2				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1000	.1	0	.05	24	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	0	24	.1	.3	

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1000	-10	13.13	F
34	86	13.13	F

Downstream Deck/Roadway Coordinates

num= 11

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
-1000	15.11		-145	15.11		-66	14.91	
10	15.91		10	15.91	14.58	34	15.77	14.44
34	15.77		36	15.77		70	13.7	
113	13.13		160	13.46				

Downstream Bridge Cross Section Data

Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1000	15.1	-555	13.89	-200	13.3	0	13.39	5	10.44
13	8.38	20	7.06	21	5.27	23	4.59	25	4.15
27	4.33	29	6.71	37	8.93	73	13.1	86	13.2

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

ExpandedLocal.rep

\*\*\*\*\*  
-1000 .1 0 .05 37 .1

Bank Sta: Left Right Coeff Contr. Expan.  
0 37 .1 .3

Ineffective Flow num= 2  
Sta L Sta R Elev Permanent  
-1000 5 13.13 F  
39 86 13.13 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
Maximum allowable submergence for weir flow = .98  
Elevation at which weir flow begins =  
Energy head used in spillway design =  
Spillway height used in design =  
Weir crest shape = Broad Crested

Number of Piers = 2

Pier Data

Pier Station Upstream= 3 Downstream= 13  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
.667 0 .667 14.58  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
.667 0 .667 14.58

Pier Data

Pier Station Upstream= 13 Downstream= 23  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
.667 0 .667 14.58  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
.667 0 .667 14.58

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy  
Momentum Cd = 2  
Yarnell KVal = 1.25

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Pressure and Weir flow  
 Submerged Inlet Cd =  
 Submerged Inlet + Outlet Cd = .8  
 Max Low Cord =

Additional Bridge Parameters

Add Friction component to Momentum  
 Do not add Weight component to Momentum  
 Class B flow critical depth computations use critical depth  
 inside the bridge at the upstream end  
 Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 15262

INPUT

Description: Copy of SELA 15261

Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1000	15.1	-555	13.89	-200	13.3	0	13.39	5	10.44
13	8.38	20	7.06	21	5.27	23	4.59	25	4.15
27	4.33	29	6.71	37	8.93	73	13.1	86	13.2

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1000	.1	0	.05	37	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 0 37 1 1 1 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1000	5	13.13	F
39	86	13.13	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 15261



ExpandedLocal.rep

INPUT

Description:

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1000	15.1	-555	13.89	-200	13.3	0	12.64	8	9.48
15	6.3	18	4.77	20	4.13	22	3.81	29	9.36
73	13.1	86	13.2						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1000	.1	0	.05	29	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	0	29		0	0		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1000	4	13.13	F
40	86	13.13	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 14915

INPUT

Description: DS Confluence Reine Canal

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1200	15.04	-601	13.59	38	12.48	42	10.15	51	6.02
58	5.61	60	3.75	63	3.01	67	3.79	70	7.59
74	10.55	97	11.15	159	14.51	255	14.9		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1200	.1	38	.05	74	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	38	74		345	345		.1	.3

CROSS SECTION

RIVER: W-15 Main

REACH: South

RS: 14570

INPUT

Description:

Station Elevation Data

num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1556	14.9	-743	13.54	-245	12.6	0	12.14	10	7.67
12	5.73	17	4.14	19	3.72	25	7.99	31	10.88
66	11.79	196	14.5						

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1556	.1	0	.05	31	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	0	31		346	346		.1	.3

CROSS SECTION

RIVER: W-15 Main

REACH: South

RS: 14224

INPUT

Description: Bank to Bank interpolated

Station Elevation Data

num= 27

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1159	13.53	-350	12.91	184	12.68	193.16	9.89	193.23	9.87
193.36	9.83	195.36	9.22	195.55	9.16	197.42	8.59	199.14	7.73
200.11	7.22	205.52	5.67	206.82	5.38	208.3	5.12	208.5	5.08
209.5	4.91	210.36	5.17	210.53	5.23	212.94	5.97	220.5	8.77
221.53	9.08	221.7	9.14	223.42	9.66	223.59	9.72	231.5	12.14
588	13.7	1020	14.03						

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1159	.1	184	.05	231.5	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	184	231.5		346	346		.1	.3

CROSS SECTION

ExpandedLocal.rep

RIVER: W-15 Main  
 REACH: South

RS: 13878

INPUT

Description: 10' US Pearl Street Bridge

Station Elevation Data num= 106

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3511	18.761	-3482	18.085	-3432.74	18.75	-3383.48	18.693	-3283.61	17.946
-3236.36	17.29	-3141.85	16.591	-3094.59	17.022	-3038.69	16.801	-3000.08	17.072
-2940.09	17.081	-2890.68	16.829	-2862.78	17.038	-2742.44	17.607	-2639.37	17.843
-2610.1	17.764	-2532.71	17.789	-2455.33	16.785	-2431.08	16.544	-2340.96	14.963
-2324.83	14.817	-2303.79	14.945	-2229.43	14.966	-2000.6	16.278	-1900.34	15.846
-1830.72	15.641	-1621.88	15.667	-1587.07	15.545	-1552.27	15.682	-1225.99	15.945
-1202.26	15.829	-1156.86	15.842	-1003.88	15.592	-946.979	15.599	-892.837	15.491
-801.101	15.513	-781.786	15.59	-587.638	15.101	-517.118	15.143	-446.598	14.903
-376.078	15.379	-340.818	15.204	-93.799	14.584	227.897	13.955	368	13.22
379.5	10.69	379.58	10.6724	379.75	10.635	382.25	10.085	382.5	10.03
387	9.04	395	6.89	398.5	6.33	398.75	6.29	400	6.09
401.25	6.29	401.5	6.33	405	6.89	417.5	9.9039	417.75	9.9642
420.2510	5.6694	420.510	6.2722	432	13.4	752.758	13.547	894.301	13.656
936.47	13.5971	1036.097	13.6581	1055.156	13.5641	1107.003	13.6261	1213.361	13.462
1426.079	13.5149	1496.985	13.7151	1532.438	14.0511	1567.891	13.7591	1673.459	13.536
1882.261	12.9022	2337.294	12.4762	2372.486	12.3432	2407.679	12.4812	2618.834	12.858
2637.375	12.7982	2654.026	12.6132	2666.311	12.7172	2689.219	12.7272	24.411	12.832
2865.182	13.0482	2910.935	13.2882	2963.939	13.2023	3112.767	14.1893	3144.956	13.436
3148.254	13.4473	3183.742	15.8013	3204.102	16.121	3219.23	16.1153	3254.717	16.375
3290.205	16.5223	3472.827	16.5873	3515.927	16.6883	3559.027	16.5633	3602.127	16.307
3906.977	16.7564	4052.924	16.8264	4193.123	17.2124	4298.185	17.7274	4340.531	18.056
4431.836	18.178								

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3511	.1	368	.05	432	.1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	368	432		56	56	56		.1	.3
Ineffective Flow			num=	1					
Sta L	Sta R	Elev	Permanent						
4404	431.836	13.45	F						

BRIDGE

RIVER: W-15 Main  
 REACH: South

RS: 13850

ExpandedLocal.rep

INPUT

Description: Pearl Street Bridge  
 Distance from Upstream XS = 10  
 Deck/Roadway Width = 36  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 4

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
368	13.22	12.57	379.58	13.5	12.85	420.5	13.5	12.85						
432	13.4	12.75												

Upstream Bridge Cross Section Data

Station Elevation Data num= 106

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3511	18.761	-3482	18.085	-3432.74	18.75	-3383.48	18.693	-3283.61	17.946
-3236.36	17.29	-3141.85	16.591	-3094.59	17.022	-3038.69	16.801	-3000.08	17.072
-2940.09	17.081	-2890.68	16.829	-2862.78	17.038	-2742.44	17.607	-2639.37	17.843
-2610.1	17.764	-2532.71	17.789	-2455.33	16.785	-2431.08	16.544	-2340.96	14.963
-2324.83	14.817	-2303.79	14.945	-2229.43	14.966	-2000.6	16.278	-1900.34	15.846
-1830.72	15.641	-1621.88	15.667	-1587.07	15.545	-1552.27	15.682	-1225.99	15.945
-1202.26	15.829	-1156.86	15.842	-1003.88	15.592	-946.979	15.599	-892.837	15.491
-801.101	15.513	-781.786	15.59	-587.638	15.101	-517.118	15.143	-446.598	14.903
-376.078	15.379	-340.818	15.204	-93.799	14.584	227.897	13.955	368	13.22
379.5	10.69	379.58	10.6724	379.75	10.635	382.25	10.085	382.5	10.03
387	9.04	395	6.89	398.5	6.33	398.75	6.29	400	6.09
401.25	6.29	401.5	6.33	405	6.89	417.5	9.9039	417.75	9.9642
420.25	10.56694	420.51	10.62722	432	13.4	752.758	13.547	894.301	13.656
936.47	13.597	1036.097	13.658	1055.156	13.564	1107.003	13.626	1213.361	13.462
1426.079	13.514	96.985	13.715	1532.438	14.051	11567.891	13.759	1673.459	13.536
1882.261	12.902	2337.294	12.476	2372.486	12.343	2407.679	12.481	2618.834	12.858
2637.375	12.798	2654.026	12.613	2666.311	12.717	2689.219	12.727	2724.411	12.832
2865.182	13.048	2910.935	13.288	2963.939	13.202	3112.767	14.189	3144.956	13.436
3148.254	13.447	3183.742	15.801	3204.102	16.121	3219.23	16.115	3254.717	16.375
3290.205	16.522	3472.827	16.587	3515.927	16.688	3559.027	16.563	3602.127	16.307
3906.977	16.756	4052.924	16.826	4193.123	17.212	4298.185	17.727	4340.531	18.056
4431.836	18.178								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3511	.1	368	.05	432	.1

Bank Sta: Left Right Coeff Contr. Expan.  
 368 432 .1 .3

Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent

ExpandedLocal.rep

4404431.836 13.45 F

Downstream Deck/Roadway Coordinates

num= 4

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
368	13.22	12.57	379.58	13.5	12.85	420.5	13.5	12.85						
432	13.4	12.75												

Downstream Bridge Cross Section Data

Station Elevation Data num= 106

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3511	18.761	-3482	18.085	-3432.74	18.75	-3383.48	18.693	-3283.61	17.946
-3236.36	17.29	-3141.85	16.591	-3094.59	17.022	-3038.69	16.801	-3000.08	17.072
-2940.09	17.081	-2890.68	16.829	-2862.78	17.038	-2742.44	17.607	-2639.37	17.843
-2610.1	17.764	-2532.71	17.789	-2455.33	16.785	-2431.08	16.544	-2340.96	14.963
-2324.83	14.817	-2303.79	14.945	-2229.43	14.966	-2000.6	16.278	-1900.34	15.846
-1830.72	15.641	-1621.88	15.667	-1587.07	15.545	-1552.27	15.682	-1225.99	15.945
-1202.26	15.829	-1156.86	15.842	-1003.88	15.592	-946.979	15.599	-892.837	15.491
-801.101	15.513	-781.786	15.59	-587.638	15.101	-517.118	15.143	-446.598	14.903
-376.078	15.379	-340.818	15.204	-93.799	14.584	227.897	13.955	368	13.22
379.5	10.69	379.58	10.6724	379.75	10.635	382.25	10.085	382.5	10.03
387	9.04	395	6.89	398.5	6.33	398.75	6.29	400	6.09
401.25	6.29	401.5	6.33	405	6.89	417.5	9.9039	417.75	9.9642
420.25	10.56694	420.51	10.62722	432	13.4	752.758	13.547	894.301	13.656
936.47	13.597	1036.097	13.658	1055.156	13.564	1107.003	13.626	1213.361	13.462
1426.079	13.514	96.985	13.715	1532.438	14.051	11567.891	13.759	1673.459	13.536
1882.261	12.902	2337.294	12.476	2372.486	12.343	2407.679	12.481	2618.834	12.858
2637.375	12.798	2654.026	12.613	2666.311	12.717	2689.219	12.727	2724.411	12.832
2865.182	13.048	2910.935	13.288	2963.939	13.202	3112.767	14.189	3144.956	13.436
3148.254	13.447	3183.742	15.801	3204.102	16.121	3219.23	16.115	3254.717	16.375
3290.205	16.522	3472.827	16.587	3515.927	16.688	3559.027	16.563	3602.127	16.307
3906.977	16.756	4052.924	16.826	4193.123	17.212	4298.185	17.727	4340.531	18.056
4431.836	18.178								

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3511	.1	368	.05	432	.1

Bank Sta: Left Right Coeff Contr. Expan.  
 368 432 .1 .3

Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 4354431.836 13.45 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical

ExpandedLocal.rep

Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
Maximum allowable submergence for weir flow = .98  
Elevation at which weir flow begins = 13.22  
Energy head used in spillway design =  
Spillway height used in design =  
Weir crest shape = Broad Crested

Number of Piers = 3

Pier Data

Pier Station Upstream= 381 Downstream= 381

Upstream num= 3

Width Elev Width Elev Width Elev

\*\*\*\*\*

2.5 1.5 2.5 11.45 3 11.45

Downstream num= 3

Width Elev Width Elev Width Elev

\*\*\*\*\*

2.5 1.5 2.5 11.45 3 11.45

Pier Data

Pier Station Upstream= 400 Downstream= 400

Upstream num= 3

Width Elev Width Elev Width Elev

\*\*\*\*\*

2.5 1.5 2.5 11.45 3 11.45

Downstream num= 3

Width Elev Width Elev Width Elev

\*\*\*\*\*

2.5 1.5 2.5 11.45 3 11.45

Pier Data

Pier Station Upstream= 419 Downstream= 419

Upstream num= 3

Width Elev Width Elev Width Elev

\*\*\*\*\*

2.5 1.5 2.5 11.45 3 11.45

Downstream num= 3

Width Elev Width Elev Width Elev

\*\*\*\*\*

2.5 1.5 2.5 11.45 3 11.45

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Momentum Cd = 2

Selected Low Flow Methods = Highest Energy Answer

ExpandedLocal.rep

High Flow Method

Pressure and Weir flow  
 Submerged Inlet Cd =  
 Submerged Inlet + Outlet Cd = .8  
 Max Low Cord =

Additional Bridge Parameters

Add Friction component to Momentum  
 Do not add Weight component to Momentum  
 Class B flow critical depth computations use critical depth  
 inside the bridge at the upstream end  
 Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 13822

INPUT

Description: 10' DS Pearl Street Bridge

Station Elevation Data num= 106

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3511	18.761	-3482	18.085	3432.74	18.75	3383.48	18.693	3283.61	17.946
-3236.36	17.29	3141.85	16.591	3094.59	17.022	3038.69	16.801	3000.08	17.072
-2940.09	17.081	2890.68	16.829	2862.78	17.038	2742.44	17.607	2639.37	17.843
-2610.1	17.764	2532.71	17.789	2455.33	16.785	2431.08	16.544	2340.96	14.963
-2324.83	14.817	2303.79	14.945	2229.43	14.966	-2000.6	16.278	1900.34	15.846
-1830.72	15.641	1621.88	15.667	1587.07	15.545	1552.27	15.682	1225.99	15.945
-1202.26	15.829	1156.86	15.842	1003.88	15.592	946.979	15.599	892.837	15.491
-801.101	15.513	781.786	15.59	587.638	15.101	517.118	15.143	446.598	14.903
-376.078	15.379	340.818	15.204	-93.799	14.584	227.897	13.955	368	13.22
379.5	10.69	379.58	10.6724	379.75	10.635	382.25	10.085	382.5	10.03
387	9.04	395	6.89	398.5	6.33	398.75	6.29	400	6.09
401.25	6.29	401.5	6.33	405	6.89	417.5	9.9039	417.75	9.9642
420.25	10.56694	420.51	10.62722	432	13.4	752.758	13.547	894.301	13.656
936.47	13.5971	1036.097	13.6581	1055.156	13.5641	1107.003	13.6261	1213.361	13.462
1426.079	13.51496	985	13.71515	1532.438	14.0511	1567.891	13.7591	1673.459	13.536
1882.261	12.9022	2337.294	12.4762	2372.486	12.3432	2407.679	12.4812	2618.834	12.858
2637.375	12.7982	2654.026	12.6132	2666.311	12.7172	2689.219	12.7272	24.411	12.832
2865.182	13.0482	2910.935	13.2882	2963.939	13.2023	112.767	14.1893	144.956	13.436
3148.254	13.4473	183.742	15.8013	204.102	16.121	3219.23	16.1153	254.717	16.375
3290.205	16.5223	472.827	16.5873	515.927	16.6883	559.027	16.5633	602.127	16.307
3906.977	16.7564	052.924	16.8264	193.123	17.2124	298.185	17.7274	340.531	18.056
4431.836	18.178								

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -3511 .1 368 .05 432 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 368 432 370 370 370 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 4354431.836 13.45 F

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 13452

INPUT

Description: Interpolated Section

Station Elevation Data num= 192  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -3366.6 18.49-3336.96 17.86-3317.52 18.03-3286.62 18.27-3236.28 18.07  
 -3219.35 17.92-3157.14 17.32-3134.21 17.12-3123.74 16.97-3090.33 16.53  
 -3085.92 16.49-3056.92 16.37 -3023.8 16.19-2989.33 16.04 -2979.1 16.14  
 -2941.04 16.39 -2934.4 16.36-2883.91 16.13 -2845 16.3-2844.45 16.3  
 -2783.14 16.3-2732.64 16.09-2704.13 16.27 -2621.5 16.58-2581.14 16.77  
 -2532.1 16.89-2475.81 16.99-2458.11 16.95 -2445.9 16.9-2424.99 16.86  
 -2366.8 16.97-2341.47 16.75-2287.72 16.24-2262.94 16.07-2259.39 16.03  
 -2226.27 15.56-2193.15 15.13-2170.84 14.79-2154.35 14.65-2144.56 14.69  
 -2132.85 14.75-2056.86 14.75-2049.88 14.78-2020.62 14.87-1847.54 15.63  
 -1823 15.72-1720.53 15.3-1649.38 15.08-1578.15 15.04-1461.82 15.01  
 -1435.95 15.02-1426.42 14.99-1400.38 14.86-1391.73 14.87-1364.81 14.92  
 -1344.3 14.91-1291.79 14.8-1165.74 15.1-1134.23 15.09 -1039.7 15.16  
 -1031.36 15.16-1007.11 15.04 -960.71 15.02 -913.66 14.93 -850.63 14.87  
 -817.32 14.85 -804.37 14.83 -756.1 14.82 -746.22 14.8 -724.59 14.71  
 -700.68 14.63 -690.89 14.63 -614.47 14.8 -597.13 14.79 -577.39 14.85  
 -576.15 14.85 -520.16 14.74 -461.2 14.61 -384.76 14.39 -378.98 14.37  
 -346.26 14.32 -306.91 14.42 -274.15 14.39 -247.2 14.32 -234.84 14.31  
 -162.77 14.8 -126.73 14.71 -16.5 14.64 14.28 14.56 29.64 14.55  
 50.34 14.49 75.78 14.35 86.39 14.33 121.92 14.12 125.72 14.11  
 168.06 14.01 194.55 13.92 214.2 13.88 230.6 13.8 300.26 13.64  
 368.21 13.61 452.92 13.5 454.48 13.49 501.06 13.25 597.67 12.77  
 599.05 12.44 609.36 10.03 609.44 10.01 609.62 9.97 612.16 9.37  
 612.41 9.32 613.59 9.04 614.98 8.72 616.99 8.24 625.12 6.02  
 628.68 5.36 628.94 5.31 630.21 5.08 630.46 5.08 633.21 5.08  
 633.46 5.08 636.38 5.08 636.62 5.08 637.79 5.31 638.02 5.36  
 641.27 6.02 652.87 9.21 653.1 9.27 655.42 9.91 655.66 9.98



ExpandedLocal.rep

663.89	12.24	666.33	12.92	860.38	13.18	974.81	13.23	1110.93	13.32
1151.49	13.27	1247.3	13.32	1265.63	13.25	1315.49	13.3	1417.78	13.16
1470.61	13.17	1601.16	13.22	1622.35	13.23	1690.54	13.45	1724.64	13.75
1736.4	13.67	1758.73	13.51	1860.26	13.32	1870.9	13.3	2061.07	12.72
2225.38	12.52	2314	12.44	2498.68	12.32	2532.52	12.22	2566.37	12.34
2757.11	12.67	2769.44	12.68	2787.27	12.62	2803.28	12.46	2815.1	12.54
2837.13	12.52	2845.42	12.54	2870.97	12.62	3006.36	12.81	3050.36	13.02
3065.53	12.99	3101.33	12.97	3109.55	13.02	3153.57	13.26	3244.46	13.8
3275.42	13.18	3278.59	13.19	3312.72	15.16	3332.3	15.43	3346.85	15.43
3380.98	15.66	3415.11	15.79	3424.74	15.79	3590.74	15.93	3602.14	15.96
3632.19	16.05	3673.64	15.98	3715.09	15.8	3943.61	16.29	4008.26	16.44
4148.62	16.64	4206.16	16.83	4283.45	17.07	4384.49	17.56	4424.94	17.86
4425.22	17.86	4513.03	17.97						

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -3366.6 .1 597.67 .05 666.33 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 597.67 666.33 369 369 369 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 851 4513.03 13.4 F

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 13083

INPUT

Description: Interpolated Section

Station Elevation Data num= 192

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3222.2	18.22	-3191.92	17.63	-3172.06	17.71	-3140.5	17.8	-3089.07	17.45
-3071.78	17.26	-3008.24	16.52	-2984.81	16.29	-2974.11	16.14	-2939.99	15.71
-2935.48	15.69	-2905.86	15.66	-2872.03	15.54	-2836.82	15.49	-2826.36	15.59
-2787.48	15.75	-2780.7	15.72	-2729.12	15.45	-2689.38	15.52	-2688.82	15.52
-2626.19	15.53	-2574.61	15.36	-2545.48	15.49	-2461.07	15.74	-2419.85	15.92
-2369.75	16.06	-2312.25	16.14	-2294.17	16.11	-2281.69	16.03	-2260.34	15.95
-2200.9	16.16	-2175.02	16.03	-2120.12	15.7	-2094.8	15.6	-2091.17	15.57
-2057.34	15.21	-2023.51	14.91	-2000.72	14.62	-1983.88	14.49	-1973.87	14.51
-1961.91	14.55	-1884.29	14.53	-1877.16	14.55	-1847.27	14.58	-1670.46	15.11
-1645.4	15.17	-1540.73	14.74	-1468.05	14.51	-1395.28	14.42	-1276.45	14.35
-1250.03	14.37	-1240.29	14.35	-1213.69	14.18	-1204.85	14.16	-1177.36	14.16
-1156.41	14.11	-1102.76	13.87	-974	14.37	-941.82	14.33	-845.25	14.38

ExpandedLocal.rep

-836.73	14.37	-811.96	14.26	-764.56	14.21	-716.5	14.09	-652.12	14.07
-618.09	14.09	-604.86	14.07	-555.55	14.04	-545.46	13.99	-523.36	13.86
-498.94	13.75	-488.93	13.78	-410.87	14.08	-393.16	14.07	-373	14.11
-371.73	14.11	-314.53	14.04	-254.3	13.91	-176.23	13.66	-170.32	13.63
-136.89	13.52	-96.7	13.69	-63.23	13.74	-35.71	13.7	-23.08	13.71
50.54	14.23	87.35	14.22	199.96	14.35	231.4	14.26	247.09	14.27
268.23	14.22	294.22	13.99	305.06	13.97	341.35	13.65	345.23	13.63
388.49	13.52	415.55	13.38	435.62	13.34	452.38	13.22	523.53	13.02
592.94	13.09	679.47	13.03	681.07	13.03	728.65	12.79	827.33	12.31
828.74	11.96	839.22	9.37	839.31	9.35	839.48	9.3	842.07	8.66
842.32	8.6	843.52	8.3	844.93	7.96	846.98	7.45	855.25	5.14
858.87	4.38	859.12	4.33	860.42	4.06	860.92	4.06	866.42	4.06
866.92	4.06	872.75	4.06	873.25	4.06	874.32	4.33	874.54	4.38
877.53	5.14	888.24	8.52	888.46	8.58	890.6	9.26	890.81	9.33
898.41	11.72	900.67	12.43	1086.98	12.87	1196.86	12.91	1327.57	12.99
1366.51	12.95	1458.51	12.99	1476.1	12.93	1523.98	12.97	1622.2	12.86
1672.92	12.87	1798.28	12.93	1818.62	12.96	1884.1	13.19	1916.84	13.45
1928.14	13.4	1949.58	13.27	2047.06	13.11	2057.28	13.09	2239.88	12.54
2397.65	12.3	2482.74	12.23	2660.06	12.17	2692.56	12.1	2725.06	12.2
2908.21	12.5	2920.05	12.5	2937.17	12.45	2952.54	12.31	2963.89	12.36
2985.04	12.33	2993	12.34	3017.54	12.41	3147.53	12.58	3189.78	12.74
3204.35	12.73	3238.72	12.74	3246.62	12.78	3288.88	12.96	3376.16	13.42
3405.88	12.93	3408.93	12.94	3441.7	14.52	3460.5	14.75	3474.47	14.75
3507.24	14.94	3540.01	15.05	3549.26	15.06	3708.64	15.28	3719.6	15.31
3748.44	15.41	3788.24	15.4	3828.04	15.3	4047.47	15.92	4109.55	16.12
4244.32	16.45	4299.56	16.68	4373.78	16.93	4470.8	17.4	4509.64	17.67
4509.9	17.67	4594.22	17.75						

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -3222.2 .1 827.33 .05 900.67 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 827.33 900.67 370 370 370 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 1271 4594.22 13.4 F

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 12713

INPUT  
 Description: Interpolated Section  
 Station Elevation Data num= 192

ExpandedLocal.rep

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3077.79	17.95	3046.88	17.4	-3026.6	17.4	-2994.37	17.32	-2941.87	16.83
-2924.22	16.61	-2859.33	15.73	-2835.41	15.46	-2824.49	15.3	-2789.64	14.89
-2785.04	14.89	-2754.8	14.95	-2720.25	14.89	-2684.3	14.94	-2673.63	15.04
-2633.93	15.11	-2627	15.08	-2574.34	14.78	-2533.76	14.75	-2533.18	14.75
-2469.24	14.75	-2416.57	14.62	-2386.83	14.72	-2300.64	14.91	-2258.55	15.08
-2207.4	15.24	-2148.69	15.29	-2130.23	15.26	-2117.49	15.17	-2095.68	15.04
-2034.99	15.35	-2008.57	15.32	-1952.51	15.16	-1926.66	15.13	-1922.96	15.11
-1888.41	14.85	-1853.87	14.69	-1830.6	14.44	-1813.4	14.33	-1803.19	14.33
-1790.98	14.36	-1711.71	14.31	-1704.44	14.32	-1673.91	14.29	-1493.39	14.6
-1467.79	14.62	-1360.92	14.19	-1286.71	13.95	-1212.41	13.81	-1091.08	13.69
-1064.1	13.72	-1054.15	13.71	-1026.99	13.5	-1017.97	13.46	-989.9	13.4
-968.51	13.32	-913.73	12.93	-782.27	13.63	-749.4	13.56	-650.8	13.6
-642.1	13.58	-616.81	13.48	-568.41	13.39	-519.33	13.25	-453.6	13.27
-418.86	13.33	-405.35	13.3	-355	13.26	-344.69	13.19	-322.14	13.01
-297.2	12.87	-286.98	12.92	-207.27	13.37	-189.2	13.36	-168.61	13.37
-167.31	13.37	-108.91	13.33	-47.41	13.21	32.31	12.94	38.34	12.9
72.47	12.71	113.51	12.96	147.68	13.1	175.79	13.08	188.68	13.11
263.85	13.66	301.44	13.72	416.41	14.05	448.52	13.96	464.54	14
486.12	13.95	512.66	13.63	523.73	13.62	560.79	13.17	564.75	13.16
608.91	13.03	636.54	12.85	657.04	12.8	674.15	12.64	746.8	12.41
817.67	12.58	906.03	12.57	907.66	12.57	956.24	12.33	1057	11.86
1058.43	11.49	1069.08	8.71	1069.17	8.69	1069.35	8.64	1071.97	7.95
1072.24	7.89	1073.45	7.57	1074.89	7.2	1076.96	6.65	1085.37	4.27
1089.05	3.41	1089.31	3.35	1090.62	3.05	1091.38	3.05	1099.62	3.05
1100.38	3.05	1109.12	3.05	1109.88	3.05	1110.86	3.35	1111.05	3.41
1113.8	4.27	1123.62	7.82	1123.81	7.89	1125.77	8.61	1125.97	8.68
1132.93	11.2	1135	11.95	1313.59	12.56	1418.92	12.59	1544.2	12.65
1581.53	12.62	1669.71	12.66	1686.58	12.61	1732.47	12.64	1826.61	12.56
1875.23	12.57	1995.39	12.65	2014.9	12.69	2077.66	12.92	2109.04	13.15
2119.87	13.12	2140.42	13.02	2233.86	12.9	2243.66	12.88	2418.68	12.36
2569.92	12.08	2651.48	12.01	2821.45	12.02	2852.6	11.97	2883.75	12.06
3059.3	12.34	3070.65	12.33	3087.06	12.27	3101.8	12.15	3112.67	12.19
3132.95	12.15	3140.58	12.15	3164.1	12.21	3288.7	12.34	3329.2	12.47
3343.17	12.46	3376.12	12.5	3383.68	12.55	3424.2	12.66	3507.85	13.03
3536.34	12.68	3539.26	12.69	3570.67	13.89	3588.69	14.06	3602.08	14.06
3633.5	14.22	3664.91	14.31	3673.78	14.32	3826.55	14.62	3837.05	14.66
3864.7	14.77	3902.85	14.81	3941	14.79	4151.33	15.55	4210.84	15.8
4340.02	16.27	4392.97	16.52	4464.12	16.78	4557.11	17.24	4594.34	17.48
4594.59	17.48	4675.41	17.54						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3077.79	.1	1057	.05	1135	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

ExpandedLocal.rep

1057 1135 370 370 370 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 2253 4675.41 12.3 F

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 12343

INPUT

Description: Interpolated Section

Station Elevation Data num= 192

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-2933.39	17.68	2901.84	17.18	2881.14	17.08	2848.25	16.84	2794.66	16.21
-2776.65	15.96	2710.42	14.93	2686.01	14.63	2674.86	14.47	2639.3	14.07
-2634.61	14.09	2603.73	14.25	2568.48	14.23	2531.79	14.39	2520.89	14.5
-2480.37	14.48	2473.31	14.45	2419.56	14.1	2378.14	13.98	2377.55	13.98
-2312.29	13.97	2258.53	13.88	2228.18	13.95	2140.22	14.07	2097.26	14.24
-2045.05	14.41	1985.13	14.44	1966.28	14.42	1953.28	14.3	1931.03	14.13
-1869.09	14.53	1842.12	14.6	1784.9	14.62	1758.52	14.66	1754.74	14.66
-1719.49	14.5	1684.23	14.47	1660.48	14.27	1642.93	14.17	1632.5	14.15
-1620.04	14.16	1539.14	14.09	1531.71	14.09	1500.56	13.99	1316.32	14.08
-1290.19	14.06	1181.12	13.64	1105.38	13.38	1029.54	13.19	905.71	13.03
-878.17	13.07	868.02	13.07	840.3	12.81	831.09	12.75	802.44	12.64
-780.61	12.53	724.7	11.99	590.53	12.89	556.98	12.79	456.35	12.81
-447.47	12.79	421.66	12.69	372.27	12.57	322.17	12.42	255.09	12.47
-219.63	12.56	205.84	12.54	154.45	12.49	143.93	12.39	120.91	12.16
-95.46	12	85.03	12.06	3.68	12.66	14.77	12.64	35.79	12.64
37.11	12.63	96.71	12.63	159.48	12.52	240.84	12.21	247	12.16
281.84	11.91	323.72	12.23	358.6	12.46	387.28	12.46	400.45	12.52
477.17	13.08	515.53	13.23	632.87	13.76	665.64	13.66	681.99	13.72
704.02	13.67	731.1	13.27	742.4	13.26	780.22	12.7	784.26	12.68
829.34	12.54	857.54	12.31	878.46	12.26	895.92	12.06	970.07	11.79
1042.4	12.07	1132.58	12.11	1134.25	12.1	1183.83	11.87	1286.67	11.41
1288.12	11.01	1298.95	8.05	1299.03	8.02	1299.21	7.97	1301.88	7.24
1302.15	7.17	1303.39	6.83	1304.84	6.44	1306.95	5.86	1315.49	3.39
1319.23	2.44	1319.5	2.37	1320.83	2.03	1321.83	2.03	1332.83	2.03
1333.83	2.03	1345.5	2.03	1346.5	2.03	1347.39	2.37	1347.57	2.44
1350.07	3.39	1358.99	7.13	1359.17	7.2	1360.95	7.95	1361.13	8.03
1367.46	10.68	1369.33	11.47	1540.2	12.25	1640.97	12.28	1760.83	12.32
1796.54	12.3	1880.91	12.32	1897.05	12.29	1940.96	12.31	2031.03	12.26
2077.55	12.27	2192.51	12.37	2211.17	12.42	2271.22	12.66	2301.24	12.85
2311.6	12.85	2331.26	12.78	2420.66	12.69	2430.03	12.68	2597.49	12.18
2742.18	11.86	2820.22	11.8	2982.83	11.87	3012.64	11.85	3042.44	11.92
3210.4	12.17	3221.26	12.15	3236.96	12.1	3251.06	12	3261.46	12.01

ExpandedLocal.rep

3280.86	11.96	3288.17	11.96	3310.66	12	3429.88	12.1	3468.62	12.2
3481.98	12.19	3513.51	12.27	3520.75	12.31	3559.51	12.36	3639.54	12.65
3666.8	12.43	3669.6	12.43	3699.65	13.25	3716.89	13.37	3729.7	13.38
3759.76	13.5	3789.81	13.58	3798.29	13.59	3944.46	13.97	3954.51	14
3980.96	14.13	4017.46	14.23	4053.96	14.29	4255.19	15.19	4312.12	15.48
4435.72	16.08	4486.38	16.37	4554.45	16.64	4643.42	17.07	4679.04	17.29
4679.28	17.29	4756.6	17.33						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2933.39	.1	1286.67	.05	1369.33	.1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1286.67	1369.33		369	369	369		.1	.3
Ineffective Flow			num=	2					
	Sta L	Sta R	Elev	Permanent					
	-2933.39	541	12.3	F					
	2117	4756.6	12.3	F					

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 11974

INPUT

Description: Interpolated Section

Station Elevation Data num= 192

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2788.99	17.41	-2756.8	16.95	-2735.69	16.77	-2702.13	16.37	-2647.46	15.59
-2629.08	15.31	-2561.52	14.14	-2536.61	13.8	-2525.24	13.63	-2488.95	13.25
-2484.17	13.29	-2452.67	13.54	-2416.7	13.58	-2379.27	13.84	-2368.16	13.95
-2326.82	13.84	-2319.61	13.81	-2264.77	13.43	-2222.52	13.2	-2221.92	13.2
-2155.34	13.2	-2100.49	13.15	-2069.53	13.18	-1979.79	13.23	-1935.96	13.4
-1882.7	13.58	-1821.56	13.58	-1802.34	13.57	-1789.08	13.44	-1766.37	13.22
-1703.18	13.72	-1675.67	13.88	-1617.3	14.08	-1590.38	14.19	-1586.53	14.2
-1550.56	14.14	-1514.59	14.25	-1490.36	14.1	-1472.45	14	-1461.82	13.97
-1449.1	13.97	-1366.57	13.87	-1358.99	13.87	-1327.21	13.7	-1139.24	13.57
-1112.59	13.51	-1001.31	13.09	-924.04	12.82	-846.67	12.58	-720.34	12.38
-692.25	12.42	-681.89	12.43	-653.61	12.13	-644.22	12.04	-614.99	11.87
-592.71	11.74	-535.68	11.06	-398.79	12.16	-364.57	12.02	-261.9	12.03
-252.85	12.01	-226.51	11.91	-176.12	11.75	-125.01	11.58	-56.57	11.67
-20.39	11.8	-6.32	11.78	46.1	11.71	56.83	11.59	80.32	11.31
106.28	11.12	116.92	11.21	199.92	11.95	218.74	11.92	240.18	11.9
241.53	11.89	302.34	11.93	366.37	11.82	449.38	11.48	455.67	11.43
491.2	11.11	533.94	11.5	569.51	11.81	598.78	11.84	612.21	11.92

ExpandedLocal.rep

690.48	12.51	729.61	12.73	849.33	13.47	882.76	13.36	899.44	13.45
921.91	13.4	949.55	12.91	961.07	12.91	999.65	12.22	1003.78	12.21
1049.76	12.05	1078.54	11.78	1099.87	11.72	1117.69	11.48	1193.34	11.18
1267.13	11.55	1359.13	11.65	1360.83	11.64	1411.42	11.41	1516.33	10.95
1517.81	10.53	1528.81	7.39	1528.89	7.36	1529.08	7.31	1531.79	6.53
1532.06	6.46	1533.32	6.1	1534.8	5.67	1536.94	5.06	1545.62	2.52
1549.41	1.47	1549.69	1.39	1551.04	1.02	1552.29	1.02	1566.04	1.02
1567.29	1.02	1581.88	1.02	1583.12	1.02	1583.93	1.39	1584.09	1.47
1586.33	2.52	1594.36	6.44	1594.52	6.51	1596.12	7.3	1596.28	7.38
1601.98	10.16	1603.67	10.98	1766.81	11.95	1863.02	11.96	1977.47	11.98
2011.56	11.97	2092.12	11.99	2107.53	11.97	2149.45	11.98	2235.45	11.96
2279.86	11.96	2389.63	12.09	2407.44	12.15	2464.78	12.39	2493.44	12.55
2503.33	12.57	2522.11	12.53	2607.47	12.48	2616.41	12.47	2776.3	11.99
2914.45	11.64	2988.95	11.59	3144.22	11.72	3172.67	11.72	3201.13	11.78
3361.5	12	3371.86	11.98	3386.85	11.92	3400.32	11.85	3410.25	11.84
3428.77	11.78	3435.75	11.76	3457.23	11.79	3571.05	11.87	3608.04	11.92
3620.8	11.92	3650.9	12.04	3657.81	12.07	3694.82	12.06	3771.24	12.26
3797.27	12.17	3799.93	12.18	3828.63	12.61	3845.09	12.68	3857.32	12.7
3886.01	12.78	3914.71	12.84	3922.81	12.85	4062.37	13.32	4071.96	13.35
4097.22	13.49	4132.07	13.65	4166.92	13.78	4359.05	14.82	4413.41	15.17
4531.42	15.89	4579.79	16.21	4644.78	16.5	4729.73	16.91	4763.74	17.1
4763.96	17.1	4837.79	17.12						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****					
-2788.99	.1	1516.33	.05	1603.67	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1516.33	1603.67		370	370		.1	.3
Ineffective Flow	num=		2					
Sta L	Sta R	Elev	Permanent					
-2788.99	1140	12.3	F					
1982	4837.79	12.3	F					

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 11604

INPUT

Description: 10' US Amber Street

Station Elevation Data num= 91

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-2644.59	17.134	-2590.23	16.455	-2481.51	14.655	-2412.61	13.34	-2375.61	12.8
-2338.61	12.432	-2301.61	12.829	-2264.93	12.931	-2215.42	13.403	-2165.91	13.171

ExpandedLocal.rep

```

-2066.9 12.431-1819.36 12.392-1720.35 12.756 -1638.4 12.726-1601.72 12.306
-1509.22 13.164-1418.31 13.745-1381.63 13.788-1344.95 14.036-1291.13 13.793
-1186.27 13.639-1153.86 13.403-962.167 13.057-663.804 11.962 -534.97 11.718
-495.759 11.786-457.337 11.335-404.815 10.944-346.649 10.122 -207.05 11.419
-172.15 11.248 -67.451 11.253 72.147 10.743 141.947 10.866 178.838 11.041
246.646 10.931 281.546 10.462 308.025 10.238 403.513 11.234 445.951 11.155
507.963 11.221 573.264 11.122 657.917 10.758 700.565 10.308 780.428 11.166
810.274 11.2181065.783 13.1741099.877 13.0661116.885 13.1731139.808 13.122
1167.987 12.5481179.739 12.551219.089 11.751270.191 11.5571299.532 11.243
1321.293 11.1771339.463 10.9021416.608 10.5611491.864 11.041585.687 11.186
1639.008 10.947 1746 10.5 1747.510.05319 1763.255.361702 1764.754.914894
1781.25 0 1782.75 0 1799.25 0 1800.75 0 1818.25 0
1819.75 0 1836.59.636986 1838 10.51993.417 11.6362482.176 11.663
2586.743 11.812695.065 12.2952802.789 12.2653086.711 11.4223157.691 11.372
3512.593 11.8363583.327 11.5693759.619 11.6573794.878 11.8363830.136 11.759
4047.327 12.1174189.415 12.6984462.914 14.4524673.197 16.0564848.433 16.906
4918.982 16.904

```

```

Manning's n Values          num=          3
Sta n Val      Sta n Val      Sta n Val
*****
-2644.59      .1      1746      .05      1838      .1

```

```

Bank Sta: Left   Right   Lengths: Left Channel   Right   Coeff Contr.   Expan.
          1746   1838                50     50           50             .1         .3
Ineffective Flow   num=          2
Sta L   Sta R   Elev Permanent
-2644.59  1740   12.3      F
18464918.982  12.3      F

```

BRIDGE

```

RIVER: W-15 Main
REACH: South          RS: 11579

```

INPUT

```

Description: Amber Street Bridge
Distance from Upstream XS = 10
Deck/Roadway Width = 30
Weir Coefficient = 2.6
Upstream Deck/Roadway Coordinates

```

```

num= 4
Sta Hi Cord Lo Cord      Sta Hi Cord Lo Cord      Sta Hi Cord Lo Cord
*****
1116 12.9              1746 12.9 9.4 1850 12.9 9.4
2695.06 12.3

```

ExpandedLocal.rep

Upstream Bridge Cross Section Data

Station Elevation Data num= 91

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2644.59	17.134	-2590.23	16.455	-2481.51	14.655	-2412.61	13.34	-2375.61	12.8
-2338.61	12.432	-2301.61	12.829	-2264.93	12.931	-2215.42	13.403	-2165.91	13.171
-2066.9	12.431	-1819.36	12.392	-1720.35	12.756	-1638.4	12.726	-1601.72	12.306
-1509.22	13.164	-1418.31	13.745	-1381.63	13.788	-1344.95	14.036	-1291.13	13.793
-1186.27	13.639	-1153.86	13.403	-962.167	13.057	-663.804	11.962	-534.97	11.718
-495.759	11.786	-457.337	11.335	-404.815	10.944	-346.649	10.122	-207.05	11.419
-172.15	11.248	-67.451	11.253	72.147	10.743	141.947	10.866	178.838	11.041
246.646	10.931	281.546	10.462	308.025	10.238	403.513	11.234	445.951	11.155
507.963	11.221	573.264	11.122	657.917	10.758	700.565	10.308	780.428	11.166
810.274	11.218	1065.783	13.174	1099.877	13.066	1116.885	13.173	1139.808	13.122
1167.987	12.548	1179.739	12.551	1219.089	11.751	1270.191	11.557	1299.532	11.243
1321.293	11.177	1339.463	10.902	1416.608	10.561	1491.864	11.041	1585.687	11.186
1639.008	10.947	1746	10.5	1747.510	0.5319	1763.255	0.361702	1764.754	0.914894
1781.25	0	1782.75	0	1799.25	0	1800.75	0	1818.25	0
1819.75	0	1836.59	0.636986	1838	10.51993	0.417	11.6362482	0.176	11.663
2586.743	11.812	2695.065	12.295	2802.789	12.265	3086.711	11.422	3157.691	11.372
3512.593	11.836	3583.327	11.569	3759.619	11.657	3794.878	11.836	3830.136	11.759
4047.327	12.117	4189.415	12.698	4462.914	14.452	4673.197	16.056	4848.433	16.906
4918.982	16.904								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2644.59	.1	1746	.05	1838	.1

Bank Sta: Left Right Coeff Contr. Expan.

1746	1838	.1	.3
------	------	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-2644.59	1740	12.3	F
18464918.982	12.3	F	

Downstream Deck/Roadway Coordinates

num= 4

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
1116	12.9			1746	12.9	9.4	1850	12.9	9.4
2695.06	12.3								

Downstream Bridge Cross Section Data

Station Elevation Data num= 91

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2644.59	17.134	-2590.23	16.455	-2481.51	14.655	-2412.61	13.34	-2375.61	12.8



ExpandedLocal.rep

```

-2338.61 12.432-2301.61 12.829-2264.93 12.931-2215.42 13.403-2165.91 13.171
-2066.9 12.431-1819.36 12.392-1720.35 12.756 -1638.4 12.726-1601.72 12.306
-1509.22 13.164-1418.31 13.745-1381.63 13.788-1344.95 14.036-1291.13 13.793
-1186.27 13.639-1153.86 13.403-962.167 13.057-663.804 11.962 -534.97 11.718
-495.759 11.786-457.337 11.335-404.815 10.944-346.649 10.122 -207.05 11.419
-172.15 11.248 -67.451 11.253 72.147 10.743 141.947 10.866 178.838 11.041
246.646 10.931 281.546 10.462 308.025 10.238 403.513 11.234 445.951 11.155
507.963 11.221 573.264 11.122 657.917 10.758 700.565 10.308 780.428 11.166
810.274 11.2181065.783 13.1741099.877 13.0661116.885 13.1731139.808 13.122
1167.987 12.5481179.739 12.551219.089 11.751270.191 11.5571299.532 11.243
1321.293 11.1771339.463 10.9021416.608 10.5611491.864 11.041585.687 11.186
1639.008 10.947 1746 10.5 1747.510.05319 1763.255.361702 1764.754.914894
1781.25 0 1782.75 0 1799.25 0 1800.75 0 1818.25 0
1819.75 0 1836.59.636986 1838 10.51993.417 11.6362482.176 11.663
2586.743 11.812695.065 12.2952802.789 12.2653086.711 11.4223157.691 11.372
3512.593 11.8363583.327 11.5693759.619 11.6573794.878 11.8363830.136 11.759
4047.327 12.1174189.415 12.6984462.914 14.4524673.197 16.0564848.433 16.906
4918.982 16.904

```

```

Manning's n Values          num=          3
Sta n Val      Sta n Val      Sta n Val
*****
-2644.59      .1    1746      .05    1838      .1

```

```

Bank Sta: Left   Right   Coeff Contr.   Expan.
           1746     1838             .1           .3

```

```

Ineffective Flow      num=          2
Sta L   Sta R   Elev Permanent
-2644.59  1745   12.3      F
18414918.982  12.3      F

```

```

Upstream Embankment side slope      =      0 horiz. to 1.0 vertical
Downstream Embankment side slope     =      0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =      .98
Elevation at which weir flow begins   =
Energy head used in spillway design   =
Spillway height used in design        =
Weir crest shape                      = Broad Crested

```

Number of Piers = 4

```

Pier Data
Pier Station      Upstream=      1764      Downstream=      1764
Upstream          num=          2
Width Elev      Width Elev
*****
1.5      0      1.5      9.4
Downstream        num=          2

```

```

Width  Elev  Width  Elev
*****
1.5    0     1.5    9.4

```

Pier Data

Pier Station Upstream= 1782 Downstream= 1782

Upstream num= 2

```

Width  Elev  Width  Elev
*****
1.5    0     1.5    9.4

```

Downstream num= 2

```

Width  Elev  Width  Elev
*****
1.5    0     1.5    9.4

```

Pier Data

Pier Station Upstream= 1800 Downstream= 1800

Upstream num= 2

```

Width  Elev  Width  Elev
*****
1.5    0     1.5    9.4

```

Downstream num= 2

```

Width  Elev  Width  Elev
*****
1.5    0     1.5    9.4

```

Pier Data

Pier Station Upstream= 1819 Downstream= 1819

Upstream num= 2

```

Width  Elev  Width  Elev
*****
1.5    0     1.5    9.4

```

Downstream num= 2

```

Width  Elev  Width  Elev
*****
1.5    0     1.5    9.4

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Momentum Cd = 1.2

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

ExpandedLocal.rep

Add Friction component to Momentum  
 Do not add Weight component to Momentum  
 Class B flow critical depth computations use critical depth  
 inside the bridge at the upstream end  
 Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 11554

INPUT

Description: 10' DS Amber Street

Station Elevation Data		num= 91		Sta Elev		Sta Elev		Sta Elev		Sta Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****											
-2644.59	17.134	2590.23	16.455	2481.51	14.655	2412.61	13.34	2375.61	12.8		
-2338.61	12.432	2301.61	12.829	2264.93	12.931	2215.42	13.403	2165.91	13.171		
-2066.9	12.431	1819.36	12.392	1720.35	12.756	-1638.4	12.726	1601.72	12.306		
-1509.22	13.164	1418.31	13.745	1381.63	13.788	1344.95	14.036	1291.13	13.793		
-1186.27	13.639	1153.86	13.403	962.167	13.057	663.804	11.962	-534.97	11.718		
-495.759	11.786	457.337	11.335	404.815	10.944	346.649	10.122	-207.05	11.419		
-172.15	11.248	-67.451	11.253	72.147	10.743	141.947	10.866	178.838	11.041		
246.646	10.931	281.546	10.462	308.025	10.238	403.513	11.234	445.951	11.155		
507.963	11.221	573.264	11.122	657.917	10.758	700.565	10.308	780.428	11.166		
810.274	11.218	1065.783	13.174	1099.877	13.066	1116.885	13.173	1139.808	13.122		
1167.987	12.548	1179.739	12.551	1219.089	11.751	1270.191	11.557	1299.532	11.243		
1321.293	11.177	1339.463	10.902	1416.608	10.561	1491.864	11.041	1585.687	11.186		
1639.008	10.947	1746	10.5	1747.510	0.5319	1763.255	0.361702	1764.754	0.914894		
1781.25	0	1782.75	0	1799.25	0	1800.75	0	1818.25	0		
1819.75	0	1836.59	0.636986	1838	10.51993	0.417	11.6362482	0.176	11.663		
2586.743	11.812	2695.065	12.295	2802.789	12.265	3086.711	11.422	3157.691	11.372		
3512.593	11.836	3583.327	11.569	3759.619	11.657	3794.878	11.836	3830.136	11.759		
4047.327	12.117	4189.415	12.698	4462.914	14.452	4673.197	16.056	4848.433	16.906		
4918.982	16.904										

Manning's n Values		num= 3		Sta n Val	
Sta	n Val	Sta	n Val	Sta	n Val
*****					
-2644.59	.1	1746	.05	1838	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1746	1838		114	114	.1	.3
Ineffective Flow	num= 2						
Sta L	Sta R	Elev	Permanent				
-2644.59	1745	12.3	F				
18414918.982	1745	12.3	F				

ExpandedLocal.rep

CROSS SECTION

RIVER: W-15 Main

REACH: South

RS: 11440

INPUT

Description: Interpolated Section

Station Elevation Data num= 175

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2819.37	17.1	-2783.25	16.63	-2765.8	16.43	-2674.88	15.15	-2658.66	14.9
-2601.13	13.93	-2590.76	13.55	-2576.17	13.05	-2560.56	12.79	-2554.3	12.79
-2523.12	12.88	-2517.84	12.83	-2481.38	12.99	-2479.45	12.99	-2445.23	13.09
-2398.32	13.43	-2396.44	13.44	-2347.65	13.2	-2250.08	12.52	-2154.95	12.32
-2045.53	12.24	-2006.15	12.17	-1908.58	12.25	-1871.03	12.18	-1827.82	12.2
-1791.67	11.95	-1789.9	11.96	-1761.87	12.33	-1710.93	12.84	-1700.52	12.9
-1669.54	12.99	-1635.34	13.18	-1612.84	13.39	-1610.93	13.4	-1574.78	13.39
-1538.64	13.52	-1485.6	13.3	-1453.54	13.24	-1408.55	13	-1386.07	13.08
-1382.27	13.06	-1370.76	12.96	-1350.33	12.92	-1329.36	12.97	-1295.16	12.73
-1161.43	12.8	-1159.28	12.8	-1102.59	12.67	-954.42	12.09	-867.4	11.81
-740.44	11.56	-701.8	11.58	-686.83	11.45	-663.94	11.34	-654.48	11.33
-612.18	10.96	-598.65	10.78	-554.86	10.29	-533.93	10.38	-419.25	10.74
-417.3	10.76	-382.9	10.73	-315.88	10.89	-279.73	11.07	-270.07	11.09
-142.16	10.8	-84.72	10.88	-73.38	10.88	-37.02	10.95	29.8	10.79
63.56	10.45	64.19	10.44	90.28	10.1	95.28	10.1	109.81	10.18
184.38	10.92	226.2	10.99	249.05	11.07	287.31	11.11	351.66	11.05
360.38	11.03	397.48	10.72	434.59	10.52	435.08	10.52	477.11	10.25
555.81	10.88	585.22	10.94	657.23	11.36	837.01	12.29	870.61	12.21
887.37	12.28	909.96	12.25	937.73	11.87	949.31	11.87	988.09	11.33
1031.97	11.22	1038.45	11.21	1067.36	11.02	1088.81	11	1106.71	10.83
1178.02	10.68	1182.73	10.68	1215.32	10.9	1256.9	11.02	1289.93	11
1349.35	11.09	1401.85	10.95	1401.9	10.95	1437.76	11.06	1476.42	10.6
1507.33	10.38	1509.35	10.01	1519.87	8.08	1525.81	6.19	1530.58	5.22
1532.4	4.85	1532.6	4.82	1539	3.85	1544.28	2.72	1549.56	1.29
1554.83	.49	1555.83	.49	1566.83	.49	1567.83	.49	1579.5	.49
1580.5	.49	1584.16	1.7	1585.73	2.68	1588.35	3.6	1590.45	4.23
1593.06	4.92	1598.3	6.85	1606.15	8.8	1611.25	10	1614	10.65
1637.39	10.87	1758.33	11.47	1764.3	11.47	1892.22	11.55	2212.23	11.95
2309.34	12.17	2325.6	12.24	2409.93	12.56	2455.62	12.58	2509.98	12.56
2632.58	12.27	2773.65	11.92	2839.56	11.86	2939.14	11.91	2955.02	11.85
3000.96	12	3046.9	11.92	3092.84	11.97	3138.79	12.14	3169.15	12.14
3234.84	11.9	3272.55	11.88	3318.94	12.06	3398.56	11.97	3431.3	12.04
3439.46	12.01	3461.19	12.05	3464.05	12.05	3564.64	12.13	3648.1	12.34
3665.75	12.36	3797.7	12.73	3812.56	12.8	4040.06	14.24	4051.69	14.32
4246.98	15.86	4351.84	16.47	4409.71	16.94	4440.92	17.08	4475.23	17.1

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2819.37 .1 1507.33 .05 1614 .1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1507.33	1614		114	114	114		.1	.3
Ineffective Flow			num=	2					
	Sta L	Sta R	Elev	Permanent					
	-2819.37	1449	12.3	F					
	1674	4475.23	12.3	F					

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 11326

INPUT

Description: Interpolated Section

Station Elevation Data		num=	175							
	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****	*****									
	-2994.14	17.06-2958.56	16.58-2941.37	16.4-2851.79	15.37-2835.81	15.15				
	-2779.13	14.32-2768.91	13.76-2754.54	12.98-2739.16	12.68-2732.99	12.77				
	-2702.27	13.27-2697.07	13.22-2661.15	13.15-2659.24	13.14-2625.53	13.24				
	-2579.32	13.48-2577.46	13.48-2529.39	13.22-2433.27	12.6-2339.54	12.23				
	-2231.74	12.09-2192.93	11.96 -2096.8	11.75-2059.81	11.62-2017.24	11.68				
	-1981.62	11.59-1979.88	11.6-1952.26	12.06-1902.08	12.62-1891.82	12.63				
	-1861.29	12.61 -1827.6	12.77-1805.44	13.05-1803.55	13.05-1767.94	12.99				
	-1732.33	13-1680.07	12.81-1648.48	12.73-1604.16	12.33-1582.01	12.51				
	-1578.27	12.48-1566.92	12.36 -1546.8	12.45-1526.14	12.57-1492.45	12.15				
	-1360.68	12.54-1358.57	12.55-1302.71	12.5-1156.73	11.89 -1071	11.66				
	-945.92	11.4 -907.85	11.37 -893.09	11.28 -870.55	11.35 -861.23	11.39				
	-819.55	10.97 -806.22	10.81 -763.08	10.45 -742.45	10.45 -629.47	10.08				
	-627.54	10.09 -593.66	10.21 -527.63	10.53 -492.01	10.88 -482.49	10.96				
	-356.47	10.85 -299.88	10.91 -288.7	10.89 -252.89	10.86 -187.05	10.66				
	-153.79	10.42 -153.17	10.41 -127.46	9.97 -122.53	9.92 -108.22	9.92				
	-34.75	10.61 6.45	10.82 28.97	10.96 66.66	10.99 130.06	10.98				
	138.65	10.97 175.21	10.51 211.76	10.28 212.25	10.28 253.66	10.19				
	331.2	10.6 360.17	10.66 431.12	10.95 608.25	11.4 641.35	11.36				
	657.86	11.4 680.12	11.38 707.48	11.18 718.89	11.18 757.09	10.91				
	800.33	10.85 806.71	10.86 835.19	10.8 856.32	10.82 873.96	10.76				
	944.21	10.78 948.86	10.79 980.97	11.03 1021.93	10.99 1054.48	10.91				
	1113.02	10.99 1164.74	10.96 1164.79	10.96 1200.12	11.32 1238.21	10.56				
	1268.67	10.26 1271.21	9.96 1284.43	8.43 1291.9	5.97 1297.91	5.08				
	1300.2	4.75 1300.45	4.73 1308.5	4.19 1315.14	3.1 1321.78	1.42				
	1328.42	.97 1328.92	.97 1334.42	.97 1334.92	.97 1340.75	.97				

ExpandedLocal.rep

1341.25	.97	1346.58	2.25	1348.87	3.72	1352.68	4.74	1355.72	5.34
1359.53	5.9	1367.15	8.13	1378.57	9.56	1385.99	10.37	1390	10.8
1411.6	11.06	1523.25	11.3	1528.75	11.3	1646.86	11.45	1942.28	12.24
2031.93	12.53	2046.95	12.59	2124.8	12.83	2166.98	12.88	2217.16	12.85
2330.35	12.67	2460.58	12.41	2521.44	12.34	2613.36	12.32	2628.03	12.17
2670.44	12.4	2712.85	12.17	2755.26	12.21	2797.68	12.49	2825.71	12.45
2886.36	12.24	2921.17	12.17	2964	12.51	3037.5	12.28	3067.73	12.24
3075.26	12.21	3095.32	12.34	3097.96	12.33	3190.83	12.33	3267.87	12.59
3284.17	12.6	3405.99	12.77	3419.7	12.8	3629.73	14.1	3640.47	14.19
3820.76	15.65	3917.56	16.34	3970.99	16.97	3999.8	17.26	4031.48	17.3

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2994.14	.1	1268.67	.05	1390	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1268.67	1390		114	114	.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 11212

INPUT

Description: 10' US Gause Blvd Bridge

Station Elevation Data num= 89

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3168.92	17.025	-3133.87	16.527	-3028.7	15.59	-2957.13	14.716	-2932.91	12.906
-2917.76	12.578	-2881.42	13.657	-2839.04	13.3	-2760.31	13.535	-2524.13	12.138
-2417.94	11.935	-2248.59	11.064	-2169.86	11.236	-2142.65	11.802	-2093.22	12.402
-2053.05	12.231	-2019.86	12.358	-1998.03	12.71	-1843.43	12.229	-1799.77	11.649
-1777.95	11.941	-1763.09	11.769	-1722.92	12.169	-1689.73	11.581	-1557.86	12.298
-1502.84	12.328	-1359.05	11.699	-1099.36	11.123	-1067.97	11.453	-1013.79	10.838
-950.977	10.516	-839.683	9.418	-739.372	10.174	-694.907	10.837	-515.033	10.94
-371.134	10.398	-340.348	9.731	-326.251	9.659	-191.118	10.853	-83.085	10.913
-47.073	10.305	-11.062	10.042	205.006	10.54	568.679	10.488	710.409	10.877
746.613	11.153	819.022	10.818	927.634	10.963	962.48	11.588	1000	10.53
1030	10.14	1049	8.78	1058	5.74	1068	4.64	1078	4.54
1086	3.49	1094	1.55	1102	1.46	1109	2.8	1112	4.76
1117	5.88	1121	6.45	1126	6.88	1136	9.4	1151	10.32
1166	10.95	1185.8	11.253	1293.209	11.131	1401.488	11.359	1768.296	12.945
1878.338	13.186	2028.12	13.064	2287.588	12.718	2301.031	12.484	2339.916	12.801
2378.8	12.422	2417.685	12.444	2456.569	12.844	2569.791	12.462	2609.054	12.959
2711.061	12.408	2729.451	12.622	2817.014	12.519	2887.65	12.847	3026.847	12.802
3219.401	13.969	3483.289	16.207	3558.686	17.439	3587.729	17.502		

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -3168.92 .1 1030 .05 1166 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1030 1166 100 100 100 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -3168.92 1039 10.14 F  
 11463587.729 10.14 F

BRIDGE

RIVER: W-15 Main  
 REACH: South RS: 11162

INPUT

Description: Gause Blvd Bridge  
 Distance from Upstream XS = 10  
 Deck/Roadway Width = 80  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 6  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 1000 10.53 1030 10.14 1049 12.3 11.3  
 1136 12.3 11.3 1151 10.32 1166 10.95

Upstream Bridge Cross Section Data

Station Elevation Data num= 89  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -3168.92 17.025-3133.87 16.527-3028.7 15.59-2957.13 14.716-2932.91 12.906  
 -2917.76 12.578-2881.42 13.657-2839.04 13.3-2760.31 13.535-2524.13 12.138  
 -2417.94 11.935-2248.59 11.064-2169.86 11.236-2142.65 11.802-2093.22 12.402  
 -2053.05 12.231-2019.86 12.358-1998.03 12.71-1843.43 12.229-1799.77 11.649  
 -1777.95 11.941-1763.09 11.769-1722.92 12.169-1689.73 11.581-1557.86 12.298  
 -1502.84 12.328-1359.05 11.699-1099.36 11.123-1067.97 11.453-1013.79 10.838  
 -950.977 10.516-839.683 9.418-739.372 10.174-694.907 10.837-515.033 10.94  
 -371.134 10.398-340.348 9.731-326.251 9.659-191.118 10.853 -83.085 10.913  
 -47.073 10.305 -11.062 10.042 205.006 10.54 568.679 10.488 710.409 10.877  
 746.613 11.153 819.022 10.818 927.634 10.963 962.48 11.588 1000 10.53  
 1030 10.14 1049 8.78 1058 5.74 1068 4.64 1078 4.54  
 1086 3.49 1094 1.55 1102 1.46 1109 2.8 1112 4.76  
 1117 5.88 1121 6.45 1126 6.88 1136 9.4 1151 10.32

ExpandedLocal.rep

1166	10.95	1185.8	11.2531293.209	11.1311401.488	11.3591768.296	12.945
1878.338	13.186	2028.12	13.0642287.588	12.7182301.031	12.4842339.916	12.801
2378.8	12.4222417.685	12.4442456.569	12.8442569.791	12.462609.054	12.959	
2711.061	12.4082729.451	12.622817.014	12.519 2887.65	12.8473026.847	12.802	
3219.401	13.9693483.289	16.2073558.686	17.4393587.729	17.502		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3168.92	.1	1030	.05	1166	.1

Bank Sta: Left Right Coeff Contr. Expan.

1030	1166	.1	.3
------	------	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-3168.92	1039	10.14	F
11463587.729	10.14	F	

Downstream Deck/Roadway Coordinates

num= 6

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
1000	11.23				1024	11.21			
1117	12.3	11.3			1128	10.69			
					1047	12.3	11.3		
					1146	11.14			

Downstream Bridge Cross Section Data

Station Elevation Data num= 85

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3168.92	17.025-3133.87	16.527	-3028.7	15.59-2957.13	14.716-2932.91	12.906			
-2917.76	12.578-2881.42	13.657-2839.04	13.3-2760.31	13.535-2524.13	12.138				
-2417.94	11.935-2248.59	11.064-2169.86	11.236-2142.65	11.802-2093.22	12.402				
-2053.05	12.231-2019.86	12.358-1998.03	12.71-1843.43	12.229-1799.77	11.649				
-1777.95	11.941-1763.09	11.769-1722.92	12.169-1689.73	11.581-1557.86	12.298				
-1502.84	12.328-1359.05	11.699-1099.36	11.123-1067.97	11.453-1013.79	10.838				
-950.977	10.516-839.683	9.418-739.372	10.174-694.907	10.837-515.033	10.94				
-371.134	10.398-340.348	9.731-326.251	9.659-191.118	10.853 -83.085	10.913				
-47.073	10.305 -11.062	10.042 205.006	10.54 568.679	10.488 710.409	10.877				
746.613	11.153 819.022	10.818 927.634	10.963 962.48	11.588 1000	11.23				
1024	11.21	1047	8.42	1057	6.92	1067	3.17	1075	.37
1086	-1.12	1096	1.02	1108	5.64	1117	7.8	1128	10.69
1146	11.141149.997	11.661 1185.8	11.2531293.209	11.1311401.488	11.359				
1768.296	12.9451878.338	13.186 2028.12	13.0642287.588	12.7182301.031	12.484				
2339.916	12.801 2378.8	12.4222417.685	12.4442456.569	12.8442569.791	12.46				
2609.054	12.9592711.061	12.4082729.451	12.622817.014	12.519 2887.65	12.847				
3026.847	12.8023219.401	13.9693483.289	16.2073558.686	17.4393587.729	17.502				

Manning's n Values num= 3



Sta n Val      Sta n Val      Sta n Val  
 \*\*\*\*\*  
 -3168.92      .1      1024      .05      1128      .1

Bank Sta: Left    Right    Coeff Contr.    Expan.  
                  1024    1128                   .1                   .3

Ineffective Flow    num=    2  
                  Sta L    Sta R    Elev    Permanent  
 -3168.92    1039    11.21    F  
                  11223587.729    11.21    F

Upstream Embankment side slope                    =            0 horiz. to 1.0 vertical  
 Downstream Embankment side slope                 =            0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow =            .98  
 Elevation at which weir flow begins               =  
 Energy head used in spillway design               =  
 Spillway height used in design                    =  
 Weir crest shape                                     = Broad Crested

Number of Piers = 3

Pier Data

Pier Station      Upstream=    1070      Downstream=    1070  
 Upstream      num=    2  
                  Width    Elev    Width    Elev  
 \*\*\*\*\*  
                  1.3      -4      1.3      11.3  
 Downstream      num=    2  
                  Width    Elev    Width    Elev  
 \*\*\*\*\*  
                  1.3      -4      1.3      11.3

Pier Data

Pier Station      Upstream=    1090      Downstream=    1090  
 Upstream      num=    2  
                  Width    Elev    Width    Elev  
 \*\*\*\*\*  
                  1.3      -4      1.3      11.3  
 Downstream      num=    2  
                  Width    Elev    Width    Elev  
 \*\*\*\*\*  
                  1.3      -4      1.3      11.3

Pier Data

Pier Station      Upstream=    1110      Downstream=    1110  
 Upstream      num=    2  
                  Width    Elev    Width    Elev  
 \*\*\*\*\*

```

      1.3      -4      1.3      11.3
Downstream  num=      2
      Width  Elev   Width  Elev
*****
      1.3      -4      1.3      11.3

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth  
inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main

REACH: South

RS: 11112

INPUT

Description: 10' DS Gause Blvd. Bridge

Station Elevation Data num= 85

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3168.92	17.025	-3133.87	16.527	-3028.7	15.59	-2957.13	14.716	-2932.91	12.906
-2917.76	12.578	-2881.42	13.657	-2839.04	13.3	-2760.31	13.535	-2524.13	12.138
-2417.94	11.935	-2248.59	11.064	-2169.86	11.236	-2142.65	11.802	-2093.22	12.402
-2053.05	12.231	-2019.86	12.358	-1998.03	12.71	-1843.43	12.229	-1799.77	11.649
-1777.95	11.941	-1763.09	11.769	-1722.92	12.169	-1689.73	11.581	-1557.86	12.298
-1502.84	12.328	-1359.05	11.699	-1099.36	11.123	-1067.97	11.453	-1013.79	10.838
-950.977	10.516	-839.683	9.418	-739.372	10.174	-694.907	10.837	-515.033	10.94
-371.134	10.398	-340.348	9.731	-326.251	9.659	-191.118	10.853	-83.085	10.913
-47.073	10.305	-11.062	10.042	205.006	10.54	568.679	10.488	710.409	10.877
746.613	11.153	819.022	10.818	927.634	10.963	962.48	11.588	1000	11.23
1024	11.21	1047	8.42	1057	6.92	1067	3.17	1075	.37
1086	-1.12	1096	1.02	1108	5.64	1117	7.8	1128	10.69
1146	11.141	1149.997	11.661	1185.8	11.253	1293.209	11.131	1401.488	11.359
1768.296	12.945	1878.338	13.186	2028.12	13.064	2287.588	12.718	2301.031	12.484
2339.916	12.801	2378.8	12.422	2417.685	12.444	2456.569	12.844	2569.791	12.46

ExpandedLocal.rep

2609.054 12.9592711.061 12.4082729.451 12.622817.014 12.519 2887.65 12.847  
 3026.847 12.8023219.401 13.9693483.289 16.2073558.686 17.4393587.729 17.502

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -3168.92 .1 1024 .05 1128 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1024 1128 474 474 474 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -3168.92 1039 11.21 F  
 11223587.729 11.21 F

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 10638

INPUT

Description: Interpolated Section

Station Elevation Data num= 201  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -2991 16.58-2984.16 16.49-2957.44 16.12-2956.07 16.11-2899.74 15.62  
 -2861.85 15.29-2856.77 15.25-2815.33 14.76-2788.25 14.44-2765.07 12.76  
 -2750.56 12.46-2746.18 12.58-2730.91 13.02-2720.64 13.32-2715.78 13.46  
 -2675.21 13.13 -2646.5 13.22-2599.84 13.35-2579.44 13.24-2562.08 13.14  
 -2536.29 12.99-2477.67 12.65-2438.23 12.43-2393.25 12.17-2373.74 12.06  
 -2326.4 11.97-2308.84 11.93-2297.02 11.91-2272.09 11.86-2224.42 11.62  
 -2155.82 11.28-2140.01 11.2-2116.51 11.08-2109.97 11.05-2055.59 11.16  
 -2034.6 11.2-2014.61 11.6-2008.56 11.73-1971.18 12.16-1961.24 12.28  
 -1922.78 12.12-1906.62 12.17-1891.01 12.23-1886.76 12.3 -1873.4 12.5  
 -1870.11 12.55-1802.35 12.33-1737.1 12.14-1732.35 12.12-1722.11 12.09  
 -1717.72 12.04-1693.46 11.72-1680.32 11.55-1659.43 11.82-1645.21 11.65  
 -1632.37 11.78-1606.75 12.02-1595.54 11.82-1574.98 11.47-1547.02 11.61  
 -1466.53 12.03-1461.67 12.06-1458.74 12.07-1448.74 12.13-1396.07 12.16  
 -1376.32 12.07-1321.94 11.84-1290.97 11.71-1258.42 11.57-1239.61 11.53  
 -1205.62 11.46-1185.13 11.42-1120.27 11.28-1048.33 11.14-1034.92 11.11  
 -1012.69 11.06-1009.82 11.06 -979.77 11.36 -927.91 10.79 -911.53 10.7  
 -867.78 10.49 -864.23 10.45 -785.77 9.7 -778.88 9.64 -774.72 9.6  
 -761.23 9.47 -693.53 9.95 -665.21 10.16 -637.92 10.56 -622.64 10.79  
 -608.18 10.8 -558.84 10.84 -522.83 10.87 -501.12 10.88 -450.45 10.93  
 -437.48 10.89 -364.31 10.63 -352.13 10.59 -331.92 10.51 -312.7 10.44  
 -283.22 9.82 -269.73 9.76 -266.78 9.78 -227.51 10.12 -183.16 10.5  
 -181.47 10.51 -140.37 10.86 -118.77 10.87 -98.14 10.88 -81.55 10.88

ExpandedLocal.rep

-36.95	10.9	-14.81	10.53	-2.47	10.33	32	10.08	68.18	10.15
68.52	10.15	68.8	10.15	151.85	10.31	219.15	10.45	235.18	10.48
238.84	10.49	255.12	10.48	318.51	10.46	369.5	10.46	401.85	10.45
442.06	10.42	485.18	10.38	519.85	10.37	568.51	10.34	586.98	10.33
629	10.42	651.84	10.47	670.2	10.52	722.66	10.63	735.17	10.72
757.32	10.87	815.94	10.58	818.5	10.57	820.56	10.56	826.63	10.53
839.5	10.54	930.61	10.59	963.96	11.15	970.91	11.08	999.88	10.78
1003.81	10.77	1022.86	10.76	1025.81	10.33	1044.74	7.75	1052.36	6.5
1054.26	6.22	1063.78	2.73	1071.39	.12	1073.01	-.1	1081.86	-1.27
1091.65	1.03	1095.57	2.59	1103.41	5.5	1106.54	6.23	1109.29	6.92
1112.22	7.6	1123	10.32	1139.85	10.74	1143.59	11.22	1177.11	10.86
1277.67	10.77	1379.04	11.02	1474.93	11.46	1649.83	12.28	1678.21	12.41
1717.58	12.59	1722.46	12.62	1825.48	12.88	1965.71	12.82	1986.59	12.8
2180.47	12.56	2208.63	12.52	2221.21	12.3	2257.62	12.6	2294.02	12.25
2294.95	12.25	2330.42	12.27	2366.83	12.64	2453.78	12.35	2472.83	12.29
2509.59	12.75	2603.33	12.25	2605.09	12.25	2622.3	12.44	2704.28	12.35
2711.11	12.39	2770.41	12.66	2900.73	12.62	2911.69	12.69	3081	13.71
3190	14.62	3241.75	15.06	3328.06	15.78	3375.36	16.55	3398.65	16.93
3425.84	16.98								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2991	.1	1022.86	.05	1123	.1

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1022.86	1123		474	474	474		.1	.3
Ineffective Flow			num=	2					
Sta L	Sta R	Elev	Permanent						
-2991	802	11.21	F						
1359	3425.84	11.21	F						

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 10164

INPUT

Description: Interpolated Section

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2813.07	16.13-2806.54	16.05-2781.02	15.71	-2779.7	15.7-2725.89	15.25			
-2689.69	14.94-2684.83	14.9-2645.24	14.45	-2619.37	14.16-2597.22	12.61			
-2583.37	12.33-2579.18	12.45-2564.59	12.86	-2554.78	13.13-2550.13	13.26			
-2511.37	12.96-2483.94	13.04-2439.36	13.17	-2419.87	13.06	-2403.3	12.97		
-2378.65	12.84-2322.65	12.53-2284.97	12.32	-2242	12.08-2223.36	11.98			

ExpandedLocal.rep

-2178.13	11.89-2161.35	11.86-2150.06	11.84-2126.24	11.79 -2080.7	11.57
-2015.15	11.25-2000.05	11.17 -1977.6	11.06-1971.35	11.03 -1919.4	11.13
-1899.35	11.17-1880.24	11.54-1874.46	11.65-1838.75	12.05-1829.25	12.15
-1792.51	12-1777.08	12.05-1762.16	12.1 -1758.1	12.16-1745.34	12.35
-1742.19	12.4-1677.45	12.18-1615.12	12-1610.58	11.99 -1600.8	11.96
-1596.6	11.91-1573.42	11.61-1560.87	11.45-1540.91	11.69-1527.32	11.54
-1515.06	11.65-1490.58	11.86-1479.88	11.68-1460.23	11.35-1433.52	11.48
-1356.62	11.87-1351.98	11.89-1349.18	11.91-1339.62	11.96 -1289.3	11.98
-1270.43	11.91-1218.48	11.69-1188.89	11.57-1157.79	11.45-1139.82	11.41
-1107.35	11.35-1087.77	11.31-1025.81	11.19 -957.08	11.06 -944.27	11.03
-923.02	10.99 -920.28	10.99 -891.57	11.27 -842.02	10.74 -826.37	10.66
-784.57	10.45 -781.18	10.42 -706.22	9.73 -699.64	9.67 -695.67	9.64
-682.79	9.51 -618.1	9.95 -591.04	10.15 -564.97	10.52 -550.38	10.74
-536.56	10.75 -489.42	10.81 -455.01	10.84 -434.27	10.86 -385.86	10.92
-373.47	10.89 -303.57	10.66 -291.93	10.62 -272.62	10.55 -254.26	10.49
-226.1	9.92 -213.21	9.85 -210.39	9.88 -172.87	10.19 -130.5	10.53
-128.89	10.55 -89.62	10.87 -68.98	10.87 -49.27	10.88 -33.42	10.88
9.19	10.89 30.34	10.54 42.13	10.35 75.06	10.11 109.62	10.17
109.95	10.17 110.22	10.17 189.57	10.29 253.86	10.4 269.18	10.43
272.67	10.44 288.23	10.43 348.79	10.38 397.51	10.4 428.41	10.39
466.83	10.34 508.02	10.26 541.15	10.24 587.63	10.19 605.28	10.17
645.43	10.23 667.25	10.27 684.79	10.31 734.91	10.38 746.86	10.46
768.02	10.59 824.03	10.29 826.47	10.28 828.44	10.27 834.24	10.24
846.53	10.23 933.58	10.22 965.45	10.71 972.08	10.64 999.76	10.33
1003.52	10.32 1021.71	10.32 1024.51	9.83 1042.49	7.08 1049.71	5.78
1051.52	5.52 1060.55	2.28 1067.78	-.13 1069.31	-.33 1077.71	-1.43
1087.31	1.05 1091.14	2.63 1098.82	5.36 1101.89	6.06 1104.57	6.76
1107.45	7.4 1118	9.94 1133.7	10.34 1137.19	10.79 1168.43	10.46
1262.13	10.42 1356.6	10.68 1445.95	11.12 1608.94	11.94 1635.39	12.08
1672.08	12.27 1676.62	12.29 1772.62	12.58 1903.29	12.58 1922.75	12.57
2103.43	12.36 2129.66	12.33 2141.39	12.13 2175.32	12.4 2209.24	12.07
2210.11	12.07 2243.16	12.09 2277.09	12.44 2358.12	12.17 2375.87	12.12
2410.12	12.55 2497.47	12.09 2499.11	12.08 2515.16	12.27 2591.55	12.19
2597.92	12.22 2653.18	12.48 2774.62	12.44 2784.83	12.5 2942.61	13.44
3044.17	14.29 3092.4	14.69 3172.83	15.36 3216.91	16.07 3238.61	16.41
3263.95	16.47				

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2813.07 .1 1021.71 .05 1118 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1021.71 1118 474 474 474 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 -2813.07 565 11.21 F

ExpandedLocal.rep

CROSS SECTION

RIVER: W-15 Main

REACH: South

RS: 9690

INPUT

Description: Interpolated Section

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2635.15	15.69	-2628.92	15.61	-2604.59	15.3	-2603.34	15.29	-2552.04	14.88
-2517.53	14.6	-2512.9	14.56	-2475.16	14.15	-2450.5	13.88	-2429.38	12.46
-2416.17	12.21	-2412.18	12.32	-2398.27	12.69	-2388.92	12.94	-2384.49	13.06
-2347.54	12.79	-2321.39	12.87	-2278.89	12.99	-2260.31	12.89	-2244.51	12.81
-2221.02	12.69	-2167.62	12.4	-2131.7	12.21	-2090.74	11.99	-2072.97	11.89
-2029.85	11.82	-2013.86	11.79	-2003.1	11.77	-1980.39	11.72	-1936.98	11.51
-1874.49	11.21	-1860.09	11.14	-1838.69	11.04	-1832.73	11.01	-1783.21	11.1
-1764.09	11.13	-1745.88	11.47	-1740.37	11.57	-1706.32	11.94	-1697.27	12.03
-1662.25	11.88	-1647.53	11.93	-1633.31	11.97	-1629.44	12.03	-1617.27	12.2
-1614.28	12.24	-1552.56	12.02	-1493.13	11.86	-1488.8	11.85	-1479.48	11.83
-1475.48	11.78	-1453.38	11.5	-1441.42	11.35	-1422.39	11.57	-1409.44	11.42
-1397.75	11.52	-1374.41	11.71	-1364.21	11.54	-1345.48	11.23	-1320.01	11.35
-1246.71	11.71	-1242.28	11.73	-1239.61	11.74	-1230.5	11.79	-1182.53	11.81
-1164.54	11.74	-1115.01	11.55	-1086.81	11.44	-1057.16	11.32	-1040.03	11.29
-1009.08	11.23	-990.41	11.2	-931.34	11.09	-865.82	10.99	-853.61	10.96
-833.35	10.93	-830.74	10.92	-803.38	11.17	-756.14	10.69	-741.22	10.61
-701.37	10.42	-698.14	10.4	-626.68	9.76	-620.4	9.71	-616.62	9.68
-604.34	9.56	-542.67	9.95	-516.88	10.14	-492.02	10.49	-478.11	10.69
-464.94	10.71	-420	10.78	-387.2	10.81	-367.43	10.84	-321.28	10.91
-309.47	10.89	-242.83	10.69	-231.73	10.66	-213.32	10.59	-195.82	10.53
-168.98	10.01	-156.69	9.95	-154	9.97	-118.23	10.26	-77.84	10.57
-76.3	10.58	-38.87	10.87	-19.19	10.88	-.41	10.89	14.7	10.87
55.33	10.87	75.49	10.56	86.72	10.38	118.12	10.14	151.07	10.19
151.39	10.19	151.64	10.19	227.28	10.28	288.57	10.36	303.18	10.38
306.51	10.38	321.33	10.37	379.07	10.31	425.51	10.34	454.97	10.32
491.6	10.25	530.87	10.14	562.45	10.11	606.76	10.03	623.59	10.01
661.86	10.04	682.66	10.07	699.38	10.1	747.16	10.14	758.55	10.2
778.72	10.31	832.12	10	834.45	9.99	836.32	9.98	841.86	9.94
853.57	9.93	936.55	9.85	966.93	10.27	973.26	10.21	999.65	9.88
1003.23	9.87	1020.57	9.87	1023.22	9.34	1040.23	6.41	1047.07	5.06
1048.78	4.81	1057.33	1.84	1064.17	-.38	1065.62	-.57	1073.57	-1.58
1082.96	1.06	1086.71	2.66	1094.22	5.22	1097.23	5.88	1099.86	6.61
1102.67	7.2	1113	9.57	1127.56	9.94	1130.79	10.35	1159.74	10.06
1246.6	10.06	1334.16	10.34	1416.97	10.78	1568.04	11.61	1592.56	11.76
1626.57	11.94	1630.77	11.96	1719.76	12.27	1840.88	12.34	1858.92	12.34
2026.38	12.16	2050.7	12.13	2061.57	11.95	2093.02	12.2	2124.46	11.9
2125.27	11.9	2155.9	11.92	2187.35	12.23	2262.45	11.99	2278.9	11.94

ExpandedLocal.rep

2310.65	12.34	2391.62	11.93	2393.14	11.92	2408.01	12.09	2478.82	12.03
2484.72	12.05	2535.94	12.29	2648.5	12.26	2657.97	12.32	2804.21	13.18
2898.35	13.95	2943.06	14.32	3017.6	14.93	3058.46	15.58	3078.57	15.9
3102.06	15.95								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2635.15	.1	1020.57	.05	1113	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1020.57	1113		473	473		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
-2635.15	328	11.21	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 9217

INPUT

Description: Interpolated Section

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2457.23	15.24	-2451.3	15.17	-2428.17	14.89	-2426.97	14.88	-2378.19	14.5
-2345.37	14.25	-2340.96	14.22	-2305.07	13.85	-2281.62	13.61	-2261.54	12.32
-2248.97	12.09	-2245.18	12.18	-2231.95	12.52	-2223.06	12.76	-2218.84	12.86
-2183.7	12.62	-2158.84	12.69	-2118.42	12.81	-2100.75	12.72	-2085.72	12.65
-2063.38	12.54	-2012.6	12.28	-1978.44	12.1	-1939.48	11.9	-1922.59	11.81
-1881.58	11.74	-1866.37	11.71	-1856.13	11.69	-1834.54	11.65	-1793.25	11.46
-1733.83	11.18	-1720.13	11.12	-1699.78	11.02	-1694.12		-1647.01	11.07
-1628.83	11.1	-1611.52	11.4	-1606.27	11.5	-1573.9	11.82	-1565.29	11.91
-1531.98	11.77	-1517.98	11.81	-1504.46	11.85	-1500.78	11.9	-1489.21	12.05
-1486.36	12.09	-1427.66	11.87	-1371.15	11.72	-1367.03	11.71	-1358.17	11.69
-1354.36	11.65	-1333.35	11.39	-1321.97	11.25	-1303.87	11.44	-1291.55	11.31
-1280.44	11.4	-1258.24	11.56	-1248.54	11.4	-1230.72	11.12	-1206.51	11.22
-1136.79	11.54	-1132.58	11.56	-1130.04	11.58	-1121.38	11.62	-1075.76	11.64
-1058.66	11.58	-1011.55	11.4	-984.73	11.3	-956.53	11.2	-940.24	11.17
-910.8	11.11	-893.05	11.09	-836.88	10.99	-774.56	10.91	-762.95	10.89
-743.69	10.86	-741.2	10.85	-715.18	11.08	-670.25	10.63	-656.07	10.57
-618.17	10.39	-615.1	10.37	-547.14	9.79	-541.17	9.75	-537.57	9.72
-525.89	9.61	-467.24	9.94	-442.71	10.12	-419.08	10.45	-405.84	10.64
-393.31	10.66	-350.58	10.74	-319.39	10.79	-300.58	10.81	-256.7	10.9
-245.46	10.89	-182.09	10.72	-171.53	10.69	-154.03	10.63	-137.38	10.58
-111.85	10.1	-100.16	10.05	-97.61	10.07	-63.59	10.33	-25.18	10.61

ExpandedLocal.rep

-23.72	10.62	11.89	10.88	30.6	10.88	48.46	10.89	62.83	10.87
101.46	10.86	120.64	10.57	131.32	10.4	161.18	10.18	192.52	10.2
192.82	10.2	193.06	10.2	265	10.26	323.29	10.31	337.17	10.33
340.34	10.33	354.44	10.32	409.35	10.24	453.51	10.28	481.53	10.26
516.36	10.17	553.71	10.02	583.75	9.98	625.89	9.88	641.89	9.84
678.29	9.86	698.06	9.87	713.97	9.89	759.41	9.89	770.24	9.94
789.43	10.02	840.21	9.71	842.42	9.7	844.2	9.69	849.47	9.65
860.61	9.63	939.52	9.48	968.42	9.84	974.43	9.77	999.53	9.44
1002.93	9.42	1019.43	9.42	1021.93	8.84	1037.98	5.74	1044.43	4.33
1046.04	4.11	1054.11	1.4	1060.56	-.63	1061.93	-.8	1069.43	-1.74
1078.61	1.08	1082.29	2.69	1089.63	5.08	1092.57	5.71	1095.14	6.45
1097.9	7	1108	9.2	1121.41	9.54	1124.38	9.92	1151.05	9.67
1231.06	9.71	1311.71	10	1388	10.44	1527.15	11.27	1549.73	11.43
1581.06	11.61	1584.93	11.64	1666.9	11.97	1778.47	12.1	1795.08	12.11
1949.34	11.96	1971.74	11.94	1981.75	11.77	2010.71	11.99	2039.68	11.72
2040.42	11.72	2068.64	11.74	2097.61	12.03	2166.79	11.82	2181.94	11.77
2211.19	12.13	2285.77	11.77	2287.17	11.76	2300.87	11.91	2366.09	11.86
2371.52	11.89	2418.7	12.1	2522.39	12.08	2531.11	12.13	2665.81	12.92
2752.53	13.62	2793.71	13.95	2862.37	14.51	2900.01	15.1	2918.53	15.39
2940.17	15.43								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2457.23	.1	1019.43	.05	1108	.1

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1019.43	1108		474	474	474		.1	.3
Ineffective Flow		num=	1						
Sta L	Sta R	Elev	Permanent						
-2457.23	91	11.21	F						

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 8743

INPUT

Description: Interpolated Section

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2279.31	14.8	-2273.69	14.73	-2251.74	14.48	-2250.61	14.47	-2204.34	14.13
-2173.2	13.91	-2169.03	13.88	-2134.98	13.54	-2112.74	13.33	-2093.69	12.17
-2081.78	11.96	-2078.17	12.05	-2065.63	12.36	-2057.2	12.57	-2053.2	12.67
-2019.87	12.45	-1996.28	12.52	-1957.95	12.62	-1941.19	12.55	-1926.93	12.48
-1905.74	12.38	-1857.58	12.15	-1825.18	11.99	-1788.23	11.81	-1772.2	11.73



ExpandedLocal.rep

-1733.31	11.67-1718.88	11.64-1709.17	11.62-1688.69	11.58-1649.53	11.4
-1593.16	11.15-1580.18	11.09-1560.87	11 -1555.5	10.98-1510.82	11.04
-1493.58	11.06-1477.15	11.34-1472.18	11.42-1441.47	11.71 -1433.3	11.78
-1401.71	11.65-1388.44	11.69-1375.61	11.72-1372.12	11.76-1361.14	11.9
-1358.44	11.93-1302.77	11.71-1249.16	11.58-1245.26	11.57-1236.85	11.56
-1233.24	11.52-1213.31	11.28-1202.52	11.15-1185.35	11.32-1173.67	11.2
-1163.12	11.27-1142.08	11.41-1132.87	11.26-1115.97	11-1093.01	11.09
-1026.88	11.38-1022.89	11.4-1020.48	11.41-1012.26	11.45 -968.99	11.47
-952.77	11.41 -908.09	11.25 -882.65	11.16 -855.9	11.07 -840.45	11.05
-812.53	11 -795.69	10.98 -742.41	10.9 -683.3	10.84 -672.29	10.81
-654.02	10.79 -651.67	10.78 -626.98	10.99 -584.37	10.58 -570.91	10.52
-534.97	10.36 -532.05	10.34 -467.59	9.83 -461.93	9.78 -458.52	9.76
-447.44	9.66 -391.81	9.94 -368.55	10.11 -346.13	10.41 -333.58	10.59
-321.69	10.62 -281.16	10.71 -251.57	10.76 -233.74	10.79 -192.11	10.9
-181.45	10.89 -121.35	10.75 -111.34	10.73 -94.73	10.67 -78.94	10.62
-54.73	10.19 -43.64	10.15 -41.22	10.16 -8.96	10.4 27.48	10.65
28.87	10.66 62.64	10.88 80.38	10.88 97.33	10.89 110.96	10.87
147.6	10.85 165.79	10.58 175.92	10.42 204.24	10.21 233.97	10.22
234.25	10.22 234.48	10.22 302.71	10.24 358	10.27 371.17	10.28
374.17	10.28 387.55	10.26 439.63	10.17 481.52	10.22 508.09	10.2
541.13	10.08 576.55	9.91 605.04	9.85 645.01	9.73 660.19	9.68
694.71	9.67 713.47	9.67 728.56	9.68 771.66	9.64 781.93	9.68
800.13	9.74 848.3	9.43 850.39	9.41 852.08	9.4 857.08	9.36
867.64	9.33 942.5	9.11 969.9	9.4 975.6	9.33 999.41	8.99
1002.64	8.96 1018.29	8.97 1020.64	8.34 1035.72	5.07 1041.79	3.61
1043.3	3.41 1050.88	.95 1056.95	-.88 1058.24	-1.04 1065.29	-1.89
1074.27	1.09 1077.86	2.72 1085.04	4.94 1087.91	5.53 1090.43	6.29
1093.12	6.8 1103	8.82 1115.26	9.14 1117.98	9.48 1142.37	9.27
1215.52	9.35 1289.27	9.66 1359.02	10.1 1486.26	10.94 1506.91	11.1
1535.55	11.28 1539.09	11.31 1614.04	11.66 1716.06	11.86 1731.25	11.88
1872.29	11.77 1892.77	11.74 1901.93	11.59 1928.41	11.79 1954.9	11.55
1955.58	11.55 1981.38	11.57 2007.86	11.83 2071.12	11.64 2084.98	11.6
2111.72	11.93 2179.91	11.6 2181.19	11.6 2193.72	11.74 2253.36	11.7
2258.33	11.72 2301.47	11.92 2396.27	11.9 2404.25	11.95 2527.42	12.65
2606.71	13.28 2644.36	13.58 2707.15	14.08 2741.55	14.61 2758.5	14.87
2778.28	14.91				

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2279.31 .1 1018.29 .05 1103 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1018.29 1103 474 474 474 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 -2279.31 -146 11.21 F

ExpandedLocal.rep

CROSS SECTION

RIVER: W-15 Main

REACH: South

RS: 8269

INPUT

Description: Interpolated Section

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2101.38	14.35	-2096.07	14.29	-2075.31	14.07	-2074.24	14.06	-2030.48	13.76
-2001.04	13.56	-1997.09	13.53	-1964.9	13.24	-1943.86	13.05	-1925.85	12.02
-1914.58	11.84	-1911.17	11.92	-1899.31	12.19	-1891.33	12.38	-1887.55	12.47
-1856.03	12.28	-1833.73	12.34	-1797.48	12.44	-1781.62	12.38	-1768.14	12.32
-1748.1	12.23	-1702.56	12.03	-1671.92	11.88	-1636.97	11.72	-1621.81	11.65
-1585.03	11.59	-1571.39	11.56	-1562.21	11.55	-1542.83	11.51	-1505.8	11.35
-1452.5	11.12	-1440.22	11.06	-1421.96	10.99	-1416.88	10.96	-1374.63	11.01
-1358.32	11.03	-1342.79	11.27	-1338.08	11.34	-1309.04	11.59	-1301.32	11.66
-1271.44	11.54	-1258.89	11.56	-1246.76	11.59	-1243.46	11.63	-1233.08	11.75
-1230.52	11.78	-1177.87	11.56	-1127.18	11.44	-1123.49	11.43	-1115.54	11.42
-1112.12	11.39	-1093.27	11.17	-1083.06	11.05	-1066.84	11.2	-1055.78	11.08
-1045.81	11.14	-1025.91	11.25	-1017.2	11.12	-1001.22	10.89	-979.5	10.96
-916.97	11.22	-913.19	11.23	-910.91	11.24	-903.14	11.28	-862.22	11.3
-846.88	11.25	-804.62	11.1	-780.57	11.02	-755.27	10.95	-740.66	10.93
-714.25	10.88	-698.33	10.86	-647.94	10.8	-592.05	10.76	-581.63	10.74
-564.35	10.72	-562.13	10.72	-538.78	10.9	-498.48	10.53	-485.76	10.48
-451.77	10.33	-449.01	10.31	-388.05	9.86	-382.7	9.82	-379.47	9.8
-368.99	9.71	-316.39	9.94	-294.38	10.1	-273.18	10.37	-261.31	10.54
-250.07	10.57	-211.74	10.67	-183.76	10.73	-166.89	10.76	-127.53	10.89
-117.45	10.88	-60.61	10.78	-51.14	10.76	-35.44	10.71	-20.5	10.67
2.4	10.28	12.88	10.24	15.17	10.26	45.68	10.47	80.14	10.69
81.45	10.69	113.39	10.89	130.17	10.89	146.2	10.89	159.08	10.86
193.74	10.83	210.94	10.59	220.52	10.45	247.31	10.24	275.41	10.24
275.68	10.24	275.9	10.24	340.42	10.22	392.71	10.22	405.17	10.22
408.01	10.23	420.66	10.21	469.91	10.1	509.52	10.16	534.65	10.13
565.9	10	599.4	9.79	626.34	9.71	664.14	9.57	678.49	9.52
711.14	9.48	728.88	9.46	743.15	9.47	783.91	9.4	793.63	9.42
810.83	9.46	856.38	9.14	858.37	9.13	859.97	9.11	864.69	9.07
874.68	9.03	945.47	8.74	971.39	8.96	976.78	8.89	999.29	8.54
1002.35	8.51	1017.14	8.53	1019.34	7.84	1033.47	4.4	1039.14	2.89
1040.56	2.71	1047.66	.51	1053.34	-1.13	1054.54	-1.27	1061.14	-2.05
1069.92	1.11	1073.43	2.76	1080.45	4.8	1083.26	5.36	1085.71	6.13
1088.35	6.6	1098	8.45	1109.11	8.74	1111.58	9.04	1133.68	8.87
1199.98	8.99	1266.82	9.32	1330.04	9.75	1445.37	10.6	1464.08	10.77
1490.04	10.96	1493.25	10.98	1561.18	11.36	1653.64	11.61	1667.41	11.65
1795.25	11.57	1813.81	11.54	1822.11	11.41	1846.11	11.59	1870.12	11.37
1870.73	11.37	1894.12	11.39	1918.12	11.63	1975.46	11.46	1988.02	11.43

ExpandedLocal.rep

2012.25	11.72	2074.06	11.44	2075.22	11.43	2086.57	11.56	2140.63	11.53
2145.13	11.55	2184.23	11.73	2270.16	11.72	2277.38	11.77	2389.02	12.39
2460.88	12.95	2495.01	13.21	2551.92	13.66	2583.1	14.13	2598.46	14.36
2616.39	14.4								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2101.38	.1	1017.14	.05	1098	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1017.14	1098		474	474		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
-2101.38	-383	11.21	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 7795

INPUT

Description: Interpolated Section

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1923.46	13.91	-1918.45	13.85	-1898.89	13.66	-1897.88	13.65	-1856.63	13.39
-1828.88	13.21	-1825.16	13.19	-1794.81	12.94	-1774.98	12.77	-1758	11.88
-1747.38	11.72	-1744.17	11.79	-1732.99	12.03	-1725.47	12.19	-1721.91	12.27
-1692.2	12.11	-1671.17	12.17	-1637	12.26	-1622.06	12.2	-1609.35	12.15
-1590.47	12.08	-1547.54	11.9	-1518.65	11.78	-1485.72	11.63	-1471.43	11.57
-1436.76	11.51	-1423.9	11.49	-1415.24	11.47	-1396.98	11.44	-1362.08	11.29
-1311.83	11.09	-1300.26	11.04	-1283.05	10.97	-1278.26	10.95	-1238.44	10.98
-1223.07	11	-1208.42	11.2	-1203.99	11.27	-1176.62	11.48	-1169.34	11.54
-1141.18	11.42	-1129.34	11.44	-1117.91	11.46	-1114.8	11.5	-1105.01	11.6
-1102.6	11.62	-1052.98	11.4	-1005.2	11.3	-1001.72	11.3	-994.22	11.29
-991	11.26	-973.24	11.06	-963.61	10.95	-948.32	11.07	-937.9	10.97
-928.5	11.01	-909.74	11.1	-901.53	10.98	-886.47	10.77	-866	10.82
-807.05	11.05	-803.49	11.07	-801.35	11.08	-794.02	11.1	-755.45	11.13
-740.99	11.08	-701.16	10.96	-678.49	10.89	-654.64	10.82	-640.87	10.81
-615.98	10.77	-600.97	10.75	-553.48	10.71	-500.79	10.68	-490.97	10.67
-474.69	10.65	-472.59	10.65	-450.58	10.8	-412.6	10.48	-400.61	10.43
-368.56	10.3	-365.96	10.28	-308.51	9.89	-303.46	9.86	-300.42	9.84
-290.54	9.75	-240.96	9.94	-220.22	10.09	-200.23	10.34	-189.05	10.49
-178.45	10.52	-142.32	10.64	-115.95	10.7	-100.05	10.74	-62.94	10.88
-53.44	10.88	.14	10.81	9.06	10.8	23.86	10.75	37.94	10.71
59.52	10.38	69.4	10.34	71.56	10.35	100.32	10.54	132.8	10.72

ExpandedLocal.rep

134.04	10.73	164.14	10.9	179.96	10.89	195.06	10.9	207.21	10.86
239.87	10.82	256.09	10.6	265.12	10.47	290.37	10.28	316.86	10.26
317.11	10.26	317.32	10.26	378.14	10.2	427.42	10.18	439.17	10.17
441.84	10.17	453.76	10.15	500.19	10.02	537.53	10.09	561.22	10.07
590.67	9.91	622.24	9.67	647.64	9.58	683.27	9.42	696.8	9.36
727.57	9.29	744.29	9.26	757.74	9.26	796.16	9.15	805.32	9.16
821.54	9.17	864.47	8.85	866.34	8.84	867.85	8.82	872.3	8.78
881.72	8.73	948.44	8.37	972.87	8.52	977.95	8.46	999.17	8.09
1002.05	8.06	1016	8.08	1018.05	7.34	1031.21	3.73	1036.5	2.17
1037.82	2.01	1044.44	.07	1049.73	-1.38	1050.85	-1.51	1057	-2.2
1065.57	1.12	1069	2.79	1075.86	4.67	1078.6	5.18	1081	5.97
1083.57	6.4	1093	8.07	1102.96	8.34	1105.18	8.61	1124.99	8.48
1184.45	8.64	1244.38	8.98	1301.07	9.41	1404.47	10.27	1421.26	10.44
1444.53	10.63	1447.41	10.65	1508.32	11.05	1591.23	11.37	1603.58	11.41
1718.2	11.37	1734.85	11.35	1742.29	11.23	1763.81	11.39	1785.34	11.2
1785.89	11.2	1806.86	11.22	1828.38	11.42	1879.79	11.28	1891.05	11.25
1912.79	11.52	1968.21	11.28	1969.25	11.27	1979.43	11.38	2027.89	11.37
2031.93	11.39	2066.99	11.55	2144.04	11.54	2150.52	11.58	2250.62	12.12
2315.06	12.62	2345.66	12.85	2396.69	13.23	2424.65	13.65	2438.42	13.85
2454.5	13.88								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1923.46	.1	1016	.05	1093	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1016	1093		474	474	.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 7321

INPUT

Description: Interpolated Section

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1745.54	13.46	-1740.83	13.42	-1722.46	13.25	-1721.52	13.24	-1682.78	13.02
-1656.72	12.87	-1653.22	12.85	-1624.73	12.63	-1606.11	12.5	-1590.16	11.73
-1580.19	11.59	-1577.17	11.65	-1566.67	11.86	-1559.61	12.01	-1556.26	12.07
-1528.36	11.94	-1508.62		12-1476.53	12.08	-1462.5	12.03	-1450.57	11.99
-1432.83	11.93	-1392.51	11.78	-1365.39	11.67	-1334.46	11.54	-1321.04	11.49
-1288.48	11.44	-1276.41	11.42	-1268.28	11.4	-1251.13	11.37	-1218.35	11.24
-1171.17	11.05	-1160.3	11.01	-1144.14	10.95	-1139.64	10.93	-1102.24	10.95
-1087.81	10.96	-1074.06	11.14	-1069.9	11.19	-1044.19	11.37	-1037.35	11.41

ExpandedLocal.rep

-1010.91	11.31	-999.8	11.32	-989.06	11.34	-986.14	11.36	-976.95	11.45
-974.69	11.47	-928.08	11.24	-883.21	11.16	-879.94	11.16	-872.91	11.15
-869.88	11.13	-853.2	10.95	-844.16	10.85	-829.8	10.95	-820.01	10.85
-811.19	10.89	-793.57	10.95	-785.86	10.84	-771.72	10.65	-752.49	10.69
-697.14	10.89	-693.8	10.9	-691.78	10.91	-684.9	10.93	-648.68	10.95
-635.1	10.92	-597.7	10.81	-576.4	10.75	-554.02	10.7	-541.08	10.68
-517.71	10.65	-503.62	10.64	-459.01	10.61	-409.53	10.61	-400.31	10.59
-385.02	10.58	-383.05	10.58	-362.38	10.71	-326.71	10.43	-315.45	10.39
-285.36	10.27	-282.92	10.25	-228.96	9.92	-224.22	9.89	-221.37	9.88
-212.09	9.8	-165.53	9.94	-146.05	10.07	-127.29	10.3	-116.78	10.44
-106.83	10.48	-72.9	10.61	-48.14	10.68	-33.21	10.71	1.64	10.87
10.56	10.88	60.88	10.84	69.26	10.83	83.16	10.79	96.38	10.76
116.64	10.47	125.92	10.44	127.95	10.45	154.96	10.61	185.46	10.76
186.62	10.77	214.89	10.9	229.74	10.89	243.93	10.9	255.34	10.85
286.01	10.81	301.24	10.61	309.72	10.49	333.43	10.31	358.31	10.28
358.54	10.28	358.74	10.28	415.85	10.19	462.13	10.13	473.16	10.12
475.68	10.12	486.87	10.1	530.47	9.95	565.53	10.03	587.78	10
615.43	9.83	645.09	9.55	668.93	9.45	702.39	9.27	715.1	9.2
744	9.1	759.7	9.06	772.33	9.05	808.41	8.9	817.01	8.9
832.24	8.89	872.56	8.56	874.32	8.55	875.73	8.54	879.91	8.49
888.76	8.43	951.41	8	974.36	8.09	979.13	8.02	999.06	7.64
1001.76	7.61	1014.86	7.63	1016.76	6.84	1028.95	3.06	1033.86	1.45
1035.08	1.31	1041.21	-.38	1046.12	-1.63	1047.16	-1.75	1052.86	-2.35
1061.22	1.13	1064.57	2.82	1071.27	4.53	1073.94	5.01	1076.29	5.82
1078.8	6.2	1088	7.7	1096.82	7.94	1098.77	8.17	1116.31	8.08
1168.91	8.28	1221.94	8.64	1272.09	9.07	1363.58	9.93	1378.43	10.12
1399.02	10.3	1401.57	10.33	1455.46	10.75	1528.82	11.13	1539.74	11.18
1641.16	11.17	1655.89	11.15	1662.47	11.05	1681.51	11.19	1700.56	11.02
1701.04	11.02	1719.6	11.04	1738.64	11.22	1784.13	11.1	1794.09	11.08
1813.32	11.31	1862.35	11.11	1863.27	11.11	1872.28	11.21	1915.16	11.2
1918.74	11.22	1949.76	11.36	2017.93	11.36	2023.66	11.4	2112.22	11.86
2169.24	12.28	2196.31	12.48	2241.46	12.81	2266.2	13.16	2278.38	13.34
2292.61	13.36								

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1745.54 .1 1014.86 .05 1088 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1014.86 1088 474 474 474 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 6847

ExpandedLocal.rep

INPUT

Description: Interpolated Section

Station Elevation Data

num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1567.61	13.01	-1563.22	12.98	-1546.04	12.84	-1545.15	12.83	-1508.93	12.65
-1484.56	12.52	-1481.29	12.51	-1454.64	12.33	-1437.23	12.22	-1422.32	11.58
-1412.99	11.47	-1410.17	11.52	-1400.35	11.69	-1393.75	11.82	-1390.62	11.87
-1364.53	11.77	-1346.07	11.82	-1316.06	11.89	-1302.94	11.86	-1291.78	11.83
-1275.19	11.78	-1237.49	11.65	-1212.13	11.56	-1183.2	11.45	-1170.66	11.41
-1140.21	11.36	-1128.92	11.34	-1121.32	11.33	-1105.28	11.3	-1074.63	11.18
-1030.51	11.02	-1020.34	10.98	-1005.23	10.93	-1001.02	10.91	-966.05	10.92
-952.55	10.93	-939.69	11.07	-935.8	11.11	-911.76	11.25	-905.37	11.29
-880.64	11.19	-870.25	11.2	-860.21	11.21	-857.48	11.23	-848.88	11.3
-846.77	11.31	-803.19	11.09	-761.23	11.02	-758.17	11.02	-751.59	11.02
-748.77	11	-733.16	10.84	-724.71	10.75	-711.28	10.82	-702.13	10.74
-693.88	10.76	-677.4	10.8	-670.19	10.7	-656.97	10.54	-638.99	10.56
-587.23	10.72	-584.1	10.74	-582.21	10.74	-575.78	10.76	-541.91	10.78
-529.21	10.75	-494.23	10.66	-474.32	10.61	-453.39	10.57	-441.29	10.56
-419.43	10.53	-406.26	10.53	-364.54	10.51	-318.28	10.53	-309.65	10.52
-295.35	10.52	-293.51	10.51	-274.19	10.62	-240.83	10.38	-230.3	10.34
-202.16	10.24	-199.88	10.23	-149.42	9.95	-144.99	9.93	-142.32	9.92
-133.64	9.85	-90.1	9.93	-71.89	10.06	-54.34	10.26	-44.51	10.39
-35.21	10.43	-3.48	10.57	19.68	10.65	33.64	10.69	66.22	10.86
74.57	10.88	121.62	10.87	129.45	10.87	142.45	10.83	154.81	10.8
173.77	10.56	182.45	10.54	184.34	10.55	209.6	10.68	238.12	10.8
239.21	10.8	265.64	10.91	279.53	10.89	292.8	10.9	303.46	10.85
332.15	10.79	346.39	10.62	354.32	10.52	376.49	10.35	399.75	10.3
399.98	10.3	400.16	10.3	453.57	10.17	496.85	10.09	507.16	10.07
509.51	10.07	519.98	10.04	560.75	9.88	593.54	9.97	614.34	9.94
640.2	9.74	667.93	9.43	690.23	9.32	721.52	9.12	733.4	9.04
760.42	8.92	775.11	8.86	786.92	8.84	820.66	8.66	828.7	8.64
842.94	8.61	880.65	8.27	882.29	8.26	883.61	8.25	887.52	8.2
895.79	8.13	954.39	7.63	975.84	7.65	980.3	7.58	998.94	7.19
1001.47	7.15	1013.71	7.19	1015.46	6.34	1026.7	2.39	1031.21	.73
1032.34	.6	1037.99	-.82	1042.5	-1.89	1043.46	-1.98	1048.71	-2.51
1056.88	1.15	1060.14	2.86	1066.67	4.39	1069.29	4.83	1071.57	5.66
1074.02	6	1083	7.33	1090.67	7.54	1092.37	7.73	1107.62	7.68
1153.37	7.93	1199.49	8.3	1243.12	8.73	1322.69	9.6	1335.6	9.79
1353.52	9.97	1355.73	10	1402.6	10.44	1466.4	10.89	1475.9	10.95
1564.11	10.97	1576.92	10.96	1582.65	10.87	1599.21	10.98	1615.78	10.85
1616.2	10.85	1632.34	10.86	1648.9	11.02	1688.46	10.93	1697.13	10.91
1713.85	11.1	1756.5	10.95	1757.3	10.95	1765.13	11.03	1802.43	11.04
1805.54	11.06	1832.52	11.17	1891.81	11.18	1896.8	11.21	1973.83	11.6
2023.42	11.95	2046.96	12.11	2086.23	12.39	2107.75	12.68	2118.35	12.82
2130.72	12.84								

Manning's n Values

num= 3

ExpandedLocal.rep

Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1567.61 .1 1013.71 .05 1083 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1013.71 1083 474 474 474 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 6373

INPUT

Description: Interpolated Section

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1389.69	12.57	-1385.6	12.54	-1369.61	12.43	-1368.79	12.42	-1335.08	12.27
-1312.4	12.17	-1309.35	12.16	-1284.55	12.02	-1268.35	11.94	-1254.47	11.43
-1245.79	11.35	-1243.17	11.39	-1234.03	11.53	-1227.89	11.63	-1224.97	11.68
-1200.69	11.6	-1183.51	11.65	-1155.59	11.71	-1143.38	11.69	-1132.99	11.66
-1117.55	11.62	-1082.47	11.53	-1058.86	11.45	-1031.95	11.36	-1020.27	11.32
-991.94	11.29	-981.43	11.27	-974.35	11.26	-959.43	11.23	-930.9	11.13
-889.84	10.99	-880.38	10.96	-866.32	10.91	-862.4	10.89	-829.86	10.89
-817.3	10.89	-805.33	11	-801.71	11.04	-779.34	11.14	-773.39	11.17
-750.37	11.08	-740.7	11.08	-731.36	11.08	-728.82	11.1	-720.82	11.15
-718.85	11.16	-678.29	10.93	-639.24	10.88	-636.4	10.88	-630.27	10.88
-627.65	10.87	-613.12	10.73	-605.26	10.66	-592.76	10.7	-584.24	10.62
-576.56	10.63	-561.23	10.64	-554.52	10.56	-542.21	10.42	-525.48	10.43
-477.31	10.56	-474.4	10.57	-472.65	10.58	-466.66	10.59	-435.14	10.61
-423.32	10.59	-390.77	10.51	-372.24	10.47	-352.76	10.45	-341.5	10.44
-321.16	10.42	-308.9	10.42	-270.08	10.42	-227.02	10.46	-219	10.45
-205.69	10.45	-203.97	10.44	-185.99	10.53	-154.95	10.33	-145.14	10.3
-118.96	10.21	-116.83	10.2	-69.88	9.98	-65.75	9.97	-63.27	9.96
-55.19	9.9	-14.67	9.93	2.28	10.05	18.61	10.22	27.75	10.34
36.41	10.39	65.94	10.54	87.49	10.62	100.48	10.66	130.81	10.85
138.57	10.88	182.36	10.9	189.65	10.9	201.75	10.87	213.25	10.84
230.89	10.65	238.97	10.63	240.73	10.64	264.24	10.74	290.78	10.84
291.79	10.84	316.39	10.91	329.32	10.9	341.66	10.9	351.59	10.85
378.29	10.78	391.54	10.63	398.92	10.54	419.55	10.38	441.2	10.32
441.41	10.32	441.58	10.32	491.28	10.15	531.56	10.04	541.16	10.02
543.34	10.02	553.09	9.99	591.03	9.81	621.54	9.91	640.9	9.88
664.97	9.66	690.77	9.31	711.53	9.19	740.65	8.96	751.7	8.88
776.85	8.73	790.52	8.66	801.51	8.63	832.9	8.41	840.39	8.38
853.65	8.33	888.74	7.98	890.26	7.97	891.5	7.96	895.13	7.91
902.83	7.83	957.36	7.25	977.32	7.21	981.48	7.14	998.82	6.74
1001.17	6.7	1012.57	6.74	1014.17	5.84	1024.44	1.72	1028.57	.01

ExpandedLocal.rep

1029.6	-.1	1034.77	-1.26	1038.89	-2.14	1039.77	-2.22	1044.57	-2.66
1052.53	1.16	1055.71	2.89	1062.08	4.25	1064.63	4.66	1066.86	5.5
1069.24	5.8	1078	6.95	1084.52	7.14	1085.97	7.3	1098.93	7.29
1137.83	7.57	1177.05	7.96	1214.14	8.39	1281.8	9.27	1292.78	9.46
1308.01	9.65	1309.89	9.67	1349.75	10.14	1403.99	10.65	1412.07	10.72
1487.07	10.77	1497.96	10.76	1502.83	10.69	1516.91	10.78	1531	10.67
1531.36	10.67	1545.08	10.69	1559.16	10.81	1592.8	10.75	1600.17	10.74
1614.39	10.9	1650.65	10.79	1651.33	10.78	1657.99	10.86	1689.7	10.88
1692.34	10.89	1715.28	10.99	1765.69	11.01	1769.94	11.03	1835.43	11.33
1877.59	11.61	1897.61	11.74	1931	11.96	1949.3	12.2	1958.31	12.31
1968.83	12.33								

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
*****								
-1389.69	.1	1012.57	.05	1078	.1			

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1012.57	1078		473	473	473		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 5900

INPUT

Description: Interpolated Section

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-1211.77	12.12	-1207.98	12.1	-1193.18	12.02	-1192.42	12.02	-1161.22	11.9
-1140.24	11.83	-1137.42	11.82	-1114.47	11.72	-1099.47	11.66	-1086.63	11.29
-1078.6	11.23	-1076.17	11.26	-1067.71	11.36	-1062.02	11.44	-1059.33	11.48
-1036.86	11.43	-1020.96	11.47	-995.11	11.53	-983.81	11.51	-974.2	11.5
-959.92	11.47	-927.45	11.4	-905.6	11.34	-880.69	11.27	-869.88	11.24
-843.66	11.21	-833.93	11.19	-827.39	11.18	-813.58	11.16	-787.18	11.07
-749.18	10.96	-740.42	10.93	-727.41	10.89	-723.79	10.88	-693.67	10.86
-682.04	10.86	-670.97	10.94	-667.61	10.96	-646.91	11.03	-641.4	11.04
-620.1	10.96	-611.15	10.95	-602.51	10.95	-600.15	10.96	-592.75	11
-590.93	11	-553.4	10.78	-517.26	10.75	-514.63	10.74	-508.96	10.75
-506.53	10.74	-493.09	10.62	-485.81	10.56	-474.24	10.57	-466.36	10.51
-459.25	10.51	-445.06	10.49	-438.85	10.42	-427.46	10.31	-411.98	10.3
-367.4	10.4	-364.71	10.41	-363.08	10.41	-357.54	10.42	-328.37	10.44
-317.43	10.42	-287.31	10.37	-270.16	10.34	-252.13	10.32	-241.71	10.32
-222.89	10.3	-211.54	10.31	-175.61	10.32	-135.76	10.38	-128.34	10.37
-116.02	10.38	-114.43	10.38	-97.79	10.43	-69.06	10.28	-59.99	10.25
-35.76	10.18	-33.79	10.17	9.67	10.01	13.48	10	15.78	10



ExpandedLocal.rep

23.25	9.95	60.76	9.93	76.44	10.04	91.56	10.19	100.02	10.29
108.03	10.34	135.36	10.51	155.3	10.59	167.33	10.64	195.39	10.84
202.58	10.88	243.1	10.93	249.85	10.94	261.05	10.91	271.69	10.89
288.02	10.75	295.49	10.73	297.12	10.74	318.87	10.81	343.44	10.88
344.37	10.88	367.14	10.92	379.11	10.9	390.53	10.91	399.72	10.84
424.42	10.77	436.69	10.64	443.52	10.56	462.61	10.41	482.65	10.34
482.84	10.34	482.99	10.33	529	10.13	566.27	10	575.15	9.97
577.18	9.96	586.19	9.93	621.31	9.74	649.55	9.85	667.46	9.81
689.74	9.57	713.62	9.19	732.82	9.06	759.77	8.81	770.01	8.72
793.28	8.54	805.93	8.46	816.1	8.42	845.15	8.16	852.08	8.12
864.35	8.04	896.82	7.69	898.24	7.68	899.38	7.67	902.74	7.62
909.87	7.53	960.33	6.88	978.81	6.77	982.65	6.71	998.7	6.3
1000.88	6.25	1011.43	6.29	1012.88	5.34	1022.19	1.06	1025.93	-.72
1026.86	-.8	1031.54	-1.71	1035.28	-2.39	1036.08	-2.45	1040.43	-2.82
1048.18	1.18	1051.29	2.92	1057.49	4.11	1059.97	4.48	1062.14	5.34
1064.47	5.6	1073	6.58	1078.37	6.74	1079.56	6.86	1090.25	6.89
1122.3	7.21	1154.6	7.62	1185.16	8.05	1240.91	8.93	1249.95	9.13
1262.5	9.32	1264.05	9.35	1296.89	9.83	1341.58	10.41	1348.23	10.49
1410.03	10.58	1419	10.57	1423.01	10.51	1434.61	10.58	1446.21	10.5
1446.51	10.5	1457.82	10.51	1469.42	10.61	1497.13	10.57	1503.2	10.56
1514.92	10.69	1544.79	10.62	1545.36	10.62	1550.84	10.68	1576.97	10.71
1579.15	10.72	1598.05	10.8	1639.58	10.83	1643.07	10.84	1697.03	11.07
1731.77	11.28	1748.27	11.37	1775.77	11.54	1790.85	11.71	1798.27	11.8
1806.94	11.81								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1211.77	.1	1011.43	.05	1073	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1011.43	1073		474	474		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 5426

INPUT

Description: Interpolated Section

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1033.85	11.68	-1030.36	11.66	-1016.76	11.61	-1016.06	11.61	-987.37	11.53
-968.07	11.48	-965.49	11.48	-944.38	11.42	-930.59	11.38	-918.79	11.14
-911.4	11.1	-909.17	11.12	-901.39	11.2	-896.16	11.26	-893.68	11.28
-873.02	11.26	-858.4	11.3	-834.64	11.35	-824.25	11.34	-815.41	11.34

ExpandedLocal.rep

-802.28	11.32	-772.42	11.28	-752.34	11.23	-729.43	11.18	-719.5	11.16
-695.39	11.14	-686.44	11.12	-680.43	11.11	-667.73	11.09	-643.45	11.01
-608.52	10.93	-600.46	10.9	-588.5	10.87	-585.17	10.86	-557.47	10.83
-546.78	10.83	-536.6	10.87	-533.52	10.88	-514.48	10.91	-509.42	10.92
-489.84	10.84	-481.61	10.83	-473.66	10.82	-471.49	10.83	-464.69	10.85
-463.01	10.85	-428.5	10.62	-395.28	10.61	-392.86	10.6	-387.64	10.61
-385.41	10.61	-373.05	10.51	-366.36	10.46	-355.72	10.45	-348.48	10.39
-341.94	10.38	-328.89	10.34	-323.19	10.28	-312.71	10.19	-298.48	10.17
-257.48	10.23	-255.01	10.24	-253.52	10.24	-248.42	10.25	-221.6	10.27
-211.54	10.26	-183.85	10.22	-168.08	10.2	-151.5	10.2	-141.92	10.2
-124.61	10.19	-114.18	10.2	-81.14	10.22	-44.51	10.31	-37.68	10.3
-26.35	10.31	-24.89	10.31	-9.59	10.34	16.82	10.23	25.16	10.21
47.45	10.15	49.25	10.14	89.21	10.04	92.72	10.04	94.83	10.04
101.7	9.99	136.18	9.93	150.61	10.02	164.5	10.15	172.28	10.24
179.65	10.29	204.78	10.47	223.12	10.57	234.17	10.61	259.98	10.83
266.58	10.88	303.84	10.96	310.05	10.97	320.34	10.95	330.13	10.93
345.14	10.84	352.01	10.83	353.51	10.83	373.51	10.88	396.1	10.91
396.96	10.92	417.89	10.93	428.89	10.9	439.4	10.91	447.85	10.84
470.56	10.75	481.84	10.65	488.12	10.59	505.67	10.45	524.1	10.35
524.27	10.35	524.41	10.35	566.71	10.11	600.98	9.95	609.15	9.92
611.01	9.91	619.3	9.88	651.59	9.66	677.55	9.79	694.02	9.75
714.5	9.49	736.46	9.07	754.12	8.93	778.9	8.66	788.31	8.56
809.71	8.35	821.34	8.26	830.69	8.21	857.4	7.92	863.78	7.86
875.05	7.76	904.91	7.41	906.21	7.39	907.26	7.38	910.35	7.33
916.91	7.22	963.31	6.51	980.29	6.34	983.83	6.27	998.59	5.85
1000.59	5.8	1010.29	5.84	1011.59	4.84	1019.93	.39	1023.29	-1.44
1024.12	-1.5	1028.32	-2.15	1031.67	-2.64	1032.39	-2.69	1036.29	-2.97
1043.84	1.19	1046.86	2.95	1052.9	3.97	1055.31	4.31	1057.43	5.19
1059.69	5.4	1068	6.21	1072.22	6.34	1073.16	6.42	1081.56	6.49
1106.76	6.86	1132.16	7.28	1156.19	7.71	1200.01	8.6	1207.13	8.8
1216.99	8.99	1218.21	9.02	1244.03	9.53	1279.17	10.16	1284.4	10.26
1332.98	10.38	1340.04	10.37	1343.19	10.34	1352.31	10.38	1361.43	10.32
1361.67	10.32	1370.56	10.34	1379.68	10.41	1401.47	10.39	1406.24	10.39
1415.45	10.48	1438.94	10.46	1439.38	10.46	1443.7	10.5	1464.24	10.55
1465.95	10.56	1480.81	10.62	1513.46	10.65	1516.21	10.66	1558.64	10.81
1585.95	10.94	1598.92	11	1620.54	11.11	1632.4	11.23	1638.23	11.28
1645.05	11.29								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****					
-1033.85	.1	1010.29	.05	1068	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1010.29	1068		474	474	.1	.3

CROSS SECTION

ExpandedLocal.rep

RIVER: W-15 Main  
 REACH: South

RS: 4952

INPUT

Description: Interpolated Section

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-855.92	11.23	-852.74	11.22	-840.33	11.2	-839.69	11.2	-813.52	11.16
-795.91	11.14	-793.55	11.13	-774.3	11.11	-761.72	11.11	-750.94	10.99
-744.2	10.98	-742.17	10.99	-735.07	11.03	-730.3	11.07	-728.04	11.08
-709.19	11.09	-695.85	11.13	-674.17	11.17	-664.69	11.17	-656.63	11.17
-644.64	11.17	-617.4	11.15	-599.08	11.12	-578.18	11.09	-569.11	11.08
-547.11	11.06	-538.95	11.05	-533.46	11.04	-521.88	11.01	-499.73	10.96
-467.85	10.89	-460.51	10.87	-449.59	10.85	-446.55	10.84	-421.28	10.81
-411.53	10.79	-402.24	10.8	-399.42	10.81	-382.06	10.8	-377.44	10.79
-359.57	10.73	-352.06	10.71	-344.81	10.7	-342.83	10.7	-336.63	10.7
-335.1	10.69	-303.61	10.47	-273.29	10.47	-271.08	10.47	-266.33	10.48
-264.29	10.48	-253.01	10.4	-246.91	10.36	-237.2	10.33	-230.59	10.28
-224.63	10.25	-212.72	10.19	-207.52	10.13	-197.96	10.07	-184.97	10.04
-147.57	10.07	-145.31	10.08	-143.95	10.08	-139.3	10.08	-114.83	10.09
-105.65	10.09	-80.38	10.07	-66	10.06	-50.87	10.07	-42.13	10.08
-26.34	10.07	-16.82	10.09	13.32	10.13	46.75	10.23	52.98	10.23
63.31	10.24	64.64	10.24	78.61	10.25	102.71	10.18	110.32	10.16
130.65	10.12	132.3	10.11	168.75	10.07	171.95	10.08	173.88	10.08
180.15	10.04	211.61	9.93	224.77	10.01	237.45	10.11	244.55	10.19
251.27	10.25	274.2	10.44	290.93	10.54	301.02	10.59	324.56	10.82
330.59	10.88	364.58	10.98	370.25	11.01	379.64	10.98	388.57	10.98
402.26	10.93	408.53	10.93	409.9	10.93	428.15	10.95	448.76	10.95
449.54	10.95	468.64	10.93	478.68	10.91	488.26	10.91	495.97	10.83
516.7	10.74	526.98	10.66	532.72	10.61	548.73	10.48	565.54	10.37
565.7	10.37	565.83	10.37	604.42	10.1	635.69	9.91	643.15	9.87
644.84	9.86	652.41	9.82	681.86	9.59	705.56	9.73	720.59	9.69
739.27	9.4	759.31	8.95	775.42	8.8	798.03	8.5	806.61	8.4
826.14	8.16	836.75	8.05	845.28	8	869.65	7.67	875.47	7.6
885.76	7.48	913	7.12	914.19	7.1	915.14	7.09	917.97	7.03
923.94	6.92	966.28	6.14	981.78	5.9	985	5.83	998.47	5.4
1000.29	5.34	1009.14	5.4	1010.29	4.34	1017.68	-.28	1020.64	-2.16
1021.38	-2.2	1025.09	-2.59	1028.06	-2.89	1028.69	-2.92	1032.14	-3.13
1039.49	1.21	1042.43	2.99	1048.31	3.83	1050.66	4.13	1052.71	5.03
1054.92	5.2	1063	5.83	1066.07	5.94	1066.76	5.99	1072.87	6.1
1091.22	6.5	1109.72	6.94	1127.21	7.36	1159.12	8.26	1164.3	8.47
1171.48	8.66	1172.37	8.69	1191.17	9.23	1216.75	9.92	1220.56	10.02
1255.94	10.18	1261.07	10.17	1263.37	10.16	1270.01	10.18	1276.65	10.15
1276.82	10.15	1283.3	10.16	1289.94	10.2	1305.8	10.21	1309.28	10.22
1315.98	10.28	1333.09	10.3	1333.41	10.3	1336.55	10.33	1351.51	10.38
1352.75	10.39	1363.57	10.43	1387.35	10.47	1389.35	10.47	1420.24	10.54

ExpandedLocal.rep

1440.13 10.61 1449.57 10.63 1465.32 10.69 1473.95 10.74 1478.19 10.77  
 1483.16 10.77

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -855.92 .1 1009.14 .05 1063 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1009.14 1063 474 474 474 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 4478

INPUT

Description:

Station Elevation Data num= 121  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -678 10.786-675.127 10.786-663.328 10.789-639.669 10.788-623.752 10.79  
 -604.211 10.81-575.165 10.86-568.753 10.865-564.439 10.88-533.295 10.951  
 -505.126 10.997-497.837 11.008-487.003 11.017-462.379 11.025-445.813 11.016  
 -426.921 11.005 -398.84 10.984-391.463 10.973 -386.5 10.965-356.005 10.904  
 -327.187 10.861-320.547 10.847-310.677 10.833-285.088 10.776-267.873 10.738  
 -249.63 10.685-222.514 10.589-214.172 10.564 -208.56 10.549-178.714 10.311  
 -151.307 10.327-149.311 10.328-143.167 10.353-132.975 10.294-107.316 10.127  
 -91.847 9.994 -71.466 9.909 -37.657 9.907 -35.615 9.911 -34.384 9.91  
 .236 9.926 23.08 9.923 36.086 9.923 57.661 9.957 71.937 9.955  
 80.544 9.979 107.788 10.032 138.007 10.156 143.639 10.153 152.979 10.175  
 195.471 10.115 215.34 10.086 248.297 10.103 251.191 10.112 252.935 10.124  
 287.041 9.923 310.399 10.074 322.892 10.202 343.616 10.408 358.743 10.51  
 367.862 10.562 394.594 10.879 425.326 11.014 430.444 11.045 438.934 11.024  
 466.295 11.023 482.79 11.023 501.418 10.99 502.128 10.989 528.467 10.911  
 537.131 10.915 544.099 10.829 572.134 10.675 606.991 10.392 607.136 10.391  
 607.253 10.389 642.139 10.077 670.407 9.865 677.142 9.816 685.515 9.769  
 712.144 9.52 733.561 9.669 747.147 9.622 764.039 9.315 782.15 8.829  
 796.716 8.67 817.152 8.352 842.563 7.975 852.155 7.853 859.87 7.789  
 887.158 7.336 921.087 6.828 922.16 6.816 923.024 6.801 930.98 6.623  
 986.178 5.395 1000 4.89 1008 4.95 1009 3.84 1018 -2.88  
 1025 -3.16 1028 -3.28 1038 3.02 1046 3.96 1048 4.87  
 1058 5.461098.233 7.0231118.228 7.9281121.473 8.1461125.974 8.337  
 1156.727 9.7931178.892 9.981 1191.98 9.9721210.138 10.0351227.234 10.134  
 1239.556 10.2241262.487 10.291294.303 10.274 1300.22 10.2661315.494 10.26  
 1321.265 10.257

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -678 .1 1008 .05 1058 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1008 1058 384 384 384 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 4094

INPUT

Description:

Station Elevation Data num= 41  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 623.141 10.518 657.356 10.716 662.082 10.785 714.407 10.863 759.364 10.304  
 771.458 10.032 788.608 9.592 828.508 8.498 838.91 8.305 856.646 7.857  
 874.871 7.359 885.559 6.948 926.561 5.466 942.61 4.94 953.928 4.531  
 1000 4.42 1004 4.11 1021 3.85 1030 4 1040 -1.29  
 1050 -2.04 1060 -.84 1065 1.86 1068 5.11 1080 5.97  
 1092.024 6.1021098.728 6.2921130.044 7.091153.681 7.661165.181 7.903  
 1180.416 8.1171200.317 8.3021215.338 8.3871262.104 8.7661276.996 8.85  
 1305.727 8.9091338.653 8.9991340.864 9.0061343.792 9.013 1400.31 9.073  
 1411.137 9.058

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 623.141 .1 1030 .05 1068 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1030 1068 398 398 398 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 3696

INPUT

Description:

Station Elevation Data num= 42  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*

ExpandedLocal.rep

619.21	9.982	646.293	10.505	661.017	10.524	670.141	10.518	704.356	10.716
709.082	10.785	761.407	10.863	806.364	10.304	818.458	10.032	835.608	9.592
875.508	8.498	885.91	8.305	903.646	7.857	921.871	7.359	932.559	6.948
973.561	5.466	989.61	4.94	1000	2.81	1011	2.21	1021	3.7
1031	.68	1041	-.62	1051	-.82	1058	2.68	1061	4.07
1071	5.251	1092.024	6.102	1098.728	6.292	1130.044	7.091	1153.681	7.66
1165.181	7.903	1180.416	8.117	1200.317	8.302	1215.338	8.387	1262.104	8.766
1276.996	8.851	1305.727	8.909	1338.653	8.999	1340.864	9.006	1343.792	9.013
1400.31	9.073	1411.137	9.058						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
619.21	.1	1021	.05	1061	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1021	1061		197 197	197		.1	.3
Ineffective Flow			num=	2				
Sta L	Sta R	Elev	Permanent					
619.21	803	12.09	F					
13141411.137		12.09	F					

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 3499

INPUT

Description: 10' US Military Road Bridge

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
891	11.67	932	11.61	988	11.17	1000	8.29	1015	5.57
1024	2.4	1033	.22	1053	-1.03	1073	-.88	1094	2.62
1103	4.24	1111	6.21	1118	8.62	1127	11.74	1159	11.05
1169	11.17								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
891	.1	988	.05	1127	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	988	1127		45 45	45		.1	.3

BRIDGE

ExpandedLocal.rep

RIVER: W-15 Main  
 REACH: South RS: 3477

INPUT

Description: Military Road Bridge  
 Distance from Upstream XS = 10  
 Deck/Roadway Width = 25  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 9

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
891	11.67				932	11.61				988	11.17			
1000	11.75	8			1038	12.09	8			1104	11.74			8
1127	11.08	8			1159	11.05				1169	11.17			

Upstream Bridge Cross Section Data

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
891	11.67	932	11.61	988	11.17	1000	8.29	1015	5.57
1024	2.4	1033	.22	1053	-1.03	1073	-.88	1094	2.62
1103	4.24	1111	6.21	1118	8.62	1127	11.74	1159	11.05
1169	11.17								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
891	.1	988	.05	1127	.1

Bank	Sta	Right	Coeff	Contr.	Expan.
	988	1127	.1	.3	

Downstream Deck/Roadway Coordinates

num= 9

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
891	11.67				932	11.61				988	11.17			
1000	11.75	8			1038	12.09	8			1104	11.74			8
1127	11.08				1159	11.05				1169	11.17			

Downstream Bridge Cross Section Data

Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
891	11.67	932	11.61	988	11.17	1000	8.65	1006	5.68
1016	2.21	1038	-.66	1058	-.07	1082	2.67	1093	6.2

ExpandedLocal.rep

1097 8.16 1104 11.74 1127 11.08 1159 11.05 1169 11.17

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
891 .1 988 .05 1104 .1

Bank Sta: Left Right Coeff Contr. Expan.
988 1104 .1 .3

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
Downstream Embankment side slope = 0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow = .98
Elevation at which weir flow begins =
Energy head used in spillway design =
Spillway height used in design =
Weir crest shape = Broad Crested

Number of Piers = 4

Pier Data

Pier Station Upstream= 1020 Downstream= 1020
Upstream num= 2
Width Elev Width Elev
\*\*\*\*\*
1 -2 1 8
Downstream num= 2
Width Elev Width Elev
\*\*\*\*\*
1 -2 1 8

Pier Data

Pier Station Upstream= 1040 Downstream= 1040
Upstream num= 2
Width Elev Width Elev
\*\*\*\*\*
1 -2 1 8
Downstream num= 2
Width Elev Width Elev
\*\*\*\*\*
1 -2 1 8

Pier Data

Pier Station Upstream= 1060 Downstream= 1060
Upstream num= 2
Width Elev Width Elev
\*\*\*\*\*
1 -2 1 8



```

Downstream      num=      2
  Width  Elev   Width  Elev
*****
      1    -2      1     8

```

Pier Data

Pier Station Upstream= 1080 Downstream= 1080

```

Upstream      num=      2
  Width  Elev   Width  Elev
*****
      1    -2      1     8

```

```

Downstream      num=      2
  Width  Elev   Width  Elev
*****
      1    -2      1     8

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

```

  Energy
  Momentum          Cd = 1.2
Selected Low Flow Methods = Highest Energy Answer

```

High Flow Method

```

  Pressure and Weir flow
    Submerged Inlet Cd =
    Submerged Inlet + Outlet Cd = .8
    Max Low Cord =

```

Additional Bridge Parameters

```

  Add Friction component to Momentum
  Do not add Weight component to Momentum
  Class B flow critical depth computations use critical depth
    inside the bridge at the upstream end
  Criteria to check for pressure flow = Upstream energy grade line

```

CROSS SECTION

```

RIVER: W-15 Main
REACH: South          RS: 3454

```

INPUT

Description: 10' DS Military Road Bridge

```

Station Elevation Data      num=      15
  Sta  Elev   Sta  Elev   Sta  Elev   Sta  Elev   Sta  Elev
*****
  891 11.67   932 11.61   988 11.17  1000  8.65  1006  5.68

```

ExpandedLocal.rep

1016	2.21	1038	-.66	1058	-.07	1082	2.67	1093	6.2
1097	8.16	1104	11.74	1127	11.08	1159	11.05	1169	11.17

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
891	.1	988	.05	1104	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	988	1104		295	295		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 3159

INPUT  
 Description: Interpolated Section

Station Elevation Data num= 65

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
787.58	10.94	792.55	10.91	821.95	10.82	823.78	10.82	825.54	10.81
856.32	10.57	858.53	10.56	875.53	10.38	890.69	10.19	891.52	10.18
907.95	10	924.51	9.63	925.06	9.62	957.5	9.04	990.35	8.72
995.67	8.9	1003.22	7.29	1006.55	6.48	1011.99	4.02	1015.81	2.7
1021.05	1.22	1028.41	.32	1041	-1.22	1056.05	-.12	1073.14	2.41
1074.11	2.53	1082.39	5.04	1085.4	6.41	1090.67	8.89	1112.07	8.95
1114.95	8.95	1117.96	8.95	1128.27	8.95	1138.16	8.9	1145.14	8.88
1149.61	8.86	1163.52	8.79	1173.79	8.76	1188.31	8.83	1202.72	8.84
1208.31	8.89	1209.92	8.9	1213.1	8.93	1221.66	8.99	1231.65	9.07
1237.89	9.13	1260.58	9.33	1262.68	9.35	1275.06	9.47	1287.47	9.6
1288.41	9.61	1289.51	9.62	1312.27	9.84	1318.44	9.91	1337.06	10.09
1341.82	10.13	1347.37	10.17	1361.85	10.25	1375.83	10.32	1376.3	10.33
1386.64	10.38	1405.23	10.44	1411.43	10.46	1421.92	10.47	1427.68	10.48

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
787.58	.1	995.67	.05	1090.67	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	995.67	1090.67		294	294		.1	.3

CROSS SECTION

RIVER: W-15 Main

ExpandedLocal.rep

REACH: South

RS: 2865

INPUT

Description: Interpolated Section

Station Elevation Data

num= 65

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
684.16	10.21	691.79	10.15	736.88	10	739.69	10	742.39	9.97
789.6	9.53	792.99	9.49	819.07	9.15	842.32	8.83	843.59	8.82
868.79	8.51	894.2	7.84	895.04	7.82	944.8	6.76	995.17	6.26
1003.33	6.62	1010.11	5.17	1013.09	4.32	1017.97	2.36	1021.41	1.18
1026.11	.24	1032.7	-.5	1044	-1.77	1054.1	-.16	1065.57	2.31
1066.22	2.39	1071.78	3.89	1073.8	4.65	1077.33	6.05	1116.01	6.29
1121.22	6.3	1126.65	6.31	1145.28	6.37	1163.16	6.33	1175.78	6.33
1183.85	6.3	1208.99	6.24	1227.54	6.25	1253.79	6.47	1279.82	6.57
1289.93	6.69	1292.83	6.71	1298.59	6.77	1314.06	6.9	1332.11	7.07
1343.39	7.18	1384.39	7.59	1388.19	7.62	1410.56	7.87	1432.99	8.13
1434.69	8.15	1436.67	8.17	1477.79	8.63	1488.95	8.76	1522.59	9.12
1531.19	9.21	1541.23	9.29	1567.39	9.45	1592.66	9.59	1593.51	9.6
1612.19	9.68	1645.8	9.76	1656.99	9.78	1675.95	9.78	1686.35	9.79

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
684.16	.1	1003.33	.05	1077.33	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1003.33	1077.33		295	295	.1	.3

CROSS SECTION

RIVER: W-15 Main

REACH: South

RS: 2570

INPUT

Description:

Station Elevation Data

num= 55

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
580.739	9.479	591.021	9.396	651.807	9.18	655.597	9.177	659.235	9.134
722.874	8.478	727.449	8.425	793.942	7.465	795.663	7.447	829.626	7.014
863.877	6.041	865.009	6.016	932.091	4.487	1000	3.79	1011	4.35
1017	3.04	1027	-.33	1037	-1.33	1047	-2.33	1058	2.2
1064	3.21119	119.948	3.618	1127.49	3.6481135	1135.347	3.6771162	1162.296	3.783
1188.162	3.7541206	1206.415	3.7731218	1218.098	3.7481254	1254.465	3.691281	1281.297	3.733
1319.273	4.098	1356.93	4.2891371	1552	4.4871384	1081	4.6181406	1406.454	4.814
1432.563	5.069	1448.89	5.2261508	1508.195	5.8471513	1698	5.9	1546.06	6.274

ExpandedLocal.rep

1578.507	6.6551580.962	6.6881583.828	6.7251643.315	7.41	1659.46	7.614
1708.123	8.1521720.569	8.2891735.093	8.4011772.932	8.6521810.726		8.873
1837.74	8.9851886.358	9.0851902.549	9.1031929.979	9.0981945.032		9.096

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
580.739	.1	1011	.05	1064	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1011	1064		235	235		.1	.3
Ineffective Flow		num=	1					
Sta L	Sta R	Elev	Permanent					
15631945.032		7.88	F					

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 2335

INPUT

Description:

Station Elevation Data num= 46

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
750.739	9.479	761.021	9.396	821.807	9.18	825.597	9.177	829.235	9.134
892.874	8.478	897.449	8.425	1000	7.07	1013	7.58	1021	3.52
1035	3.57	1045	-2.39	1055	-2.69	1065	-.29	1075	2.51
1085	3.681111.162		3.7541129.415		3.7731141.098		3.7481177.465		3.69
1204.297	3.7331242.273		4.098 1279.93		4.2891294.552		4.4871307.081		4.618
1329.454	4.8141355.563		5.069 1371.89		5.2261431.195		5.8471436.698		5.9
1469.06	6.2741501.507		6.6551503.962		6.6881506.828		6.7251566.315		7.41
1582.46	7.6141631.123		8.1521643.569		8.2891658.093		8.4011695.932		8.652
1733.726	8.873 1760.74		8.9851809.358		9.0851825.549		9.1031852.979		9.098
1868.032	9.096								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
750.739	.1	1035	.05	1085	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1035	1085		243	243		.1	.3
Ineffective Flow		num=	1					
Sta L	Sta R	Elev	Permanent					
13281868.032		7.88	F					

ExpandedLocal.rep

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 2092

INPUT

Description: 10' US Old River Road

Station Elevation Data num= 52

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	10.618	40.899	10.567	51.853	10.553	86.882	10.358	104.588	10.348
124.956	10.175	157.323	9.75	163.03	9.657	177.849	9.704	210.058	9.799
239.178	9.629	262.793	9.49	314.799	9.347	315.326	9.344	315.528	9.342
353.399	9.094	368.263	9.002	391.473	8.852	420.998	8.665	429.547	8.605
451.748	8.474	467.621	8.372	473.733	8.342	487.501	8.287	526.468	8.108
545.433	8.062	572.116	8.049	584.21	8.041	614.843	8.06	644.764	8.074
656.577	8.055	684.965	7.964	705.317	7.932	741.038	7.85	765.87	7.79
825.499	7.636	826.424	7.634	861.306	7.561	886.977	7.558	896.574	7.541
909.96	7.544	947.53	7.686	984	7.96	1000	4.79	1006	3.22
1016	.12	1028	-.47	1045	-2.22	1058	-1.16	1074	3.08
1090	7.88	1640	7.33						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	984	.05	1090	.1

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
984	1090	54	54	54	.1	.3	
Ineffective Flow	num=	2					
Sta L	Sta R	Elev	Permanent				
0	974	7.88	F				
1100	1640	7.88	F				

BRIDGE

RIVER: W-15 Main  
 REACH: South RS: 2065

INPUT

Description: Old River Road Bridge  
 Distance from Upstream XS = 10  
 Deck/Roadway Width = 34  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates  
 num= 4

ExpandedLocal.rep

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
984	7.96	6.65	1000	8.14	6.65	1079	8.14	6.65
1090	7.88	6.65						

Upstream Bridge Cross Section Data

Station Elevation Data num= 52

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	10.618	40.899	10.567	51.853	10.553	86.882	10.358	104.588	10.348
124.956	10.175	157.323	9.75	163.03	9.657	177.849	9.704	210.058	9.799
239.178	9.629	262.793	9.49	314.799	9.347	315.326	9.344	315.528	9.342
353.399	9.094	368.263	9.002	391.473	8.852	420.998	8.665	429.547	8.605
451.748	8.474	467.621	8.372	473.733	8.342	487.501	8.287	526.468	8.108
545.433	8.062	572.116	8.049	584.21	8.041	614.843	8.06	644.764	8.074
656.577	8.055	684.965	7.964	705.317	7.932	741.038	7.85	765.87	7.79
825.499	7.636	826.424	7.634	861.306	7.561	886.977	7.558	896.574	7.541
909.96	7.544	947.53	7.686	984	7.96	1000	4.79	1006	3.22
1016	.12	1028	-.47	1045	-2.22	1058	-1.16	1074	3.08
1090	7.88	1640	7.33						

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	984	.05	1090	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	984	1090		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	974	7.88	F
1100	1640	7.88	F

Downstream Deck/Roadway Coordinates

num= 4

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
984	7.44	6.65	1000	8.14	6.65	1079	8.14	6.65
1095	7.17	6.65						

Downstream Bridge Cross Section Data

Station Elevation Data num= 52

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	10.618	40.899	10.567	51.853	10.553	86.882	10.358	104.588	10.348
124.956	10.175	157.323	9.75	163.03	9.657	177.849	9.704	210.058	9.799
239.178	9.629	262.793	9.49	314.799	9.347	315.326	9.344	315.528	9.342
353.399	9.094	368.263	9.002	391.473	8.852	420.998	8.665	429.547	8.605

ExpandedLocal.rep

451.748	8.474	467.621	8.372	473.733	8.342	487.501	8.287	526.468	8.108
545.433	8.062	572.116	8.049	584.21	8.041	614.843	8.06	644.764	8.074
656.577	8.055	684.965	7.964	705.317	7.932	741.038	7.85	765.87	7.79
825.499	7.636	826.424	7.634	861.306	7.561	886.977	7.558	896.574	7.541
909.96	7.544	947.53	7.686	984	7.44	1000	2.97	1012	-1.14
1035	-.58	1050	-.54	1065	-.3	1073	.75	1079	3.09
1095	7.17	1640	7.33						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	984	.05	1095	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	984	1095		.1	.3

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 5

Pier Data

Pier Station	Upstream=	1013.3	Downstream=	1013.3
Upstream	num=	2		
Width	Elev	Width	Elev	
1	-.1	1	6.65	
Downstream	num=	2		
Width	Elev	Width	Elev	
1	-.1	1	6.65	

Pier Data

Pier Station	Upstream=	1026.6	Downstream=	1026.6
Upstream	num=	2		
Width	Elev	Width	Elev	
1	-.1	1	6.65	
Downstream	num=	2		
Width	Elev	Width	Elev	
1	-.1	1	6.65	

ExpandedLocal.rep

Pier Data

Pier Station Upstream= 1039.9 Downstream= 1039.9

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 -.1 1 6.65

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 -.1 1 6.65

Pier Data

Pier Station Upstream= 1053.3 Downstream= 1053.3

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 -.1 1 6.65

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 -.1 1 6.65

Pier Data

Pier Station Upstream= 1066.6 Downstream= 1066.6

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 -.1 1 6.65

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 -.1 1 6.65

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Momentum Cd = 1.2

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Pressure and Weir flow

Submerged Inlet Cd =

Submerged Inlet + Outlet Cd = .8

Max Low Cord =

Additional Bridge Parameters

Add Friction component to Momentum



ExpandedLocal.rep

Do not add Weight component to Momentum  
 Class B flow critical depth computations use critical depth  
 inside the bridge at the upstream end  
 Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 2038

INPUT

Description: 10' DS Old River Road

Station Elevation Data num= 52

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	10.618	40.899	10.567	51.853	10.553	86.882	10.358	104.588	10.348
124.956	10.175	157.323	9.75	163.03	9.657	177.849	9.704	210.058	9.799
239.178	9.629	262.793	9.49	314.799	9.347	315.326	9.344	315.528	9.342
353.399	9.094	368.263	9.002	391.473	8.852	420.998	8.665	429.547	8.605
451.748	8.474	467.621	8.372	473.733	8.342	487.501	8.287	526.468	8.108
545.433	8.062	572.116	8.049	584.21	8.041	614.843	8.06	644.764	8.074
656.577	8.055	684.965	7.964	705.317	7.932	741.038	7.85	765.87	7.79
825.499	7.636	826.424	7.634	861.306	7.561	886.977	7.558	896.574	7.541
909.96	7.544	947.53	7.686	984	7.44	1000	2.97	1012	-1.14
1035	-.58	1050	-.54	1065	-.3	1073	.75	1079	3.09
1095	7.17	1640	7.33						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	984	.05	1095	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	984	1095		217	217	.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 1821

INPUT

Description:

Station Elevation Data num= 38

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
596	9.702	608.267	9.707	628.3	9.856	660.129	9.801	667.22	9.706

ExpandedLocal.rep

688.541	9.404	706.139	9.161	711.992	9.107	723.676	8.973	763.854	8.351
801.379	8.148	815.717	8.045	822.898	7.962	844.492	7.454	861.817	7.017
867.579	6.914	900.737	6.248	919.442	5.908	956.786	5.25	971.304	4.979
978.576	4.85	1000	4.44	1010	-2.99	1020	-3.39	1030	-2.44
1039	1.46	1042	4.14	1050	4.781	1054.449	4.878	1102.848	5.64
1103.795	5.657	1104.611	5.671	1115.691	5.851	1153.141	6.465	1196.53	7.079
1202.487	7.181	1209.391	7.233	1218.207	7.327				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
596	.1	1000	.05	1042	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1000	1042		314	314		.1	.3
Ineffective Flow			num=	1				
Sta L	Sta R	Elev	Permanent					
596	876	7.45	F					

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 1507

INPUT

Description: Interpolated Section

Station Elevation Data num= 77

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
573	9.46	578.69	9.46	585.1	9.46	586.18	9.46	590.2	9.47
607.7	9.5	631.43	9.45	631.79	9.45	634.95	9.44	641.89	9.41
649.51	9.34	672.41	9.12	677.76	9.07	683.26	9.02	691.32	8.93
697.61	8.88	710.16	8.76	724.08	8.6	735.54	8.47	753.32	8.24
770.41	8.1	787.83	7.95	793.63	7.9	796.11	7.87	809.03	7.73
816.75	7.63	818.42	7.6	825.61	7.47	839.94	7.18	842.34	7.14
858.56	6.81	864.75	6.7	868.51	6.64	895.7	6.14	900.37	6.05
918.61	5.7	920.46	5.67	930.74	5.49	958.99	4.96	960.58	4.94
965.79	4.84	968.71	4.77	976.17	4.65	983.99	4.54	993.91	4.38
1003.26	4.11	1007	4.01	1008	3.48	1017	-1.86	1027	-2.96
1035.67	-2.31	1038.82	-2	1044.33	-.67	1049.45	1.45	1051.27	2.55
1053	4.07	1061.96	4.5	1066.94	4.61	1081.6	4.9	1086.53	5
1088.61	5.07	1093.73	5.18	1121.15	5.79	1122.21	5.81	1123.12	5.83
1135.53	6.11	1136.86	6.14	1177.22	6.72	1177.47	6.72	1185.11	6.85
1188.32	6.89	1195.91	6.95	1226.07	7.17	1232.74	7.23	1233.36	7.24
1240.47	7.25	1250.34	7.3						

Manning's n Values num= 3

ExpandedLocal.rep

Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 573 .1 1007 .05 1053 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1007 1053 314 314 314 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 1193

INPUT

Description:

Station Elevation Data num= 45  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 550 9.22 556.083 9.217 562.935 9.218 568.386 9.202 612.466 9.078  
 612.852 9.076 616.234 9.058 661.997 8.814 667.881 8.773 711.528 8.432  
 723.78 8.324 761.059 7.938 779.679 7.731 788.533 7.615 812.383 7.281  
 820.067 7.17 837.958 6.873 865.942 6.428 895.003 5.938 919.5 5.467  
 932.471 5.239 962.673 4.653 969.939 4.521 973.059 4.432 1000 4.09  
 1010 3.71 1014 3.59 1015 3.27 1024 -.73 1034 -2.53  
 1044 -1.93 1054 -.93 1062 2.27 1064 3.991095.667 4.718  
 1101.124 4.8551103.428 4.9561109.096 5.1071156.845 6.4091201.529 6.979  
 1210.262 7.137 1213.81 7.1871222.218 7.2051263.678 7.2851282.481 7.265

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 550 .1 1014 .05 1064 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1014 1064 381 381 381 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 812

INPUT

Description: Interpolated Section

Station Elevation Data num= 60  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 585.67 8.86 591.07 8.84 597.15 8.81 598.71 8.8 601.99 8.79

ExpandedLocal.rep

641.14	8.62	641.48	8.61	644.48	8.6	646.8	8.58	669.35	8.44
685.12	8.36	690.35	8.33	712.75	8.18	729.11	8.07	739.99	7.98
773.21	7.71	775.01	7.7	792.51	7.56	800.61	7.49	800.83	7.49
823.24	7.31	829.82	7.26	830.46	7.25	847.27	7.04	850.23	7
862.32	6.85	873.56	6.68	886.71	6.48	900.86	6.12	905	6.01
923.88	5.52	936.07	5.22	943.76	5.02	964.44	4.57	971.27	4.43
974.2	4.34	988.19	4.11	999.51	3.95	1001.19	3.9	1008.91	3.65
1012.67	3.55	1013.67	3.27	1022.67	-.05	1029.33	-1.73	1036	-2.36
1044.33	-1.76	1052.67	-.9	1060.67	2.2	1062.67	3.58	1084.26	4.14
1087.98	4.24	1089.55	4.31	1093.42	4.43	1125.98	5.4	1156.45	5.88
1162.41	6	1164.83	6.04	1170.56	6.07	1198.83	6.22	1211.65	6.24

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 585.67 .1 1012.67 .05 1062.67 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1012.67 1062.67 381 381 381 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 431

INPUT

Description: Interpolated Section

Station Elevation Data num= 60

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
621.33	8.5	626.05	8.46	631.37	8.41	632.73	8.39	635.6	8.37
669.81	8.15	670.11	8.15	672.74	8.13	674.76	8.12	694.46	7.97
708.25	7.91	712.82	7.89	732.39	7.79	746.69	7.7	756.2	7.64
787.29	7.47	788.97	7.46	805.34	7.4	812.92	7.36	813.12	7.36
834.09	7.34	840.25	7.34	840.84	7.33	856.57	7.2	859.35	7.18
870.66	7.08	881.17	6.94	893.48	6.77	906.72	6.3	910.59	6.16
928.26	5.57	939.66	5.2	946.86	4.95	966.21	4.48	972.6	4.33
975.34	4.26	988.43	3.97	999.03	3.81	1000.6	3.77	1007.82	3.59
1011.33	3.51	1012.33	3.26	1021.33	.64	1029.67	-1.83	1038	-2.2
1044.67	-1.6	1051.33	-.86	1059.33	2.12	1061.33	3.18	1072.86	3.56
1074.84	3.63	1075.68	3.67	1077.74	3.75	1095.11	4.39	1111.37	4.77
1114.55	4.86	1115.84	4.9	1118.9	4.94	1133.99	5.15	1140.83	5.22

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 621.33 .1 1011.33 .05 1061.33 .1

ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1011.33 1061.33 381 381 381 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 50

INPUT

Description: 50' US Confluence with Doubloon Bayou

Station Elevation Data num= 23

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
657	8.146	666.754	7.982	702.715	7.655	719.58	7.506	752.036	7.392
772.406	7.296	801.357	7.227	825.231	7.231	850.677	7.419	868.464	7.359
878.996	7.31	900.248	7.055	916.187	6.319	949.96	4.891	988.672	3.837
1000	3.65	1010	3.47	1020	1.32	1030	-1.93	1040	-2.03
1050	-.83	1060	2.77	1070	4.2				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
657	.1	1010	.05	1060	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1010 1060 0 0 0 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 54648

INPUT

Description: Copy of SELA 10.35

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-100	21	260	16	360	16	491.8	17.8	496.8	17.9
499.8	13.2	514.8	12.65	518.8	13.1	524.8	19.1	532.8	18.8
820.21	21								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-100	.125	496.8	.04	524.8	.125

ExpandedLocal.rep

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
496.8	524.8	311	311	311		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 54337

INPUT

Description: Copy of SELA 10.291

Station Elevation Data	num=	11
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev		
*****		
-100 21 260 16 360 16 491.8 17.8 496.8 17.9		
499.8 13.2 514.8 12.6 518.8 13.1 524.8 19.1 532.8 18.8		
824 21		

Manning's n Values	num=	3
Sta n Val Sta n Val Sta n Val		
*****		
-100 .125 496.8 .04 524.8 .125		

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
496.8	524.8	53	53	53		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 54284

INPUT

Description: Copy of SELA 10.281

Station Elevation Data	num=	12
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev		
*****		
-98 21 262 16 362 16 492 16.9 495 16.9		
502 12.7 504 12.5 507 12.3 510 12.4 512 12.5		
515 17.6 822 21		

Manning's n Values	num=	3
Sta n Val Sta n Val Sta n Val		
*****		
-98 .125 495 .04 515 .125		

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
----------------	-------	---------------	---------	-------	-------	--------	--------

	495	515		106	106	106		.1	.3
Ineffective Flow		num=	2						
Sta L	Sta R	Elev	Permanent						
-98	501	17.6	F						
513	822	17.6	F						

CULVERT

RIVER: W14 Main  
 REACH: Upper RS: 54280

INPUT

Description: Pawn Road  
 Distance from Upstream XS = 2  
 Deck/Roadway Width = 102  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates  
 num= 2

Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord
*****	*****	*****	*****	*****	*****
492	17.6		515	17.6	

Upstream Bridge Cross Section Data

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-98	21	262	16	362	16	492	16.9	495	16.9
502	12.7	504	12.5	507	12.3	510	12.4	512	12.5
515	17.6	822	21						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
-98	.125	495	.04	515	.125

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	495	515		.1	.3

Ineffective Flow		num=	2
Sta L	Sta R	Elev	Permanent
-98	501	17.6	F
513	822	17.6	F

Downstream Deck/Roadway Coordinates

num=	2				
Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord
*****	*****	*****	*****	*****	*****
495	17.5		515	17.5	

ExpandedLocal.rep

Downstream Bridge Cross Section Data

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-95	21	265	16	365	16	495	17.5	500	13.4
502	12	507	12	510	12.3	511	12.4	515	17.5
1665	21								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-95	.125	495	.04	515	.125

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	495	515		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-95	500	17.5	F
512	1665	17.5	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 2

Culvert Name	Shape	Rise	Span
Culvert #1	Pipe Arch	3	4.83

FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
 FHWA Scale # 1 - 90 Degree headwall  
 Solution Criteria = Highest U.S. EG

Culvert	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
1	2	102	.024	.024	0		.2

Upstream Elevation = 12.3  
 Centerline Station = 505  
 Downstream Elevation = 12  
 Centerline Station = 504

Culvert Name	Shape	Rise	Span
Culvert #2	Circular	3	

FHWA Chart # 1 - Concrete Pipe Culvert



ExpandedLocal.rep

FHWA Scale # 1 - Square edge entrance with headwall

Solution Criteria = Highest U.S. EG

Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef Exit Loss Coef

2 102 .013 .013 0 .9

1

Upstream Elevation = 12.75
Centerline Station = 510
Downstream Elevation = 12.48
Centerline Station = 509

CROSS SECTION

RIVER: W14 Main
REACH: Upper RS: 54178

INPUT

Description: Copy of SELA 10.261

Station Elevation Data num= 11

Table with 11 columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Data points include (-95, 21), (265, 16), (365, 16), (495, 17.5), (500, 13.4), (504, 12.7), (507, 12), (510, 12.3), (511, 12.4), (515, 17.5), (825, 21).

Manning's n Values num= 3

Table with 6 columns: Sta, n Val, Sta, n Val, Sta, n Val. Data points include (-95, .125), (495, .04), (515, .125).

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
495 515 21 21 21 .1 .3

Ineffective Flow num= 2

Table with 4 columns: Sta L, Sta R, Elev, Permanent. Data points include (-95, 500, 17.5, F), (512, 825, 17.5, F).

CROSS SECTION

RIVER: W14 Main
REACH: Upper RS: 54157

INPUT

Description: Copy of SELA 10.257

Station Elevation Data num= 30

Table with 10 columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev.

ExpandedLocal.rep

```
*****
-290    21    70    16    170    16    300    18.3    310    18.3
 320    18.3   330    18.3   340    18.5   350    18.6   360    18.4
 370    18.4   380    18.2   390    18.3   400    18.4   410    18.2
 420    18.5   430    18.6   440    18.7   450    18.7   460    18.5
 470    18.5   480    18.4   490    18.9   497    17.2   500    12.4
 507    12.7   512    12.8   516    17.7   519    17.6   630    21
```

```
Manning's n Values      num=      3
  Sta  n Val    Sta  n Val    Sta  n Val
*****
-290    .125    497    .04    516    .125
```

```
Bank Sta: Left   Right   Lengths: Left Channel   Right   Coeff Contr.   Expan.
          497     516           164     164     164           .1         .3
```

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 53993

INPUT

Description: Copy of SELA 10.226\*

```
Station Elevation Data      num=      39
  Sta  Elev    Sta  Elev    Sta  Elev    Sta  Elev    Sta  Elev
*****
-352.55    21  -38.45    16.43    2.14    16   66.25    16  100.67    16.05
 212.82    17.71  228.75    17.96   238.61    17.97  248.46    17.99  258.31    18.01
 265.38    18.13  268.16    18.17   278.02    18.24  287.87    18.08  297.72    18.07
 307.57    17.91  317.43    17.98   317.84    17.98  327.28    18.09  337.13    17.99
 346.98    18.26  356.84    18.39   366.69    18.51   370.4    18.53  376.54    18.51
 386.4     18.33  396.25    18.3    406.1     18.2   415.95    18.54  422.85    17.25
 426.69    13.27  428.38    12.05   434.09    12.46  435.5    12.68  440.58    13.41
 444.65    17.6   447.46    17.54   450.9     17.56   567.5     21
```

```
Manning's n Values      num=      3
  Sta  n Val    Sta  n Val    Sta  n Val
*****
-352.55    .125  422.85    .04  444.65    .125
```

```
Bank Sta: Left   Right   Lengths: Left Channel   Right   Coeff Contr.   Expan.
          422.85  444.65           163     163     163           .1         .3
```

CROSS SECTION

RIVER: W14 Main

REACH: Upper

RS: 53830

INPUT

Description: Copy of SELA 10.195\*

Station Elevation Data num= 39

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-415.1	21	-105.7	16.29	-65.71	16	-2.57	16	31.34	16.09
141.82	17.41	157.51	17.61	167.21	17.65	176.92	17.69	186.62	17.72
193.59	17.82	196.33	17.84	206.03	17.88	215.74	17.76	225.44	17.74
235.15	17.62	244.85	17.65	245.26	17.65	254.56	17.79	264.26	17.78
273.97	18.03	283.68	18.17	293.38	18.31	297.03	18.35	303.09	18.31
312.79	18.16	322.5	18.1	332.2	18	341.91	18.19	348.7	17.3
354.29	12.68	356.75	11.7	362.56	12.27	363.99	12.66	369.16	14.01
373.3	17.5	375.93	17.47	379.13	17.51	505	21		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-415.1	.125	348.7	.04	373.3	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	348.7	373.3		164	164	.1	.3

CROSS SECTION

RIVER: W14 Main

REACH: Upper

RS: 53666

INPUT

Description: Copy of SELA 10.164\*

Station Elevation Data num= 39

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-477.65	21	-172.95	16.14	-133.57	16	-71.38	16	-37.99	16.14
70.81	17.1	86.26	17.27	95.82	17.32	105.38	17.38	114.93	17.43
121.79	17.51	124.49	17.52	134.05	17.51	143.61	17.44	153.17	17.41
162.72	17.33	172.28	17.33	172.68	17.33	181.84	17.48	191.4	17.58
200.95	17.79	210.51	17.96	220.07	18.12	223.67	18.17	229.63	18.12
239.19	17.99	248.74	17.9	258.3	17.79	267.86	17.83	274.55	17.35
281.9	12.09	285.12	11.35	291.03	12.09	292.49	12.64	297.74	14.62
301.95	17.4	304.39	17.41	307.37	17.45	442.21	21		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-477.65	.125	274.55	.04	301.95	.125

ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 274.55 301.95 164 164 164 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 53502

INPUT

Description: Copy of SELA 10.133

Station Elevation Data num= 14  

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-540.2	21	-240.2	16	-140.2	16	-.2	16.8	50	17.2
100.1	17	150.3	18	200.4	17.4	209.5	11.5	213.5	11
219.5	11.9	230.6	17.3	235.6	17.4	380	21		

Manning's n Values num= 3  

Sta	n Val	Sta	n Val	Sta	n Val
-540.2	.125	200.4	.04	230.6	.125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 200.4 230.6 280 280 280 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 53222

INPUT

Description: Copy of SELA 10.08

Station Elevation Data num= 41  

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
360	19.1	370	18.7	380	18	390	17.5	400	17.3
410	17.1	420	17	430	16.9	440	17.2	450	17.1
460	16.9	470	16.7	480	16.7	490	16.6	500	16.4
510	16.3	513	11.6	517	10.8	527	12.5	529	17.3
530	17.1	540	16.9	550	16.6	560	16.3	570	16.5
580	16	590	16.1	600	16	610	16.1	620	16.2
630	16.2	640	16.3	650	16.3	660	16.2	670	15.7
680	15.9	690	16	700	16.9	710	17	720	16.4
820	20								

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 360 .125 510 .04 529 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 510 529 68 68 68 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 53154

INPUT

Description: Copy of SELA 10.067

Station Elevation Data num= 11  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 278 20 478 17.1 492 12 496 11.7 502 10.9  
 503 10.8 509 10.9 515 10.6 516 10.5 528 16  
 628 20

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 278 .125 478 .04 528 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 478 528 42 42 42 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 278 491 19.3 F  
 515 628 19.3 F

CULVERT

RIVER: W14 Main  
 REACH: Upper RS: 53150

INPUT

Description: Brownsitch Road  
 Distance from Upstream XS = .5  
 Deck/Roadway Width = 41  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates  
 num= 2

ExpandedLocal.rep

Sta Hi Cord Lo Cord      Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 200    19.3                    700    19.3

Upstream Bridge Cross Section Data

Station Elevation Data      num=      11  
 Sta    Elev      Sta    Elev      Sta    Elev      Sta    Elev      Sta    Elev  
 \*\*\*\*\*  
 278    20      478    17.1      492    11.85      496    11.5      502    10.9  
 503    10.8      509    10.9      515    10.6      516    10.5      528    16  
 628    20

Manning's n Values      num=      3  
 Sta    n Val      Sta    n Val      Sta    n Val  
 \*\*\*\*\*  
 278    .125      478    .04      528    .125

Bank Sta: Left    Right    Coeff Contr.    Expan.  
                   478      528                    .1      .3

Ineffective Flow      num=      2  
 Sta L    Sta R      Elev    Permanent  
 278      491      19.3      F  
 515      628      19.3      F

Downstream Deck/Roadway Coordinates

num=      2  
 Sta Hi Cord Lo Cord      Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 200    19.3                    700    19.3

Downstream Bridge Cross Section Data

Station Elevation Data      num=      9  
 Sta    Elev      Sta    Elev      Sta    Elev      Sta    Elev      Sta    Elev  
 \*\*\*\*\*  
 322    20      522    17.2      532    11.92      544    10.4      550    11.5  
 555    11.5      556    12.1      558    18.1      658    20

Manning's n Values      num=      3  
 Sta    n Val      Sta    n Val      Sta    n Val  
 \*\*\*\*\*  
 322    .125      522    .04      558    .125

Bank Sta: Left    Right    Coeff Contr.    Expan.  
                   522      558                    .1      .3

Ineffective Flow      num=      2  
 Sta L    Sta R      Elev    Permanent  
 322    531.25      19.3      F  
 555.25    658      19.3      F

ExpandedLocal.rep

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name Shape Rise Span  
 Culvert #1 Box 4 4  
 FHWA Chart # 10- 90 degree headwall; Chamfered or beveled inlet  
 FHWA Scale # 1 - Inlet edges chamfered 3/4 inch  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 .5 41 .013 .013 0 .5

1

Number of Barrels = 4

Upstream Elevation = 11.54

Centerline Stations

Sta. Sta. Sta. Sta.  
 494.75 500.25 505.75 511.25

Downstream Elevation = 11.54

Centerline Stations

Sta. Sta. Sta. Sta.  
 535 540.5 546 551.5

CROSS SECTION

RIVER: W14 Main

REACH: Upper RS: 53112

INPUT

Description: Copy of SELA 10.059

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
322	20	522	17.2	533	12.1	537	12	543	12
543	10.4	544	10.4	544	11.9	550	11.9	555	11.9
556	12.1	558	18.1	658	20				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

ExpandedLocal.rep

322 .125 522 .04 558 .125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.	
	522	558		48 48	48		.1	.3	
Ineffective Flow	num=		2						
Sta L	Sta R	Elev	Permanent						
322	531.25	19.3	F						
555.25	658	19.3	F						

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 53064

INPUT

Description: Copy of SELA 10.05

Station Elevation Data num= 20

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
500	21.8	510	17.7	520	17.2	525	17.2	535	11.6
545	11.6	545	10.3	546	10.3	546	11.6	556	11.7
565	18.9	570	19	580	19.1	590	19.1	600	19.2
610	19.2	620	19.2	630	19.3	640	19.4	740	20

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
500	.125	525	.04	565	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	525	565		169 169	169		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 52895

INPUT

Description: Copy of SELA 10.018\*

Station Elevation Data num= 33

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
419.72	21.16	435.9	17.67	439.54	17.53	452.07	17.19	459.37	17.18
460.16	17.04	471.17	11.6	473.4	11.4	480.72	10.84	482.18	10.8
482.18	9.76	482.98	9.76	482.98	10.8	486.11	10.89	491.34	12.01
492.87	12.18	501.78	18.84	506.32	18.63	510.2	18.41	515.4	18.52



ExpandedLocal.rep

524.47	18.63	528.9	18.72	533.55	18.73	542.63	18.67	547.43	18.64
551.71	18.65	560.79	18.75	569.86	18.85	586.35	18.97	611.62	19.18
633.52	19.46	642.11	19.84	660.64	19.96				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
419.72	.125	460.16	.04	501.78	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	460.16	501.78		169	169		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 52726

INPUT

Description: Copy of SELA 9.986\*

Station Elevation Data num= 33

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
339.44	20.52	361.79	17.64	366.83	17.47	384.14	17.19	394.23	17.16
395.32	16.88	407.34	11.59	409.78	11.2	417.76	10.08	419.36	10
419.36	9.22	419.96	9.22	419.96	10	423.06	10.14	428.23	12.33
429.75	12.65	438.56	18.78	442.64	18.26	446.13	17.79	450.79	17.94
458.95	18.16	462.93	18.29	467.1	18.26	475.26	18.14	479.57	18.08
483.41	18.1	491.57	18.19	499.73	18.29	514.54	18.43	537.24	18.69
556.91	19.09	564.63	19.81	581.28	19.92				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
339.44	.125	395.32	.04	438.56	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	395.32	438.56		169	169		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 52557

INPUT

Description: Copy of SELA 9.954\*

Station Elevation Data num= 33

ExpandedLocal.rep

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
259.16	19.88	287.69	17.6	294.12	17.41	316.22	17.18	329.08	17.14
330.48	16.72	343.51	11.59	346.15	11	354.81	9.32	356.54	9.2
356.54	8.68	356.94	8.68	356.94	9.2	360.01	9.39	365.12	12.65
366.62	13.13	375.34	18.72	378.96	17.89	382.05	17.16	386.19	17.36
393.42	17.68	396.95	17.86	400.66	17.79	407.89	17.61	411.72	17.52
415.12	17.55	422.36	17.64	429.59	17.74	442.72	17.88	462.86	18.19
480.31	18.73	487.15	19.77	501.92	19.88				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
259.16	.125	330.48	.04	375.34	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	330.48	375.34		169	169	169		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 52388

INPUT  
 Description: Copy of SELA 9.922\*  
 Station Elevation Data num= 33

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
178.88	19.24	213.58	17.57	221.41	17.36	248.29	17.18	263.94	17.12
265.64	16.56	279.68	11.58	282.53	10.8	291.85	8.56	293.72	8.4
293.72	8.14	293.92	8.14	293.92	8.4	296.95	8.65	302.01	12.98
303.5	13.6	312.12	18.66	315.28	17.52	317.98	16.53	321.59	16.78
327.9	17.21	330.98	17.43	334.21	17.32	340.52	17.08	343.86	16.96
346.83	17	353.14	17.09	359.45	17.18	370.91	17.34	388.48	17.7
403.7	18.36	409.68	19.74	422.56	19.84				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
178.88	.125	265.64	.04	312.12	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	265.64	312.12		169	169	169		.1	.3

CROSS SECTION

ExpandedLocal.rep

RIVER: W14 Main  
REACH: Upper

RS: 52219

INPUT

Description: Copy of SELA 9.89

Station Elevation Data num= 18

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
98.6	18.6	148.7	17.3	198.8	17.1	200.8	16.4	218.9	10.6
228.9	7.8	230.9	7.6	233.9	7.9	238.9	13.3	248.9	18.6
253.9	15.9	265	17	276	16.4	299.1	16.8	314.1	17.2
327.1	18	332.2	19.7	343.2	19.8				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
98.6	.125	200.8	.04	248.9	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	200.8	248.9		282	282		.1	.3

CROSS SECTION

RIVER: W14 Main  
REACH: Upper

RS: 51937

INPUT

Description: Copy of SELA 9.8365\*

Station Elevation Data num= 31

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
60	16.92	142.25	16.78	190.71	16.66	199.84	16.59	204.65	16.62
209.2	16.48	213.84	16.31	218.52	16.09	220.4	16.05	237.49	9.9
240.29	8.99	246.93	7.29	248.82	7.1	251.87	7.39	253.4	8.77
256.96	12.34	267.15	17.98	272.15	15.68	279.16	16.2	283.25	16.59
294.25	16.23	296.18	16.28	317.29	16.37	317.34	16.37	332.34	16.62
335.41	16.76	343.32	17.4	345.34	17.63	350.44	19.37	351.42	19.44
361.43	19.53								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
60	.125	220.4	.04	267.15	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	220.4	267.15		283	283		.1	.3

ExpandedLocal.rep

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 51654

INPUT

Description: Copy of SELA 9.783\*

Station Elevation Data num= 31

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
57.7	16.53	93.62	16.42	184.39	16.2	201.49	16.07	210.49	16.14
219.02	16.07	227.71	15.93	236.47	15.69	240	15.7	256.08	9.2
258.71	8.21	264.96	6.77	266.73	6.6	269.84	6.89	271.4	8.01
275.03	11.39	285.4	17.37	290.4	15.47	297.41	15.8	301.49	16.17
312.49	16.05	314.42	16.12	335.54	15.93	335.58	15.93	350.58	16.03
353.65	16.13	361.55	16.92	363.57	17.26	368.67	19.04	369.66	19.17
379.67	19.27								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
57.7	.125	240	.04	285.4	.125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 240 285.4 282 282 282 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 51372

INPUT

Description: Copy of SELA 9.7295\*

Station Elevation Data num= 30

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
44.99	16.07	178.07	15.75	203.15	15.55	216.34	15.65	228.84	15.65
241.58	15.55	254.43	15.29	259.6	15.35	274.66	8.5	277.14	7.43
282.99	6.26	284.65	6.1	287.82	6.38	289.4	7.26	293.09	10.43
303.65	16.75	308.65	15.25	315.66	15.4	319.74	15.76	330.74	15.88
332.67	15.97	353.78	15.5	353.82	15.5	368.82	15.45	371.89	15.49
379.79	16.44	381.81	16.89	386.91	18.71	387.89	18.9	397.9	19

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

ExpandedLocal.rep

44.99 .125 259.6 .04 303.65 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
259.6 303.65 283 283 283 .1 .3

CROSS SECTION

RIVER: W14 Main  
REACH: Upper RS: 51089

INPUT

Description: Copy of SELA 9.67600\*

Station Elevation Data num= 30

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
140	15.71	171.74	15.3	204.8	15.03	222.18	15.17	238.66	15.23
255.46	15.16	272.39	14.89	279.2	15	293.25	7.8	295.56	6.66
301.01	5.74	302.57	5.6	305.79	5.88	307.4	6.51	311.16	9.48
321.9	16.13	326.9	15.04	333.9	15	337.99	15.34	348.98	15.7
350.91	15.81	372.02	15.07	372.06	15.07	387.05	14.87	390.12	14.86
398.03	15.96	400.04	16.51	405.14	18.38	406.13	18.64	416.13	18.73

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
140	.125	279.2	.04	321.9	.125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
279.2 321.9 282 282 282 .1 .3

CROSS SECTION

RIVER: W14 Main  
REACH: Upper RS: 50807

INPUT

Description: Copy of SELA 9.6225\*

Station Elevation Data num= 30

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
158	15.36	165.42	14.85	206.45	14.52	228.03	14.69	248.48	14.82
269.33	14.78	290.34	14.5	298.8	14.65	311.84	7.1	313.98	5.88
319.04	5.23	320.48	5.1	323.76	5.37	325.4	5.75	329.22	8.52
340.15	15.52	345.15	14.82	352.15	14.6	356.24	14.93	367.23	15.53
369.16	15.66	390.26	14.63	390.31	14.63	405.29	14.28	408.36	14.23
416.26	15.48	418.28	16.14	423.38	18.05	424.36	18.37	434.37	18.47

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 158 .125 298.8 .04 340.15 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 298.8 340.15 283 283 283 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 50524

INPUT

Description: Copy of SELA 9.569

Station Elevation Data num= 18  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 130 15 159.1 14.4 208.1 14 258.3 14.4 283.2 14.4  
 308.3 14.1 318.4 14.3 332.4 5.1 338.4 4.6 343.4 5  
 358.4 14.9 370.4 14.2 387.4 15.5 408.5 14.2 426.6 13.6  
 434.5 15 442.6 18.1 452.6 18.2

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 130 .125 318.4 .04 358.4 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 318.4 358.4 289 289 289 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 50235

INPUT

Description: Copy of SELA 9.5142\*

Station Elevation Data num= 31  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 14.81 13.86 14.66 196.62 14.24 244.76 13.9 294.08 14.2  
 318.54 14.19 343.2 13.94 353.12 14.1 361.12 9.63 367.12 5  
 367.22 4.97 373.12 4.52 378.12 4.93 380.09 6 393.14 14.64  
 401.13 14.47 405.11 14.26 411.24 14.62 421.35 15.22 422.06 15.26

ExpandedLocal.rep

431.46	14.8	441.68	14.31	443.1	14.25	451.69	14.07	461.15	13.8
461.8	13.89	469.03	14.89	471.91	15.76	477.11	17.41	482.02	17.5
487.08	18.02								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
0	.125	353.12	.04	393.14	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	353.12	393.14		289	289		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 49946

INPUT

Description: Copy of SELA 9.4594\*

Station Elevation Data num= 31

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
-16.73	14.61	54.65	14.5	234.14	14.09	281.41	13.81	329.85	14.01
353.88	13.99	378.09	13.79	387.84	13.9	395.84	10.23	401.84	4.91
401.94	4.85	407.84	4.44	412.85	4.85	414.82	5.7	427.88	14.38
435.85	14.5	439.81	14.33	445.93	14.56	456.01	14.99	456.72	15.02
466.1	14.67	476.28	14.33	477.7	14.3	486.27	14.23	495.7	14
496.35	14.07	503.56	14.78	506.43	15.42	511.62	16.72	516.52	16.85
521.56	17.84								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
-16.73	.125	387.84	.04	427.88	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	387.84	427.88		290	290		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 49656

INPUT

Description: Copy of 9.4046\*

Station Elevation Data num= 31

ExpandedLocal.rep

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
25.35	14.42	95.43	14.33	271.65	13.93	318.07	13.71	365.63	13.81
389.21	13.78	412.99	13.63	422.56	13.7	430.56	10.82	436.56	4.81
436.66	4.74	442.56	4.36	447.58	4.78	449.55	5.4	462.62	14.12
470.56	14.53	474.52	14.39	480.62	14.51	490.68	14.76	491.38	14.78
500.73	14.55	510.89	14.36	512.31	14.35	520.84	14.39	530.26	14.2
530.9	14.25	538.09	14.67	540.96	15.08	546.12	16.03	551.01	16.2
556.04	17.66								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
25.35	.125	422.56	.04	462.62	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	422.56	462.62		289	289		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 49367

INPUT  
 Description: Copy of SELA 9.3498\*  
 Station Elevation Data num= 31

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
67.44	14.23	136.22	14.17	309.17	13.78	354.73	13.62	401.4	13.62
424.55	13.58	447.89	13.48	457.28	13.5	465.28	11.41	471.28	4.72
471.38	4.62	477.28	4.28	482.3	4.7	484.27	5.1	497.36	13.86
505.28	14.57	509.23	14.46	515.31	14.45	525.34	14.53	526.04	14.54
535.37	14.42	545.49	14.38	546.91	14.39	555.42	14.54	564.81	14.41
565.45	14.42	572.62	14.57	575.48	14.74	580.63	15.35	585.51	15.55
590.52	17.48								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
67.44	.125	457.28	.04	497.36	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	457.28	497.36		289	289		.1	.3

CROSS SECTION



ExpandedLocal.rep

RIVER: W14 Main  
 REACH: Upper RS: 49078

INPUT

Description: Copy of SELA 9.295

Station Elevation Data num= 18

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
100	15	177	14	492	13.3	500	12	506.1	4.5
512	4.2	519	4.8	532.1	13.6	540	14.6	550	14.4
560	14.3	570	14.3	580.1	14.4	590	14.7	600	14.6
610	14.4	620	14.9	625	17.3				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
100	.125	492	.04	532.1	.125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

492	532.1	16	16	16	.1	.3
-----	-------	----	----	----	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
100	470	15.43	F
540	625	15.43	F

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 49062

INPUT

Description: Copy from SELA 9.292

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	15.43	.1	14.2	2.68	9.2	9.5	4.7	18.5	4.19
18.51	4.19	19.5	4.14	19.51	4.13	20.12	4.1	30.23	5.1
35.5	10.2	37.9	14.1	38	15.43	44	14.1		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	0	.04	38	.125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

0	38	69	69	69	.1	.3
---	----	----	----	----	----	----

ExpandedLocal.rep

BRIDGE

RIVER: W14 Main  
 REACH: Upper RS: 49060

INPUT

Description: North Blvd  
 Distance from Upstream XS = 5.5  
 Deck/Roadway Width = 58  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 2

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
0	15.43	14.17	38	15.43	14.17

Upstream Bridge Cross Section Data

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	15.43	.1	14.2	2.68	9.2	9.5	4.7	18.5	4.19
18.51	4.19	19.5	4.14	19.51	4.13	20.12	4.1	30.23	5.1
35.5	10.2	37.9	14.1	38	15.43	44	14.1		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	0	.04	38	.125

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	0	38	.1		.3

Downstream Deck/Roadway Coordinates

num= 2

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
0	15.43	14.17	38	15.43	14.17

Downstream Bridge Cross Section Data

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	15.43	.1	14.2	2.68	9.2	9.5	4.7	18.5	4.19
18.51	4.19	19.5	4.14	19.51	4.13	20.12	4.1	30.23	5.1
35.5	10.2	37.9	14.1	38	15.43	44	14.1		

Manning's n Values num= 3

ExpandedLocal.rep

Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
0	.125	0	.04	38	.125

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	0	38		.1	.3

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
Maximum allowable submergence for weir flow = .98  
Elevation at which weir flow begins =  
Energy head used in spillway design =  
Spillway height used in design =  
Weir crest shape = Broad Crested

Number of Piers = 1

Pier Data

Pier Station Upstream= 19 Downstream= 19

Upstream num= 2

Width	Elev	Width	Elev
*****	*****	*****	*****
1	13	1	14.17

Downstream num= 2

Width	Elev	Width	Elev
*****	*****	*****	*****
1	13	1	14.17

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main

ExpandedLocal.rep

REACH: Upper

RS: 48993

INPUT

Description: Copy of 9.279

Station Elevation Data

num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	15.43	.1	14.2	2.68	9.2	9.5	4.7	18.5	4.19
18.51	4.19	19.5	4.14	19.51	4.13	20.12	4.1	30.23	5.1
35.5	10.2	37.9	14.1	38	15.43	44	14.1		

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	0	.04	38	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	0	38		42	42		.1	.3

CROSS SECTION

RIVER: W14 Main

REACH: Upper

RS: 48951

INPUT

Description: Copy of SELA 9.271

Station Elevation Data

num= 20

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
529.7	15	536.6	13.96	539.6	10.6	546.6	4.6	552.6	4.2
557.6	5.1	563.5	11.5	566.6	13.96	573.5	15.2	581.5	14.1
590.4	13.9	600.4	14.1	610.4	14.3	620.3	14.4	630.4	14.8
640.4	15.2	650.3	16.6	660.3	17.5	667.3	17.9	670.3	18

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
529.7	.125	536.6	.04	566.6	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	536.6	566.6		360	360		.1	.3

CROSS SECTION

RIVER: W14 Main

REACH: Upper

RS: 48591

ExpandedLocal.rep

INPUT

Description: Data from Survey

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	12.8	12	14.4	20	16.2	26	16.2	33	13.9
44	12.3	49	8.4	53	4	60	3.4	67	4
74	6.4	93	7	116	6.6				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	49	.04	74	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	49	74		179	179		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 48412

INPUT

Description: Copy of SELA 9.169

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
215.6	18.7	222.6	14.7	227.6	14.5	233	13.3	239.6	4.8
247.6	4.6	255.6	4.6	263	13.3	269.6	13.4	293.6	15.6
307.7	10	314.6	9.5	326.6	11.7	343.6	11.3	351.6	13.5
363.6	17.1								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
215.6	.125	233	.04	263	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	233	263		111	111		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 48301

ExpandedLocal.rep

INPUT

Description: Copy of SELA 9.148

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
215.6	18.7	222.6	14.7	227.6	14.5	233	13.4	239.6	4.8
247.6	4.6	255.6	4.6	263	13.4	269.6	13.4	293.6	15.6
307.7	10	314.6	9.5	326.6	11.7	343.6	11.3	351.6	13.5
363.6	17.1								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
215.6	.125	233	.04	263	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	233	263		0	0		.1	.3

CROSS SECTION

RIVER: W14 Main

REACH: Mid RS: 48154

INPUT

Description: Data from survey

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	12.4	27	12.5	46	11.9	53	7.9	55	4.2
62	3.5	66	4.2	71	9.6	80	13	94	12.3
111	12								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	46	.035	80	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	46	80		407	407		.1	.3

CROSS SECTION

RIVER: W14 Main

REACH: Mid RS: 47747

INPUT

ExpandedLocal.rep

Description: Copy of SELA 9.147

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
215.6	18.7	222.6	14.7	227.6	14.5	233	13.4	239.6	4.8
247.6	4.6	255.6	4.6	263	13.4	269.6	13.4	293.6	15.6
307.7	10	314.6	9.5	326.6	11.7	343.6	11.3	351.6	13.5
363.6	17.1								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
215.6	.125	233	.035	263	.125

Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	233	263	143	143	143		.1	.3

CROSS SECTION

RIVER: W14 Main

REACH: Mid

RS: 47604

INPUT

Description: Copy of SELA 9.116

Station Elevation Data num= 104

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1128	14.505	-1124.36	14.558	-1108.95	14.632	-1089.99	14.738	-1059.56	14.645
-1021.25	14.546	-1004.17	14.386	-986.888	14.181	-972.489	13.944	-949.416	13.557
-925.586	13.12	-918.151	13.091	-887.84	13.469	-849.415	13.779	-847.001	13.778
-839.266	13.759	-820.806	13.724	-815.047	13.701	-782.028	13.371	-746.31	13.014
-742.221	12.977	-729.115	12.858	-711.942	12.716	-708.768	12.688	-683.439	12.366
-643.206	11.913	-633.891	11.963	-595.339	12.164	-574.469	12.071	-565.609	12.086
-540.101	12.27	-532.661	12.22	-508.815	12.038	-506.466	12.035	-505.733	12.035
-476.419	12.35	-471.364	12.372	-464.442	12.403	-456.523	12.401	-436.79	12.406
-417.143	12.748	-402.058	12.823	-387.551	12.912	-367.326	12.984	-357.96	13.025
-304.043	13.244	-297.862	13.264	-273.679	13.36	-263.13	13.39	-247.902	13.404
-228.398	13.399	-222.126	13.388	-204.074	13.377	-158.934	13.262	-144.796	13.215
-107.41	13.002	-89.47	12.921	-67.467	12.88	-28.455	12.668	-20.006	12.622
-13.499	12.557	-4.135	12.492	35.64	12.177	49.458	12.109	68.472	12.134
95.834	12.249	109.457	12.297	118.922	12.385	119.373	12.382	140.106	12.214
152.509	11.985	178.28	10.808	188	13.4	200	13.3	204	12.8
213	4.8	218	4.1	224	4.5	234	12.8	262	15.3
278	11	299	10.7	308	11.9	320	11.9	333.209	11.72
336.307	11.711	355.693	11.633	358.126	11.63	366.591	11.462	399.668	10.911
409.178	10.967	432.25	11.558	461.548	11.744	497.351	11.933	516.148	12.357
522.015	12.408	552.627	13.018	565.836	13.274	567.496	13.364	569.633	13.483

ExpandedLocal.rep

590.877 14.54 597.144 14.638 603.361 14.578 612.7 14.167

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1128 .125 204 .035 234 .085

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 204 234 326 326 326 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 262 612.7 15.3 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 47278

INPUT

Description: Copy of SELA 9.046  
 Station Elevation Data num= 117  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1127 14.773-1122.54 14.764-1106.13 14.72-1082.11 14.625-1070.94 14.445  
 -1061.24 14.222-1035.75 13.703 -1006.4 13.232-1000.55 13.278-995.483 13.295  
 -957.842 13.324-929.725 13.488-906.311 13.63-892.832 13.708-882.286 13.681  
 -863.966 13.67 -858.26 13.662-854.976 13.661-834.235 13.54-753.559 12.965  
 -741.406 12.872-738.133 12.843-732.449 12.776-701.419 12.423 -666.69 12.164  
 -666.057 12.152 -664.34 12.173-621.823 12.685-600.932 12.045 -589.98 11.94  
 -575.12 12.211 -545.93 12.911-535.173 12.948-521.905 12.994-514.266 12.979  
 -485.901 12.912-473.854 12.883-469.414 12.865-445.451 12.71-438.553 12.715  
 -416.056 12.557-400.697 12.326-372.922 12.082-353.727 11.927-337.897 11.922  
 -327.87 11.983-319.764 12.049-287.127 12.23-266.606 12.344 -249.27 12.371  
 -213.448 12.566-211.414 12.581-210.289 12.589 -206.38 12.601-185.549 12.659  
 -140.621 12.688-138.334 12.686 -136.8 12.68 -82.746 12.59 -70.816 12.57  
 -57.633 12.608 -42.54 12.499 -23.388 12.192 -19.178 12.058 -15.861 11.942  
 4.183 11.091 25.912 9.671 50.906 6.326 67.684 7.41 74.267 8.24  
 82.619 8.776 120.99 10.964 135.623 10.965 144.351 11.055 151.229 11.096  
 163 13.5 188 13.4 200 13.3 204 12.8 213 4.8  
 218 4.1 224 4.5 234 12.8 242 13.1 259.752 11.461  
 274.317 11.525 296.133 11.492 335.148 11.833 343.504 11.834 363.863 11.85  
 378.371 11.928 395.98 11.919 420.453 11.944 436.534 11.939 443.889 11.952  
 448.105 11.972 463.642 12.043 488.216 12.127 517.371 12.219 517.715 12.219  
 517.838 12.22 518.101 12.22 562.094 12.203 587.572 12.198 591.645 12.217  
 614.289 12.091 620.283 12.054 627.018 11.978 657.306 11.916 679.86 12.142  
 711.207 12.878 720.414 13.131 724.626 13.208 727.039 13.238 767.653 14.133  
 782.622 14.469 794.705 14.42



ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1127 .125 204 .035 234 .085

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 204 234 206 206 206 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 242 794.705 13.1 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 47072

INPUT

Description: Data from Survey

Station Elevation Data num= 118  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1127 14.773-1122.54 14.764-1106.13 14.72-1082.11 14.625-1070.94 14.445  
 -1061.24 14.222-1035.75 13.703 -1006.4 13.232-1000.55 13.278-995.483 13.295  
 -957.842 13.324-929.725 13.488-906.311 13.63-892.832 13.708-882.286 13.681  
 -863.966 13.67 -858.26 13.662-854.976 13.661-834.235 13.54-753.559 12.965  
 -741.406 12.872-738.133 12.843-732.449 12.776-701.419 12.423 -666.69 12.164  
 -666.057 12.152 -664.34 12.173-621.823 12.685-600.932 12.045 -589.98 11.94  
 -575.12 12.211 -545.93 12.911-535.173 12.948-521.905 12.994-514.266 12.979  
 -485.901 12.912-473.854 12.883-469.414 12.865-445.451 12.71-438.553 12.715  
 -416.056 12.557-400.697 12.326-372.922 12.082-353.727 11.927-337.897 11.922  
 -327.87 11.983-319.764 12.049-287.127 12.23-266.606 12.344 -249.27 12.371  
 -213.448 12.566-211.414 12.581-210.289 12.589 -206.38 12.601-185.549 12.659  
 -140.621 12.688-138.334 12.686 -136.8 12.68 -82.746 12.59 -70.816 12.57  
 -57.633 12.608 -42.54 12.499 -23.388 12.192 -19.178 12.058 -15.861 11.942  
 19 11.5 33 11.2 38 6.5 40 3.2 46 2.9  
 50 3.2 52 5.8 65 14.7 78 14.8 91 14.8  
 120.99 10.964 135.623 10.965 144.351 11.055 151.229 11.096 167.712 11.222  
 188.627 10.765 214.435 10.685 234.774 11.148 237.796 11.201 241.631 11.321  
 259.752 11.461 274.317 11.525 296.133 11.492 335.148 11.833 343.504 11.834  
 363.863 11.85 378.371 11.928 395.98 11.919 420.453 11.944 436.534 11.939  
 443.889 11.952 448.105 11.972 463.642 12.043 488.216 12.127 517.371 12.219  
 517.715 12.219 517.838 12.22 518.101 12.22 562.094 12.203 587.572 12.198  
 591.645 12.217 614.289 12.091 620.283 12.054 627.018 11.978 657.306 11.916  
 679.86 12.142 711.207 12.878 720.414 13.131 724.626 13.208 727.039 13.238  
 767.653 14.133 782.622 14.469 794.705 14.42

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1127 .125 33 .035 65 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 33 65 841 841 841 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 91 794.705 14.8 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 46231

INPUT

Description: Copy of SELA 8.82066\*

Station Elevation Data num= 109  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1140 14.802-1100.72 14.922-1100.37 14.923-1100.14 14.924-1099.01 14.926  
 -1066.87 14.927-1014.64 14.76-969.793 14.585-963.598 14.571-936.673 14.485  
 -933.232 14.463-932.877 14.464-930.209 14.451-882.691 14.153-851.615 13.952  
 -831.48 13.857 -825.04 13.812-776.712 13.351-763.284 13.27-736.993 13.271  
 -718.742 13.274-695.089 13.254-692.167 13.244-681.845 13.211-665.592 13.13  
 -660.992 13.119-652.757 13.066-626.894 12.872-618.773 12.839-592.796 12.843  
 -561.396 12.758-558.699 12.768-532.719 13.146-518.534 13.147-490.503 13.207  
 -469.424 13.238-456.406 13.279-439.554 13.312-422.308 13.395-399.375 13.544  
 -373.271 13.732-354.113 13.851-346.697 13.884-320.498 14.054-320.015 14.056  
 -317.313 14.035-295.105 13.856 -284.22 13.79-255.715 13.317-245.439 13.225  
 -239.092 13.239-212.338 13.349-195.774 13.403-176.396 13.46-158.334 13.426  
 -140.455 13.35 -109.09 13.23 -99.741 13.171 -92.183 13.135 -78.399 13.053  
 -32.631 12.774 -16.303 12.785 17.747 12.701 40.606 12.749 75.193 12.838  
 77.387 12.822 82.293 12.784 102.22 12.64 111.134 12.629 134.478 12.348  
 147.075 12.161 151.886 11.835 161.64 13.18 186.55 13.1 198.5 13.03  
 202 12.78 210.7 5.36 213.19 4.44 214.77 4.34 218.83 3.1  
 221.87 5.06 223.96 5.35 232 12.78 235.91 12.7 238.58 13.03  
 242.985 9.607 252.722 9.815 264.542 10.198 290.84 11.468 300.883 11.484  
 323.332 11.8 325.715 11.845 327.776 11.864 356.084 12.007 397.22 12.226  
 398.664 12.228 400.214 12.228 434.606 12.275 441.863 12.275 449.655 12.277  
 471.789 12.276 473.794 12.278 477.418 12.278 502.379 12.252 509.286 12.249  
 546.21 12.225 546.783 12.226 559.583 12.25 573 12.275

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*

ExpandedLocal.rep

-1140 .125 202 .035 232 .06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	202	232		261	261	.1	.3
Ineffective Flow	num=		1				
Sta L	Sta R	Elev	Permanent				
238.58	573	13.03	F				

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 45970

INPUT

Description: Copy of SELA 8.76433\*

Station Elevation Data num= 111

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-1140	14.802	-1100.72	14.922	-1100.37	14.923	-1100.14	14.924	-1099.01	14.926
-1066.87	14.927	-1014.64	14.76	-969.793	14.585	-963.598	14.571	-936.673	14.485
-933.232	14.463	-932.877	14.464	-930.209	14.451	-882.691	14.153	-851.615	13.952
-831.48	13.857	-825.04	13.812	-776.712	13.351	-763.284	13.27	-736.993	13.271
-718.742	13.274	-695.089	13.254	-692.167	13.244	-681.845	13.211	-665.592	13.13
-660.992	13.119	-652.757	13.066	-626.894	12.872	-618.773	12.839	-592.796	12.843
-561.396	12.758	-558.699	12.768	-532.719	13.146	-518.534	13.147	-490.503	13.207
-469.424	13.238	-456.406	13.279	-439.554	13.312	-422.308	13.395	-399.375	13.544
-373.271	13.732	-354.113	13.851	-346.697	13.884	-320.498	14.054	-320.015	14.056
-317.313	14.035	-295.105	13.856	-284.22	13.79	-255.715	13.317	-245.439	13.225
-239.092	13.239	-212.338	13.349	-195.774	13.403	-176.396	13.46	-158.334	13.426
-140.455	13.35	-109.09	13.23	-99.741	13.171	-92.183	13.135	-78.399	13.053
-32.631	12.774	-16.303	12.785	17.747	12.701	40.606	12.749	75.193	12.838
77.387	12.822	82.293	12.784	102.22	12.64	111.134	12.629	134.478	12.348
147.075	12.161	151.886	11.835	160.28	12.86	185.09	12.81	197	12.77
200	12.75	201.44	12.13	210.6	4.48	213.37	4.08	215.13	4.07
219.67	2.1	222.19	5.78	223.91	6.2	229.74	9.02	230	12.72
233.83	12.8	235.16	12.97	242.985	9.607	252.722	9.815	264.542	10.198
290.84	11.468	300.883	11.484	323.332	11.8	325.715	11.845	327.776	11.864
356.084	12.007	397.22	12.226	398.664	12.228	400.214	12.228	434.606	12.275
441.863	12.275	449.655	12.277	471.789	12.276	473.794	12.278	477.418	12.278
502.379	12.252	509.286	12.249	546.21	12.225	546.783	12.226	559.583	12.25
573	12.275								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1140	.125	200	.035	230	.06

ExpandedLocal.rep

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
200	230	339	339	339		.1	.3
Ineffective Flow		num=	1				
Sta L	Sta R	Elev	Permanent				
235.16	573	12.97	F				

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 45631

INPUT

Description: data from survey

Station Elevation Data	num=	86							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-1301	14.802	-1261.72	14.922	-1261.37	14.923	-1261.14	14.924	-1260.01	14.926
-1227.87	14.927	-1175.64	14.76	-1130.79	14.585	-1124.59	14.571	-1097.67	14.485
-1094.23	14.463	-1093.87	14.464	-1091.2	14.451	-1043.69	14.153	-1012.61	13.952
-992.48	13.857	-986.04	13.812	-937.712	13.351	-924.284	13.27	-897.993	13.271
-879.742	13.274	-856.089	13.254	-853.167	13.244	-842.845	13.211	-826.592	13.13
-821.992	13.119	-813.757	13.066	-787.894	12.872	-779.773	12.839	-753.796	12.843
-722.396	12.758	-719.699	12.768	-693.719	13.146	-679.534	13.147	-651.503	13.207
-630.424	13.238	-617.406	13.279	-600.554	13.312	-583.308	13.395	-560.375	13.544
-534.271	13.732	-515.113	13.851	-507.697	13.884	-481.498	14.054	-481.015	14.056
-478.313	14.035	-456.105	13.856	-445.22	13.79	-416.715	13.317	-406.439	13.225
-400.092	13.239	-373.338	13.349	-356.774	13.403	-337.396	13.46	-319.334	13.426
-301.455	13.35	-270.09	13.23	-260.741	13.171	-253.183	13.135	-239.399	13.053
-193.631	12.774	-177.303	12.785	-143.253	12.701	-120.394	12.749	-85.807	12.838
-83.613	12.822	-78.707	12.784	-58.78	12.64	-49.866	12.629	-26.522	12.348
-13.925	12.161	-9.114	11.835	17	13.1	34	12.3	43	11.4
49	7.1	50	3.3	56	3.1	63	2.9	66	8.3
75	14.3	93	15.6	117	20	168	4.5	1210	4.5
1261	20								

Manning's n Values	num=	3			
Sta	n Val	Sta	n Val	Sta	n Val
*****					
-1301	.125	43	.035	117	.03

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
43	117	170	170	170		.1	.3
Ineffective Flow		num=	1				
Sta L	Sta R	Elev	Permanent				
117	1261	20	T				

CROSS SECTION

ExpandedLocal.rep

RIVER: W14 Main  
 REACH: Mid RS: 45461

INPUT

Description: Copy of SELA 8.655  
 Pond added from Lidar and Pond Plans

Station Elevation Data num= 94

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1191	15.119	-1186.33	15.112	-1148.29	15.147	-1131.32	15.049	-1118.69	14.956
-1103.53	14.816	-1093.35	14.677	-1060.98	13.779	-1038.41	12.949	-1037.3	12.96
-1036.89	12.965	-1007.49	13.403	-990.647	13.581	-928.53	14.235	-920.308	14.226
-914.186	14.285	-896.861	14.481	-873.588	14.69	-873.414	14.69	-872.403	14.69
-854.398	14.69	-827.932	14.69	-826.774	14.689	-825.737	14.689	-795.588	14.55
-778.758	14.479	-764.03	14.393	-737.647	14.265	-729.585	14.166	-693.602	13.748
-664.135	12.992	-649.557	12.971	-637.8	13.267	-598.259	13.399	-590.464	13.417
-582.064	13.457	-558.907	13.631	-532.891	13.771	-524.731	13.849	-517.422	13.88
-495.792	13.945	-441.129	14.078	-434.544	14.096	-431.795	14.091	-429.332	14.096
-416.745	14.055	-407.436	14.03	-394.926	14.138	-371.995	13.901	-354.582	13.818
-333.679	13.66	-327.447	13.599	-326.531	13.59	-297.633	13.325	-292.334	13.304
-275.114	13.026	-258.137	12.834	-226.674	12.345	-223.94	12.303	-222.448	12.292
-217.375	12.336	-196.021	12.623	-189.743	12.672	-163.47	12.81	-155.545	12.861
-129.793	13.045	-121.348	13.112	-113.84	13.163	-101.072	13.209	-70.772	13.33
-52.954	13.362	-37.461	13.314	-18.757	13.276	-4.569	13.226	41.82	12.807
49.638	12.734	63.968	12.723	83.835	12.897	101.498	12.887	131.535	12.961
144.566	13.013	152.229	13.025	173.954	12.704	195.5	12.5	200.4	12.7
210.5	3.6	215.5	3.8	220.5	1.1	222.5	6.5	228.5	8.9
234.5	20	281	4.5	1323	4.5	1369	20		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1191	.125	195.5	.035	234.5	.03

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	195.5	234.5		338	338	.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
234.5	1369	20	T

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 45123

ExpandedLocal.rep

INPUT

Description: Copy of SELA 8.582

Station Elevation Data

num= 85

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1021	15.542	999.193	15.578	986.024	15.427	926.064	15.13	910.402	14.962
-895.474	14.602	869.846	13.88	853.504	13.457	834.464	13.129	804.666	14.123
-799.503	14.282	796.495	14.393	785.094	14.429	751.518	14.628	739.486	14.603
-724.827	14.513	720.557	14.455	695.422	14.2	682.588	14.186	659.206	13.961
-644.619	13.869	631.554	13.726	609.126	13.403	607.209	13.408	606.65	13.407
-577.804	13.31	544.194	13.219	537.601	13.196	531.091	13.182	501.242	13.785
-472.262	14.05	464.884	14.134	457.284	14.201	438.017	14.334	420.381	14.422
-410.346	14.433	400.604	14.436	373.988	14.461	346.574	14.467	316.223	14.322
-309.671	14.321	283.092	13.945	257.286	13.233	246.733	12.985	235.864	12.796
-213.119	13.362	194.428	13.789	185.627	13.943	162.058	14.221	137.032	14.285
-131.386	14.286	127.804	14.282	120.49	14.245	88.898	14.079	67.586	14.041
-54.719	13.974	41.134	13.861	20.539	13.502	14.682	13.302	5.363	12.564
13.641	12.3	17.058	12.289	25.278	12.458	87.144	13.396	96.884	13.319
122.354	13.438	150.361	13.287	170.48	10.94	184.54	8.461	189.2	12.7
200.3	12.5	201	11.82	211.3	4.3	217.3	4	218	1.2
219	1.2	221.3	4.8	223.3	8.3	227.3	11.3	231	11.82
240.4	15	260.4	20	311	4.5	1484	4.5	1535	20

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1021	.125	201	.035	260.4	.03

Bank Sta: Left 201 Right 260.4 Lengths: Left Channel 404 Right 404 Coeff Contr. .1 Expan. .3

Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 260.4 1535 20 T

CROSS SECTION

RIVER: W14 Main

REACH: Mid

RS: 44719

INPUT

Description: Copy of SELA 8.495

Station Elevation Data

num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1681	16.181	1678.92	16.184	1676.65	16.178	1641.22	16.047	1619.77	15.879
-1604.67	15.793	1580.87	15.563	1532.42	14.179	1531.56	14.161	1507.33	14.061
-1458.89	15.302	1458.46	15.313	1458.01	15.317	1421.9	15.415	1409.28	15.476

ExpandedLocal.rep

-1385.35	15.393-1384.77	15.391	-1383.6	15.38-1312.24	14.784-1311.24	14.776			
-1309.18	14.775-1299.96	14.772	-1286.17	14.765-1276.73	14.838	-1268.8	14.927		
-1209.58	15.08-1206.77	15.044	-1184.04	14.827-1145.11	13.671	-1136.8	13.438		
-1132.98	13.389-1122.66	13.619	-1090.58	14.244-1075.55	14.397	-1034.02	14.764		
-1031.85	14.765-1030.85	14.769	-1028.15	14.763-1005.31	14.626	-996.866	14.66		
-969.972	14.598-942.712	14.577	-926.898	14.605-913.959	14.596	-913.191	14.596		
-889.296	14.552-876.307	14.489	-866.323	14.443-832.815	14.362	-811.019	14.157		
-808.269	14.119-806.155	14.083	-774.249	13.526-745.986	12.992	-732.741	12.749		
-685.818	13.642-666.821	13.833	-639.351	14.471-615.325	14.647	-595.681	14.722		
-576.186	14.917-571.967	14.922	-565.481	14.904-545.338	14.877	-524.334	14.842		
-510.303	14.826-482.468	14.59	-461.004	14.451-428.542	13.904	-400.748	13.115		
-384.746	12.642	-378.77	12.762	-373.724	12.874	-343.858	13.592	-308.488	14.37
-284.854	14.664-270.359	14.839	-260.906	14.848-248.983	14.79	-246.53	14.778		
-225.878	14.743-190.835	14.703	-152.055	14.713-129.202	14.712	-101.945	14.741		
-94.757	14.709	-90.093	14.692	-71.038	14.529	-50.984	14.536	-45.723	14.527
-4.408	13.075	18.608	12.189	23.84	12.091	43.173	12.123	66.343	12.162
71.278	12.18	78.884	12.185	98.945	12.398	105.452	12.531	107.439	12.547
130.292	12.935	156.299	13.134	162.374	13.269	172.424	13.512	189.2	12.7
193.5	11.82	200.3	12.5	211.3	4.3	217.3	4	218	1.3
219	1.3	221.3	4.8	223.3	8.3	227.3	11.3	233.41	13.02
281.086	15.592	311.037	20	362	4.5	1535	4.5	1586	20

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1681	.125	200.3	.035	311.037	.03

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	200.3	311.037		275	275	275		.1	.3
Ineffective Flow			num=	1					
Sta L	Sta R	Elev	Permanent						
311.037	1586	20	T						

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 44444

INPUT

Description: Copy of SELA 8.436

Station Elevation Data num= 119

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1333	15.701-1325.03	15.648	-1314.67	15.512	-1282.04	15.144	-1268.11	14.877	
-1251.67	14.696-1244.84	14.644	-1239.05	14.669	-1221.56	14.878	-1200.9	15.11	
-1198.28	15.133-1169.37	15.252	-1153.07	15.326	-1151.72	15.331	-1150.12	15.328	
-1121.99	15.28-1110.09	15.193	-1081.88	15.06	-1067.1	15.006	-1055.45	14.977	

ExpandedLocal.rep

-1048.57	14.978-1012.05	14.966-997.805	14.971-965.494	14.976-947.031	14.974
-942.215	14.995-938.138	14.999-911.807	15.091-880.378	15.187-852.162	15.206
-849.1	15.215-845.483	15.216-816.041	15.281-789.771	15.303-766.186	15.246
-743.935	15.21-732.706	15.201-723.198	15.168-704.314	15.201-693.162	15.22
-662.869	15.214-642.388	15.212-624.509	15.241-594.234	15.157-578.354	15.112
-560.665	15.135 -533.05	15.072 -529.8	15.079 -511.53	15.141-481.798	15.239
-477.259	15.257-473.986	15.259-471.513	15.253-441.241	15.196-409.939	15.342
-393.854	15.38 -380.39	15.413 -359.12	15.46-355.025	15.47-347.961	15.448
-309.057	15.252 -297.78	15.352-285.279	15.306-277.366	15.186-254.501	14.454
-236.441	14.201-220.231	13.854-199.707	13.715-190.169	13.654-175.102	13.707
-160.878	13.728-136.341	13.929-118.837	14.086-113.763	14.119 -90.562	14.261
-48.878	14.421 -46.321	14.432 -30.531	14.471 -5.56	14.529 .051	14.549
8.915	14.609 23.829	14.706 33.269	14.815 53.933	15.111 86.402	15.682
110.928	16.034 115.219	16.081 118.96	16.123 132.233	16.256 142.871	16.333
174.846	16.553 190.693	16.595 195.965	16.492 214.604	16.169 225.795	15.816
244.294	15.026 259.697	14.636 286.336	13.714 302.332	13.367 323.429	13.217
334.158	13.152 347.968	13.106 405.891	12.695 417.138	12.666 424.932	12.595
488.432	11.335 490	13.2 495	12.8 503.5	11.7 513	2.7
515	1.6 536	2.3 557	14.1 565	14.5 575	14.5
585	20 636	4.5 1678	4.5 1729	20	

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1333	.125	503.5	.035	585	.03

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	503.5	585		51 51	51	.1	.3
Ineffective Flow		num=	1				
Sta L	Sta R	Elev	Permanent				
585	1729	20	T				

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 44393

INPUT

Description: Copy of SELA 8.425

Station Elevation Data num= 119

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1333	15.701-1325.03	15.648-1314.67	15.512-1282.04	15.144-1268.11	14.877				
-1251.67	14.696-1244.84	14.644-1239.05	14.669-1221.56	14.878 -1200.9	15.11				
-1198.28	15.133-1169.37	15.252-1153.07	15.326-1151.72	15.331-1150.12	15.328				
-1121.99	15.28-1110.09	15.193-1081.88	15.06 -1067.1	15.006-1055.45	14.977				
-1048.57	14.978-1012.05	14.966-997.805	14.971-965.494	14.976-947.031	14.974				



ExpandedLocal.rep

-942.215	14.995-938.138	14.999-911.807	15.091-880.378	15.187-852.162	15.206
-849.1	15.215-845.483	15.216-816.041	15.281-789.771	15.303-766.186	15.246
-743.935	15.21-732.706	15.201-723.198	15.168-704.314	15.201-693.162	15.22
-662.869	15.214-642.388	15.212-624.509	15.241-594.234	15.157-578.354	15.112
-560.665	15.135 -533.05	15.072 -529.8	15.079 -511.53	15.141-481.798	15.239
-477.259	15.257-473.986	15.259-471.513	15.253-441.241	15.196-409.939	15.342
-393.854	15.38 -380.39	15.413 -359.12	15.46-355.025	15.47-347.961	15.448
-309.057	15.252 -297.78	15.352-285.279	15.306-277.366	15.186-254.501	14.454
-236.441	14.201-220.231	13.854-199.707	13.715-190.169	13.654-175.102	13.707
-160.878	13.728-136.341	13.929-118.837	14.086-113.763	14.119 -90.562	14.261
-48.878	14.421 -46.321	14.432 -30.531	14.471 -5.56	14.529 .051	14.549
8.915	14.609 23.829	14.706 33.269	14.815 53.933	15.111 86.402	15.682
110.928	16.034 115.219	16.081 118.96	16.123 132.233	16.256 142.871	16.333
174.846	16.553 190.693	16.595 195.965	16.492 214.604	16.169 225.795	15.816
244.294	15.026 259.697	14.636 286.336	13.714 302.332	13.367 323.429	13.217
334.158	13.152 347.968	13.106 405.891	12.695 417.138	12.666 424.932	12.595
488.432	11.335 490	13.2 495	12.8 503.5	11.7 513	2.7
515	1.6 536	2.3 557	14.1 565	14.5 575	14.5
585	20 636	4.5 1678	4.5 1729	20	

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1333	.125	503.5	.035	585	.03

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	503.5	585		353	353	.1	.3
Ineffective Flow		num=	1				
Sta L	Sta R	Elev	Permanent				
585	1729	20	T				

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 44040

INPUT

Description: Copy of SELA 8.349

Station Elevation Data num= 141

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1046	16.316	-1042.7	16.369-1005.05	16.412-996.156	16.471-987.861	16.521			
-968.636	16.462-927.376	16.363-921.214	16.346-915.472	16.343-894.565	16.215				
-879.277	16.137-865.007	16.028-849.693	15.905-827.535	15.722-806.887	15.567				
-795.796	10.525-790.064	15.495-772.011	15.445-741.586	15.353-680.891	15.426				
-673.721	8.68-668.196	15.435-662.108	15.453-633.998	15.747-625.913	15.811				
-616.647	15.775-589.718	15.127-573.587	14.616-553.524	14.78-544.035	14.704				

ExpandedLocal.rep

-535.794	14.612	-511.373	14.583	-491.974	14.508	-467.107	14.48	-444.391	14.449
-422.841	14.388	-394.232	14.33	-383.456	14.334	-378.575	14.324	-352.988	14.317
-325.686	14.235	-296.49	14.159	-293.107	14.145	-290.043	14.144	-262.708	14.146
-247.619	14.133	-223.425	14.152	-201.511	14.252	-176.971	14.26	-157.245	14.255
-152.498	14.251	-149.877	14.245	-107.289	14.354	-100.137	14.265	-70.117	13.884
-49.063	13.787	-37.353	13.739	2.936	13.606	9.291	13.597	14.459	13.596
32.613	13.603	54.935	13.771	56.747	13.786	64.635	13.977	99.035	14.76
106.934	14.726	125.9	14.203	158.934	14.041	183.611	13.949	200.53	13.85
210.933	13.805	232.731	13.693	262.932	13.55	264.933	13.54	268.186	13.525
289.152	13.475	310.474	13.436	312.473	13.437	352.762	13.524	361.536	13.523
366.93	13.532	393.737	13.562	418.929	13.586	425.938	13.588	437.338	13.591
452.404	13.569	470.929	13.537	474	13.3	481	13.1	490	13.2
495	12.8	513	2.7	515	1.6	536	2.3	557	14.1
565	14.5	575	14.5	585	15.4	595	16	606.49	7.249
615.656	8.496	626.926	9.638	638.977	11.256	648.778	11.999	659.048	12.175
685.877	12.765	686.99	12.783	758.98	13.229	760.559	13.232	762.183	13.234
785.082	13.249	796.294	13.249	809.605	13.225	836.796	13.153	862.95	13.102
900.58	13.041	905.881	13.034	911.409	13.036	932.221	13.063	942.411	13.065
972.147	13.088	978.94	13.106	981.268	13.126	986.022	13.162	1019.357	13.508
1039.024	13.571	1051.998	13.561	1068.37	13.688	1086.599	13.605	1106.249	13.569
1155.935	13.667	1159.998	13.675	1176.604	13.671	1183.372	13.679	1185.25	13.684
1195.302	13.763	1212.931	13.896	1258.871	14.652	1260.735	14.667	1261.858	14.7
1274.438	14.564								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1046	.125	495	.035	557	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	495	557		32 32	32	.1	.3
Ineffective Flow		num=	2				
Sta L	Sta R	Elev	Permanent				
-1046	461.98	14.6	F				
5951274.438		16	T				

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 44008

INPUT

Description: Copy of SELA 8.342

Station Elevation Data num= 132

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1046	16.316	-1042.7	16.369	-1005.05	16.412	-996.156	16.471	-987.861	16.521

ExpandedLocal.rep

-968.636	16.462-927.376	16.363-921.214	16.346-915.472	16.343-894.565	16.215
-879.277	16.137-865.007	16.028-849.693	15.905-827.535	15.722-806.887	15.567
-790.064	15.495-772.011	15.445-741.586	15.353-680.891	15.426-668.196	15.435
-662.108	15.453-633.998	15.747-625.913	15.811-616.647	15.775-589.718	15.127
-573.587	14.616-553.524	14.78-544.035	14.704-535.794	14.612-511.373	14.583
-491.974	14.508-467.107	14.48-444.391	14.449-422.841	14.388-394.232	14.33
-383.456	14.334-378.575	14.324-352.988	14.317-325.686	14.235 -296.49	14.159
-293.107	14.145-290.043	14.144-262.708	14.146-247.619	14.133-223.425	14.152
-201.511	14.252-176.971	14.26-157.245	14.255-152.498	14.251-149.877	14.245
-107.289	14.354-100.137	14.265 -70.117	13.884 -49.063	13.787 -37.353	13.739
2.936	13.606 9.291	13.597 14.459	13.596 32.613	13.603 54.935	13.771
56.747	13.786 64.635	13.977 99.035	14.76 106.934	14.726 125.9	14.203
158.934	14.041 183.611	13.949 200.53	13.85 210.933	13.805 232.731	13.693
262.932	13.55 264.933	13.54 268.186	13.525 289.152	13.475 310.474	13.436
312.473	13.437 352.762	13.524 361.536	13.523 366.93	13.532 375	13
474.4	12.4 499.4	2.5 500.4	2.4 515.4	1.8 519.4	1.6
529.4	2.1 539.4	2.5 559.2	12.3 559.6	12.3 569.012	12.238
606.49	7.249 615.656	8.496 626.926	9.638 638.977	11.256 648.778	11.999
659.048	12.175 685.877	12.765 686.99	12.783 758.98	13.229 760.559	13.232
762.183	13.234 785.082	13.249 796.294	13.249 809.605	13.225 836.796	13.153
862.95	13.102 900.58	13.041 905.881	13.034 911.409	13.036 932.221	13.063
942.411	13.065 972.147	13.088 978.94	13.106 981.268	13.126 986.022	13.162
1019.357	13.5081039.024	13.5711051.998	13.561 1068.37	13.6881086.599	13.605
1106.249	13.5691155.935	13.6671159.998	13.6751176.604	13.6711183.372	13.679
1185.25	13.6841195.302	13.7631212.931	13.8961258.871	14.6521260.735	14.667
1261.858	14.71274.438	14.564			

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1046	.125	474.4	.035	559.6	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	474.4	559.6		70	70	.1	.3
Ineffective Flow			num=	2			
Sta L	Sta R	Elev	Permanent				
-1046	487.25	14.6	F				
541.751274.438		14.6	F				

CULVERT

RIVER: W14 Main  
 REACH: Mid RS: 44006

INPUT  
 Description: Robert Road  
 Distance from Upstream XS = 2.5

ExpandedLocal.rep

Deck/Roadway Width = 65  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 4

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-580	14.6				0	14.6				561	14.6			
1289	14.6													

Upstream Bridge Cross Section Data

Station Elevation Data num= 132

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1046	16.316	-1042.7	16.369	-1005.05	16.412	-996.156	16.471	-987.861	16.521
-968.636	16.462	-927.376	16.363	-921.214	16.346	-915.472	16.343	-894.565	16.215
-879.277	16.137	-865.007	16.028	-849.693	15.905	-827.535	15.722	-806.887	15.567
-790.064	15.495	-772.011	15.445	-741.586	15.353	-680.891	15.426	-668.196	15.435
-662.108	15.453	-633.998	15.747	-625.913	15.811	-616.647	15.775	-589.718	15.127
-573.587	14.616	-553.524	14.78	-544.035	14.704	-535.794	14.612	-511.373	14.583
-491.974	14.508	-467.107	14.48	-444.391	14.449	-422.841	14.388	-394.232	14.33
-383.456	14.334	-378.575	14.324	-352.988	14.317	-325.686	14.235	-296.49	14.159
-293.107	14.145	-290.043	14.144	-262.708	14.146	-247.619	14.133	-223.425	14.152
-201.511	14.252	-176.971	14.26	-157.245	14.255	-152.498	14.251	-149.877	14.245
-107.289	14.354	-100.137	14.265	-70.117	13.884	-49.063	13.787	-37.353	13.739
2.936	13.606	9.291	13.597	14.459	13.596	32.613	13.603	54.935	13.771
56.747	13.786	64.635	13.977	99.035	14.76	106.934	14.726	125.9	14.203
158.934	14.041	183.611	13.949	200.53	13.85	210.933	13.805	232.731	13.693
262.932	13.55	264.933	13.54	268.186	13.525	289.152	13.475	310.474	13.436
312.473	13.437	352.762	13.524	361.536	13.523	366.93	13.532	375	13
474.4	12.4	496.4	2.5	500.4	1.3	515.4	1.3	519.4	1.3
529.4	1.3	539.4	2.5	559.2	12.3	559.6	12.3	569.012	12.238
606.49	7.249	615.656	8.496	626.926	9.638	638.977	11.256	648.778	11.999
659.048	12.175	685.877	12.765	686.99	12.783	758.98	13.229	760.559	13.232
762.183	13.234	785.082	13.249	796.294	13.249	809.605	13.225	836.796	13.153
862.95	13.102	900.58	13.041	905.881	13.034	911.409	13.036	932.221	13.063
942.411	13.065	972.147	13.088	978.94	13.106	981.268	13.126	986.022	13.162
1019.357	13.508	1039.024	13.571	11051.998	13.561	1068.37	13.688	1086.599	13.605
1106.249	13.569	1155.935	13.667	1159.998	13.675	1176.604	13.671	1183.372	13.679
1185.25	13.684	1195.302	13.763	1212.931	13.896	1258.871	14.652	1260.735	14.667
1261.858	14.712	74.438	14.564						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1046	.125	474.4	.035	559.6	.125

Bank Sta: Left Right Coeff Contr. Expan.  
 474.4 559.6 .1 .3

ExpandedLocal.rep

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -1046 487.25 14.6 F  
 541.751274.438 14.6 F

Downstream Deck/Roadway Coordinates

num= 4  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 -580 14.6 0 14.6 617 14.6  
 1289 14.6

Downstream Bridge Cross Section Data

Station Elevation Data num= 137  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1046 16.316 -1042.7 16.369-1005.05 16.412-996.156 16.471-987.861 16.521  
 -968.636 16.462-927.376 16.363-921.214 16.346-915.472 16.343-894.565 16.215  
 -879.277 16.137-865.007 16.028-849.693 15.905-827.535 15.722-806.887 15.567  
 -790.064 15.495-772.011 15.445-741.586 15.353-680.891 15.426-668.196 15.435  
 -662.108 15.453-633.998 15.747-625.913 15.811-616.647 15.775-589.718 15.127  
 -573.587 14.616-553.524 14.78-544.035 14.704-535.794 14.612-511.373 14.583  
 -491.974 14.508-467.107 14.48-444.391 14.449-422.841 14.388-394.232 14.33  
 -383.456 14.334-378.575 14.324-352.988 14.317-325.686 14.235 -296.49 14.159  
 -293.107 14.145-290.043 14.144-262.708 14.146-247.619 14.133-223.425 14.152  
 -201.511 14.252-176.971 14.26-157.245 14.255-152.498 14.251-149.877 14.245  
 -107.289 14.354-100.137 14.265 -70.117 13.884 -49.063 13.787 -37.353 13.739  
 2.936 13.606 9.291 13.597 14.459 13.596 32.613 13.603 54.935 13.771  
 56.747 13.786 64.635 13.977 99.035 14.76 106.934 14.726 125.9 14.203  
 158.934 14.041 183.611 13.949 200.53 13.85 210.933 13.805 232.731 13.693  
 262.932 13.55 264.933 13.54 268.186 13.525 289.152 13.475 310.474 13.436  
 312.473 13.437 352.762 13.524 361.536 13.523 366.93 13.532 393.737 13.562  
 418.929 13.586 425.938 13.588 437.338 13.591 452.404 13.569 470.929 13.537  
 479.626 13.533 517.5 13.351 522.369 13.324 522.928 13.314 553.5 1.1  
 554 1.1 569 1.1 573 1.1 584 1.1 597.6 3.2  
 617 12.2 617 12.3 626.926 9.638 638.977 11.256 648.778 11.999  
 659.048 12.175 685.877 12.765 686.99 12.783 758.98 13.229 760.559 13.232  
 762.183 13.234 785.082 13.249 796.294 13.249 809.605 13.225 836.796 13.153  
 862.95 13.102 900.58 13.041 905.881 13.034 911.409 13.036 932.221 13.063  
 942.411 13.065 972.147 13.088 978.94 13.106 981.268 13.126 986.022 13.162  
 1019.357 13.5081039.024 13.5711051.998 13.561 1068.37 13.6881086.599 13.605  
 1106.249 13.5691155.935 13.6671159.998 13.6751176.604 13.6711183.372 13.679  
 1185.25 13.6841195.302 13.7631212.931 13.8961258.871 14.6521260.735 14.667  
 1261.858 14.71274.438 14.564

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*

-1046 .125 522.369 .035 617 .125

Bank Sta: Left Right Coeff Contr. Expan.  
 522.369 617 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -1046 546.25 14.6 F  
 590.751274.438 14.6 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 3

Culvert Name Shape Rise Span

Culvert #1 Circular 9.5  
 FHWA Chart # 1 - Concrete Pipe Culvert  
 FHWA Scale # 1 - Square edge entrance with headwall  
 Solution Criteria = Highest U.S. EG

Culvert	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
1	2.5	65	.025	.025	0	.5	

Upstream Elevation = 1.3  
 Centerline Station = 502  
 Downstream Elevation = 1.1  
 Centerline Station = 556

Culvert Name Shape Rise Span

Culvert #2 Circular 9.5  
 FHWA Chart # 1 - Concrete Pipe Culvert  
 FHWA Scale # 1 - Square edge entrance with headwall  
 Solution Criteria = Highest U.S. EG

Culvert	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
1	2.5	65	.025	.025	0	.5	

Upstream Elevation = 1.3  
 Centerline Station = 515  
 Downstream Elevation = 1.1  
 Centerline Station = 569

Culvert Name Shape Rise Span

ExpandedLocal.rep

Culvert #3 Circular 9.5  
FHWA Chart # 1 - Concrete Pipe Culvert  
FHWA Scale # 1 - Square edge entrance with headwall  
Solution Criteria = Highest U.S. EG  
Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
Exit Loss Coef

1

Upstream Elevation = 1.3  
Centerline Station = 527  
Downstream Elevation = 1.1  
Centerline Station = 581

CROSS SECTION

RIVER: W14 Main  
REACH: Mid RS: 43938

INPUT

Description: Copy of SELA 8.327

Station Elevation Data num= 137

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1046	16.316	-1042.7	16.369	-1005.05	16.412	-996.156	16.471	-987.861	16.521
-968.636	16.462	-927.376	16.363	-921.214	16.346	-915.472	16.343	-894.565	16.215
-879.277	16.137	-865.007	16.028	-849.693	15.905	-827.535	15.722	-806.887	15.567
-790.064	15.495	-772.011	15.445	-741.586	15.353	-680.891	15.426	-668.196	15.435
-662.108	15.453	-633.998	15.747	-625.913	15.811	-616.647	15.775	-589.718	15.127
-573.587	14.616	-553.524	14.78	-544.035	14.704	-535.794	14.612	-511.373	14.583
-491.974	14.508	-467.107	14.48	-444.391	14.449	-422.841	14.388	-394.232	14.33
-383.456	14.334	-378.575	14.324	-352.988	14.317	-325.686	14.235	-296.49	14.159
-293.107	14.145	-290.043	14.144	-262.708	14.146	-247.619	14.133	-223.425	14.152
-201.511	14.252	-176.971	14.26	-157.245	14.255	-152.498	14.251	-149.877	14.245
-107.289	14.354	-100.137	14.265	-70.117	13.884	-49.063	13.787	-37.353	13.739
2.936	13.606	9.291	13.597	14.459	13.596	32.613	13.603	54.935	13.771
56.747	13.786	64.635	13.977	99.035	14.76	106.934	14.726	125.9	14.203
158.934	14.041	183.611	13.949	200.53	13.85	210.933	13.805	232.731	13.693
262.932	13.55	264.933	13.54	268.186	13.525	289.152	13.475	310.474	13.436
312.473	13.437	352.762	13.524	361.536	13.523	366.93	13.532	393.737	13.562
418.929	13.586	425.938	13.588	437.338	13.591	452.404	13.569	470.929	13.537
479.626	13.533	517.5	13.351	522.369	13.324	522.928	13.314	553.5	2.9
554	2.8	569	1.7	573	1.4	584	2.3	597.6	3.2
617	12.2	617	12.3	626.926	9.638	638.977	11.256	648.778	11.999
659.048	12.175	685.877	12.765	686.99	12.783	758.98	13.229	760.559	13.232
762.183	13.234	785.082	13.249	796.294	13.249	809.605	13.225	836.796	13.153
862.95	13.102	900.58	13.041	905.881	13.034	911.409	13.036	932.221	13.063
942.411	13.065	972.147	13.088	978.94	13.106	981.268	13.126	986.022	13.162

ExpandedLocal.rep

1019.357	13.5081039.024	13.5711051.998	13.561 1068.37	13.6881086.599	13.605
1106.249	13.5691155.935	13.6671159.998	13.6751176.604	13.6711183.372	13.679
1185.25	13.6841195.302	13.7631212.931	13.8961258.871	14.6521260.735	14.667
1261.858	14.71274.438	14.564			

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1046	.125	522.369	.035	617	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	522.369	617		46	46	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1046	546.25	14.6	F
590.751274.438		14.6	F

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 43892

INPUT

Description: Copy of SELA 8.317

Station Elevation Data num= 140

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1046	16.316	-1042.7	16.369-1005.05	16.412-996.156	16.471-987.861	16.521			
-968.636	16.462-927.376	16.363-921.214	16.346-915.472	16.343-894.565	16.215				
-879.277	16.137-865.007	16.028-849.693	15.905-827.535	15.722-806.887	15.567				
-790.064	15.495-772.011	15.445-741.586	15.353-680.891	15.426-668.196	15.435				
-662.108	15.453-633.998	15.747-625.913	15.811-616.647	15.775-589.718	15.127				
-573.587	14.616-553.524	14.78-544.035	14.704-535.794	14.612-511.373	14.583				
-491.974	14.508-467.107	14.48-444.391	14.449-422.841	14.388-394.232	14.33				
-383.456	14.334-378.575	14.324-352.988	14.317-325.686	14.235 -296.49	14.159				
-293.107	14.145-290.043	14.144-262.708	14.146-247.619	14.133-223.425	14.152				
-201.511	14.252-176.971	14.26-157.245	14.255-152.498	14.251-149.877	14.245				
-107.289	14.354-100.137	14.265 -70.117	13.884 -49.063	13.787 -37.353	13.739				
2.936	13.606	9.291	13.597 14.459	13.596 32.613	13.603 54.935	13.771			
56.747	13.786	64.635	13.977 99.035	14.76 106.934	14.726 125.9	14.203			
158.934	14.041	183.611	13.949 200.53	13.85 210.933	13.805 232.731	13.693			
262.932	13.55	264.933	13.54 268.186	13.525 289.152	13.475 310.474	13.436			
312.473	13.437	352.762	13.524 361.536	13.523 366.93	13.532 393.737	13.562			
418.929	13.586	425.938	13.588 437.338	13.591 452.404	13.569 470.929	13.537			
479.626	13.533	517.5	13.351 522.369	13.324 522.928	13.314 550	13.8			
560	13.7	570	13.5 577	13.4 582	13.3 595	2.8			
607	1.6	613	2.9 627	13.4 640	13.6 650	13.7			



ExpandedLocal.rep

660	13.7	670	13.8	680	13.4	690	13.5	700	14
710	14.2	758.98	13.229	760.559	13.232	762.183	13.234	785.082	13.249
796.294	13.249	809.605	13.225	836.796	13.153	862.95	13.102	900.58	13.041
905.881	13.034	911.409	13.036	932.221	13.063	942.411	13.065	972.147	13.088
978.94	13.106	981.268	13.126	986.022	13.162	1019.357	13.508	1039.024	13.571
1051.998	13.561	1068.37	13.688	1086.599	13.605	1106.249	13.569	1155.935	13.667
1159.998	13.675	1176.604	13.671	1183.372	13.679	1185.25	13.684	1195.302	13.763
1212.931	13.896	1258.871	14.652	1260.735	14.667	1261.858	14.712	1274.438	14.564

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1046	.125	582	.035	627	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	582	627		163	163		.1	.3
Ineffective Flow		num=	2					
Sta L	Sta R	Elev	Permanent					
-1046	555.41	14.6	F					
645.91	1274.438	14.6	F					

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 43729

INPUT

Description: Copy of SELA 8.282  
 Overbank from Lidar

Station Elevation Data num= 94

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-437.069	15.491	-430.39	15.498	-402.487	15.426	-378.511	15.311	-359.424	15.107
-333.325	14.814	-300.693	14.401	-298.744	14.388	-283.168	14.39	-237.415	14.327
-235.667	14.306	-229.258	14.243	-219.101	14.295	-193.248	14.191	-176.934	14.113
-151.241	14.133	-121.227	14.291	-109.327	14.269	-103.532	14.257	-64.66	14.163
-51.497	14.09	-24.856	13.919	-16.859	13.872	-1.241	13.709	17.779	13.494
38.844	13.069	79.891	12.536	87.056	12.481	90.215	12.479	90.708	12.48
148.23	13.063	152.852	13.122	180.41	13.375	185.666	13.435	212.589	13.546
218.481	13.578	224.611	13.585	232.043	13.587	276.347	13.608	284.13	13.605
308.097	13.564	316.958	13.541	339.846	13.439	349.785	13.391	360.423	13.312
403.344	13.269	415.439	13.262	435.094	13.674	462.366	14.182	479.586	14.413
491.983	14.562	514.909	14.678	547.267	14.522	548.68	14.5	555.55	13.465
582	13.3	595	2.8	607	1.6	613	2.9	627	13.4
640	13.6	650	13.7	660	13.7	670	13.8	680	13.4
681.42	12.118	689.261	12.253	714.288	13.277	720.338	13.315	747.151	13.355
777.233	13.393	780.013	13.398	781.287	13.4	784.714	13.401	825.616	13.423

ExpandedLocal.rep

839.128	13.43	844.952	13.433	846.115	13.435	878.536	13.387	878.923	13.388
943.765	13.056	944.152	13.054	944.927	13.047	976.961	12.896	986.428	12.858
1007.079	12.781	1009.881	12.777	1059.869	13.393	1071.267	13.473	1075.811	13.497
1102.694	13.633	1122.923	13.758	1141.742	13.798	1156.739	13.805		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-437.069	.125	582	.035	627	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	582	627		0	0	.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 43600

INPUT

Description: copy of SELA 8.281

Station Elevation Data num= 94

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-437.069	15.491	-430.39	15.498	-402.487	15.426	-378.511	15.311	-359.424	15.107
-333.325	14.814	-300.693	14.401	-298.744	14.388	-283.168	14.39	-237.415	14.327
-235.667	14.306	-229.258	14.243	-219.101	14.295	-193.248	14.191	-176.934	14.113
-151.241	14.133	-121.227	14.291	-109.327	14.269	-103.532	14.257	-64.66	14.163
-51.497	14.09	-24.856	13.919	-16.859	13.872	-1.241	13.709	17.779	13.494
38.844	13.069	79.891	12.536	87.056	12.481	90.215	12.479	90.708	12.48
148.23	13.063	152.852	13.122	180.41	13.375	185.666	13.435	212.589	13.546
218.481	13.578	224.611	13.585	232.043	13.587	276.347	13.608	284.13	13.605
308.097	13.564	316.958	13.541	339.846	13.439	349.785	13.391	360.423	13.312
403.344	13.269	415.439	13.262	435.094	13.674	462.366	14.182	479.586	14.413
491.983	14.562	514.909	14.678	547.267	14.522	548.68	14.5	555.55	13.465
582	13.3	595	2.8	607	1.6	613	2.9	627	13.4
640	13.6	650	13.7	660	13.7	670	13.8	680	13.4
681.42	12.118	689.261	12.253	714.288	13.277	720.338	13.315	747.151	13.355
777.233	13.393	780.013	13.398	781.287	13.4	784.714	13.401	825.616	13.423
839.128	13.43	844.952	13.433	846.115	13.435	878.536	13.387	878.923	13.388
943.765	13.056	944.152	13.054	944.927	13.047	976.961	12.896	986.428	12.858
1007.079	12.781	1009.881	12.777	1059.869	13.393	1071.267	13.473	1075.811	13.497
1102.694	13.633	1122.923	13.758	1141.742	13.798	1156.739	13.805		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-437.069	.125	582	.035	627	.125

ExpandedLocal.rep

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
582	627	354	354	354	.1	.3
Ineffective Flow	num=	2				
Sta L	Sta R	Elev	Permanent			
-437.069	228	15.7	T			
9811156.739		15.7	T			

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 43256

INPUT

Description: Copy of SELA 8.177

Station Elevation Data	num=	137							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-1346	15.13-1326.94	15.067-1311.54	15.053-1287.72	15.181-1285.84	15.187				
-1285.17	15.19-1260.14	15.12-1229.84	15.124-1215.56	15.076-1212.81	15.073				
-1204.46	15.086-1181.51	15.108-1154.06	15.092-1147.95	15.095-1138.35	15.111				
-1114.34	15.138-1099.07	15.116-1080.73	15.077-1068.11	15.056-1050.69	15.028				
-1016.92	14.973-1013.38	14.961-1007.62	14.937-962.459	14.747-945.924	14.647				
-924.938	14.619-912.195	14.621-894.804	14.652-878.466	14.717-864.669	14.775				
-844.737	14.862-834.535	14.896-804.803	14.959-749.006	15.199-745.312	15.211				
-744.601	15.215 -743.55	15.22 -741.84	15.224-723.662	15.238-709.821	15.195				
-702.292	15.196-676.091	15.255-662.904	15.318-653.976	15.348-635.672	15.381				
-607.699	15.442-607.663	15.442-571.518	15.48-538.139	15.474-535.115	15.474				
-532.904	15.473-462.926	15.288 -459.88	15.263 -449.82	14.93-422.668	14.331				
-399.092	13.973 -390.21	13.902-369.751	14.375-348.243	14.895-341.732	14.987				
-329.568	15.011-295.557	15.175-276.387	15.262-261.073	14.987-225.302	14.386				
-196.819	13.944-177.939	13.723-164.927	13.635-164.747	13.634-134.931	13.538				
-115.738	13.436-106.289	13.406 -46.797	13.267 -33.151	13.25 -17.72	13.265				
24.343	13.278 55.793	13.401 76.557	13.445 80.298	13.445 145.622	13.843				
153.811	13.872 162.17	13.927 186.265	14.052 209.634	14.124 222.834	14.167				
236.445	14.172 250.274	14.163 253.905	14.161 262.625	14.152 267.26	14.14				
302.336	14.031 319.338	13.983 329.373	13.953 362.852	13.747 364.534	13.738				
368.324	13.652 407.777	12.934 434.855	12.744 438.99	12.726 449.72	12.776				
458.826	12.798 469.334	12.831 474.395	12.523 500	14.8 510	10.9				
520	8 525	4 535	1.8 543	4.2 557	12.7				
601.408	12.318 607.07	12.304 624.265	12.264 654.227	12.385 667.061	12.39				
687.036	12.468 699.869	12.519 706.286	12.525 725.536	12.691 765.486	12.991				
775.473	13.045 798.294	13.216 808.282	13.259 831.102	13.398 840.57	13.437				
841.193	13.44 864.748	13.557 896.823	13.668 898.734	13.671 902.061	13.661				
932.72	13.572 948.635	13.44 966.706	13.294 983.823	13.2361017.423	13.066				
1050.004	13.0731053.652	13.066							

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1346 .125 500 .035 557 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 500 557 10 10 10 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -1346 502.89 15.7 T  
 564.041053.652 15.7 T

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 43246

INPUT

Description: Pilot Channel added (Sta 32.06) for stability  
 Copy of SELA 8.174

Station Elevation Data num= 153  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1849 15.13-1829.94 15.067-1814.54 15.053-1790.72 15.181-1788.84 15.187  
 -1788.17 15.19-1763.14 15.12-1732.84 15.124-1718.56 15.076-1715.81 15.073  
 -1707.46 15.086-1684.51 15.108-1657.06 15.092-1650.95 15.095-1641.35 15.111  
 -1617.34 15.138-1602.07 15.116-1583.73 15.077-1571.11 15.056-1553.69 15.028  
 -1519.92 14.973-1516.38 14.961-1510.62 14.937-1465.45 14.747-1448.92 14.647  
 -1427.93 14.619-1415.19 14.621 -1397.8 14.652-1381.46 14.717-1367.66 14.775  
 -1347.73 14.862-1337.53 14.896 -1307.8 14.959 -1252 15.199-1248.31 15.211  
 -1247.6 15.215-1246.55 15.22-1244.84 15.224-1226.66 15.238-1212.82 15.195  
 -1205.29 15.196-1179.09 15.255 -1165.9 15.318-1156.97 15.348-1138.67 15.381  
 -1110.69 15.442-1110.66 15.442-1074.51 15.48-1041.13 15.474-1038.11 15.474  
 -1035.9 15.473-965.926 15.288 -962.88 15.263 -952.82 14.93-925.668 14.331  
 -902.092 13.973 -893.21 13.902-872.751 14.375-851.243 14.895-844.732 14.987  
 -832.568 15.011-798.557 15.175-779.387 15.262-764.073 14.987-728.302 14.386  
 -699.819 13.944-680.939 13.723-667.927 13.635-667.747 13.634-637.931 13.538  
 -618.738 13.436-609.289 13.406-549.797 13.267-536.151 13.25 -520.72 13.265  
 -478.657 13.278-447.207 13.401-426.443 13.445-422.702 13.445-357.378 13.843  
 -349.189 13.872 -340.83 13.927-316.735 14.052-293.366 14.124-280.166 14.167  
 -266.555 14.172-252.726 14.163-249.095 14.161-240.375 14.152 -235.74 14.14  
 -200.664 14.031-183.662 13.983-173.627 13.953-140.148 13.747-138.466 13.738  
 -134.676 13.652 -95.223 12.934 -68.145 12.744 -64.01 12.726 -53.28 12.776  
 -44.174 12.798 -33.666 12.831 -28.605 12.523 7.13 15.1 14.25 10.9  
 18.5 7.89 18.51 7.88 19.5 7.18 19.51 7.17 21.02 6.1  
 21.38 5.7 27.07 2.4 28.5 2.1 32.06 -5.4 34.2 2  
 35.63 2.5 37.5 3.34 37.51 3.35 38.5 3.79 38.51 3.8

ExpandedLocal.rep

42.75	5.7	48.45	12.9	49.16	14.6	49.88	14.7	57	15.7
80	14.2	98.408	12.318	104.07	12.304	121.265	12.264	151.227	12.385
164.061	12.39	184.036	12.468	196.869	12.519	203.286	12.525	222.536	12.691
262.486	12.991	272.473	13.045	295.294	13.216	305.282	13.259	328.102	13.398
337.57	13.437	338.193	13.44	361.748	13.557	393.823	13.668	395.734	13.671
399.061	13.661	429.72	13.572	445.635	13.44	463.706	13.294	480.823	13.236
514.423	13.066	547.004	13.073	550.652	13.066				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1849	.125	7.13	.035	57	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	7.13	57		30	30	30		.1	.3
Ineffective Flow		num=	2						
Sta L	Sta R	Elev	Permanent						
-1849	8.59	15.7	T						
49.74	550.652	15.7	T						

BRIDGE

RIVER: W14 Main  
 REACH: Lower RS: 43220

INPUT

Description: Independence Avenue  
 taken from SELA model  
 Distance from Upstream XS = 1  
 Deck/Roadway Width = 28  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num=	2	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
		0	15.7	13.7	57	15.7	13.7				

Upstream Bridge Cross Section Data

Station	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1849	15.13-1829.94	15.067-1814.54	15.053-1790.72	15.181-1788.84	15.187				
-1788.17	15.19-1763.14	15.12-1732.84	15.124-1718.56	15.076-1715.81	15.073				
-1707.46	15.086-1684.51	15.108-1657.06	15.092-1650.95	15.095-1641.35	15.111				
-1617.34	15.138-1602.07	15.116-1583.73	15.077-1571.11	15.056-1553.69	15.028				
-1519.92	14.973-1516.38	14.961-1510.62	14.937-1465.45	14.747-1448.92	14.647				
-1427.93	14.619-1415.19	14.621-1397.8	14.652-1381.46	14.717-1367.66	14.775				

ExpandedLocal.rep

-1347.73	14.862-1337.53	14.896	-1307.8	14.959	-1252	15.199-1248.31	15.211
-1247.6	15.215-1246.55	15.22	-1244.84	15.224	-1226.66	15.238-1212.82	15.195
-1205.29	15.196-1179.09	15.255	-1165.9	15.318	-1156.97	15.348-1138.67	15.381
-1110.69	15.442-1110.66	15.442	-1074.51	15.48	-1041.13	15.474-1038.11	15.474
-1035.9	15.473-965.926	15.288	-962.88	15.263	-952.82	14.93-925.668	14.331
-902.092	13.973 -893.21	13.902	-872.751	14.375	-851.243	14.895-844.732	14.987
-832.568	15.011-798.557	15.175	-779.387	15.262	-764.073	14.987-728.302	14.386
-699.819	13.944-680.939	13.723	-667.927	13.635	-667.747	13.634-637.931	13.538
-618.738	13.436-609.289	13.406	-549.797	13.267	-536.151	13.25 -520.72	13.265
-478.657	13.278-447.207	13.401	-426.443	13.445	-422.702	13.445-357.378	13.843
-349.189	13.872 -340.83	13.927	-316.735	14.052	-293.366	14.124-280.166	14.167
-266.555	14.172-252.726	14.163	-249.095	14.161	-240.375	14.152 -235.74	14.14
-200.664	14.031-183.662	13.983	-173.627	13.953	-140.148	13.747-138.466	13.738
-134.676	13.652 -95.223	12.934	-68.145	12.744	-64.01	12.726 -53.28	12.776
-44.174	12.798 -33.666	12.831	-28.605	12.523	7.13	15.1 14.25	10.9
18.5	7.89 18.51	7.88	19.5	7.18	19.51	7.17 21.02	6.1
21.38	5.7 27.07	2.4	28.5	2.1	32.06	-5.4 34.2	2
35.63	2.5 37.5	3.34	37.51	3.35	38.5	3.79 38.51	3.8
42.75	5.7 48.45	12.9	49.16	14.6	49.88	14.7 57	15.7
80	14.2 98.408	12.318	104.07	12.304	121.265	12.264 151.227	12.385
164.061	12.39 184.036	12.468	196.869	12.519	203.286	12.525 222.536	12.691
262.486	12.991 272.473	13.045	295.294	13.216	305.282	13.259 328.102	13.398
337.57	13.437 338.193	13.44	361.748	13.557	393.823	13.668 395.734	13.671
399.061	13.661 429.72	13.572	445.635	13.44	463.706	13.294 480.823	13.236
514.423	13.066 547.004	13.073	550.652	13.066			

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1849	.125	7.13	.035	57	.125

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	7.13	57		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1849	8.59	15.7	T
49.74	550.652	15.7	T

Downstream Deck/Roadway Coordinates num= 2

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0	15.7	13.7	57	15.7	13.7				

Downstream Bridge Cross Section Data Station Elevation Data num= 153

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev

ExpandedLocal.rep

-1849	15.13-1829.94	15.067-1814.54	15.053-1790.72	15.181-1788.84	15.187
-1788.17	15.19-1763.14	15.12-1732.84	15.124-1718.56	15.076-1715.81	15.073
-1707.46	15.086-1684.51	15.108-1657.06	15.092-1650.95	15.095-1641.35	15.111
-1617.34	15.138-1602.07	15.116-1583.73	15.077-1571.11	15.056-1553.69	15.028
-1519.92	14.973-1516.38	14.961-1510.62	14.937-1465.45	14.747-1448.92	14.647
-1427.93	14.619-1415.19	14.621 -1397.8	14.652-1381.46	14.717-1367.66	14.775
-1347.73	14.862-1337.53	14.896 -1307.8	14.959 -1252	15.199-1248.31	15.211
-1247.6	15.215-1246.55	15.22-1244.84	15.224-1226.66	15.238-1212.82	15.195
-1205.29	15.196-1179.09	15.255 -1165.9	15.318-1156.97	15.348-1138.67	15.381
-1110.69	15.442-1110.66	15.442-1074.51	15.48-1041.13	15.474-1038.11	15.474
-1035.9	15.473-965.926	15.288 -962.88	15.263 -952.82	14.93-925.668	14.331
-902.092	13.973 -893.21	13.902-872.751	14.375-851.243	14.895-844.732	14.987
-832.568	15.011-798.557	15.175-779.387	15.262-764.073	14.987-728.302	14.386
-699.819	13.944-680.939	13.723-667.927	13.635-667.747	13.634-637.931	13.538
-618.738	13.436-609.289	13.406-549.797	13.267-536.151	13.25 -520.72	13.265
-478.657	13.278-447.207	13.401-426.443	13.445-422.702	13.445-357.378	13.843
-349.189	13.872 -340.83	13.927-316.735	14.052-293.366	14.124-280.166	14.167
-266.555	14.172-252.726	14.163-249.095	14.161-240.375	14.152 -235.74	14.14
-200.664	14.031-183.662	13.983-173.627	13.953-140.148	13.747-138.466	13.738
-134.676	13.652 -95.223	12.934 -68.145	12.744 -64.01	12.726 -53.28	12.776
-44.174	12.798 -33.666	12.831 -28.605	12.523 7.13	15.1 14.25	10.9
18.5	7.89 18.51	7.88 19.5	7.18 19.51	7.17 21.02	6.1
21.38	5.7 27.07	2.4 28.5	2.1 32.06	1.4 34.2	2
35.63	2.5 37.5	3.34 37.51	3.35 38.5	3.79 38.51	3.8
42.75	5.7 48.45	12.9 49.16	14.6 49.88	14.7 57	15.7
80	14.2 98.408	12.318 104.07	12.304 121.265	12.264 151.227	12.385
164.061	12.39 184.036	12.468 196.869	12.519 203.286	12.525 222.536	12.691
262.486	12.991 272.473	13.045 295.294	13.216 305.282	13.259 328.102	13.398
337.57	13.437 338.193	13.44 361.748	13.557 393.823	13.668 395.734	13.671
399.061	13.661 429.72	13.572 445.635	13.44 463.706	13.294 480.823	13.236
514.423	13.066 547.004	13.073 550.652	13.066		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1849	.125	7.13	.035	57	.125

\*\*\*\*\*

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	7.13	57		.1	.3
Ineffective Flow	num=		2		
Sta L	Sta R	Elev	Permanent		
-1849	9.09	15.7	T		
49.24	550.652	15.7	T		

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins = 12.32

Energy head used in spillway design =  
Spillway height used in design =  
Weir crest shape = Broad Crested

Number of Piers = 2

Pier Data

Pier Station Upstream= 19 Downstream= 19

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 10 1 14.2

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 10 1 14.2

Pier Data

Pier Station Upstream= 38 Downstream= 38

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 10 1 14.2

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 10 1 14.2

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth  
inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main



ExpandedLocal.rep

REACH: Lower

RS: 43216

INPUT

Description: copy of SELA 8.166

reach lengths adjusted

Station Elevation Data

num= 153

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1849	15.13	1829.94	15.067	1814.54	15.053	1790.72	15.181	1788.84	15.187
-1788.17	15.19	1763.14	15.12	1732.84	15.124	1718.56	15.076	1715.81	15.073
-1707.46	15.086	1684.51	15.108	1657.06	15.092	1650.95	15.095	1641.35	15.111
-1617.34	15.138	1602.07	15.116	1583.73	15.077	1571.11	15.056	1553.69	15.028
-1519.92	14.973	1516.38	14.961	1510.62	14.937	1465.45	14.747	1448.92	14.647
-1427.93	14.619	1415.19	14.621	-1397.8	14.652	-1381.46	14.717	-1367.66	14.775
-1347.73	14.862	1337.53	14.896	-1307.8	14.959	-1252	15.199	-1248.31	15.211
-1247.6	15.215	1246.55	15.22	1244.84	15.224	1226.66	15.238	1212.82	15.195
-1205.29	15.196	1179.09	15.255	-1165.9	15.318	-1156.97	15.348	-1138.67	15.381
-1110.69	15.442	1110.66	15.442	-1074.51	15.48	-1041.13	15.474	-1038.11	15.474
-1035.9	15.473	965.926	15.288	-962.88	15.263	-952.82	14.93	-925.668	14.331
-902.092	13.973	-893.21	13.902	-872.751	14.375	-851.243	14.895	-844.732	14.987
-832.568	15.011	798.557	15.175	779.387	15.262	764.073	14.987	728.302	14.386
-699.819	13.944	680.939	13.723	667.927	13.635	667.747	13.634	637.931	13.538
-618.738	13.436	609.289	13.406	549.797	13.267	536.151	13.25	520.72	13.265
-478.657	13.278	447.207	13.401	426.443	13.445	422.702	13.445	357.378	13.843
-349.189	13.872	-340.83	13.927	-316.735	14.052	-293.366	14.124	-280.166	14.167
-266.555	14.172	252.726	14.163	249.095	14.161	240.375	14.152	-235.74	14.14
-200.664	14.031	183.662	13.983	173.627	13.953	140.148	13.747	138.466	13.738
-134.676	13.652	-95.223	12.934	-68.145	12.744	-64.01	12.726	-53.28	12.776
-44.174	12.798	-33.666	12.831	-28.605	12.523	7.13	15.1	14.25	10.9
18.5	7.89	18.51	7.88	19.5	7.18	19.51	7.17	21.02	6.1
21.38	5.7	27.07	2.4	28.5	2.1	32.06	1.4	34.2	2
35.63	2.5	37.5	3.34	37.51	3.35	38.5	3.79	38.51	3.8
42.75	5.7	48.45	12.9	49.16	14.6	49.88	14.7	57	15.7
80	14.2	98.408	12.318	104.07	12.304	121.265	12.264	151.227	12.385
164.061	12.39	184.036	12.468	196.869	12.519	203.286	12.525	222.536	12.691
262.486	12.991	272.473	13.045	295.294	13.216	305.282	13.259	328.102	13.398
337.57	13.437	338.193	13.44	361.748	13.557	393.823	13.668	395.734	13.671
399.061	13.661	429.72	13.572	445.635	13.44	463.706	13.294	480.823	13.236
514.423	13.066	547.004	13.073	550.652	13.066				

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1849	.125	7.13	.035	57	.125

Bank	Sta	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
		7.13	57		42	42	42		.1	.3
Ineffective Flow				num=	2					

ExpandedLocal.rep

Sta L	Sta R	Elev	Permanent
-1849	9.09	15.7	T
49.24	550.652	15.7	T

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 43174

INPUT  
 Description: copy of SELA 8.158  
 reach lengths adjusted  
 ineffective flows from  
 SELA

Station Elevation Data num= 140

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-1354	15.13	-1334.94	15.067	-1319.54	15.053	-1295.72	15.181	-1293.84	15.187
-1293.17	15.19	-1268.14	15.12	-1237.84	15.124	-1223.56	15.076	-1220.81	15.073
-1212.46	15.086	-1189.51	15.108	-1162.06	15.092	-1155.95	15.095	-1146.35	15.111
-1122.34	15.138	-1107.07	15.116	-1088.73	15.077	-1076.11	15.056	-1058.69	15.028
-1024.92	14.973	-1021.38	14.961	-1015.62	14.937	-970.459	14.747	-953.924	14.647
-932.938	14.619	-920.195	14.621	-902.804	14.652	-886.466	14.717	-872.669	14.775
-852.737	14.862	-842.535	14.896	-812.803	14.959	-757.006	15.199	-753.312	15.211
-752.601	15.215	-751.55	15.22	-749.84	15.224	-731.662	15.238	-717.821	15.195
-710.292	15.196	-684.091	15.255	-670.904	15.318	-661.976	15.348	-643.672	15.381
-615.699	15.442	-615.663	15.442	-579.518	15.48	-546.139	15.474	-543.115	15.474
-540.904	15.473	-470.926	15.288	-467.88	15.263	-457.82	14.93	-430.668	14.331
-407.092	13.973	-398.21	13.902	-377.751	14.375	-356.243	14.895	-349.732	14.987
-337.568	15.011	-303.557	15.175	-284.387	15.262	-269.073	14.987	-233.302	14.386
-204.819	13.944	-185.939	13.723	-172.927	13.635	-172.747	13.634	-142.931	13.538
-123.738	13.436	-114.289	13.406	-54.797	13.267	-41.151	13.25	-25.72	13.265
16.343	13.278	47.793	13.401	68.557	13.445	72.298	13.445	137.622	13.843
145.811	13.872	154.17	13.927	178.265	14.052	201.634	14.124	214.834	14.167
228.445	14.172	242.274	14.163	245.905	14.161	254.625	14.152	259.26	14.14
294.336	14.031	311.338	13.983	321.373	13.953	354.852	13.747	356.534	13.738
360.324	13.652	399.777	12.934	426.855	12.744	430.99	12.726	441.72	12.776
450.826	12.798	461.334	12.831	466.395	12.523	494.353	11.54	504	14.3
510	9.4	520	2.2	527	.7	530	1.7	532	2.2
540	8.5	547	14.1	575.929	11.854	593.408	12.318	599.07	12.304
616.265	12.264	646.227	12.385	659.061	12.39	679.036	12.468	691.869	12.519
698.286	12.525	717.536	12.691	757.486	12.991	767.473	13.045	790.294	13.216
800.282	13.259	823.102	13.398	832.57	13.437	833.193	13.44	856.748	13.557
888.823	13.668	890.734	13.671	894.061	13.661	924.72	13.572	940.635	13.44
958.706	13.294	975.823	13.236	1009.423	13.066	1042.004	13.073	1045.652	13.066

Manning's n Values num= 3

ExpandedLocal.rep

Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1354 .125 504 .035 547 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
           504 547          401 401 401          .1 .3  
 Ineffective Flow num= 2  
   Sta L Sta R Elev Permanent  
   -1354 484.39 15.7 T  
   566.541045.652 15.7 T

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 42773

INPUT

Description: copy of SELA 8.082\*  
 reach lengths adjusted  
 ineffective flows

from SELA

Station Elevation Data num= 160  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -2432 14.949-2420.82 14.944 -2413.2 14.941-2388.01 14.928-2380.28 14.934  
 -2356.75 14.996-2322.39 15.092-2305.57 15.164-2289.58 15.198-2281.51 15.228  
 -2256.78 15.318-2248.59 15.337-2223.97 15.355-2215.66 15.354-2166.82 15.29  
 -2158.35 15.273-2149.82 15.25-2125.54 15.135-2116.89 15.11-2068.73 14.908  
 -2051.05 14.916-2027.11 14.917-2003.34 14.928 -1985.2 14.944-1937.95 14.908  
 -1928.68 14.932-1890.97 15.122-1863.07 15.2-1843.88 15.215-1816.82 15.205  
 -1797.45 15.173-1777.81 15.153-1751.65 15.15-1711.73 15.215-1686.49 15.268  
 -1666.21 15.352-1645.65 15.369 -1609.4 15.339-1567.78 15.187-1565.97 15.178  
 -1545.9 15.072-1540.32 15.028-1531.49 14.989-1502.12 14.825-1493.18 14.754  
 -1469.29 14.555-1443.52 14.509-1436.46 14.495-1423.84 14.53-1370.79 14.628  
 -1274.18 14.532-1272.58 14.529-1272.3 14.529-1272.02 14.529-1271.26 14.528  
 -1223.69 14.441-1206.63 14.426-1170.49 14.452-1140.97 14.523-1113.61 14.567  
 -1108.14 14.574-1102.24 14.563-1075.31 14.515-1060.32 14.477-1009.64 14.324  
 -988.112 14.299-976.814 14.296-935.609 14.301-917.607 14.273 -911.15 14.262  
 -897.472 14.305-878.318 14.319-863.344 14.286-854.467 14.259-845.417 14.233  
 -826.323 14.171-801.565 14.101-779.246 14.071-750.244 14.045-743.019 14.035  
 -718.891 14.028-713.746 14.022-712.205 14.022 -679.99 14.033-674.165 14.04  
 -646.905 14.041-637.651 14.037-636.273 14.036-613.996 14.024 -593.61 14.005  
 -567.544 13.951-548.314 13.929-533.179 13.872-515.474 13.814-499.273 13.713  
 -464.449 13.624-449.793 13.55-408.457 13.603-384.111 13.611-361.354 13.573  
 -351.271 13.555-300.345 13.229-289.027 13.17 -285.59 13.16-255.442 12.958  
 -250.173 12.935-219.908 12.78 -216.26 12.756-187.068 12.672-134.014 12.632  
 -121.387 12.624-120.801 12.622 -88.546 12.526 -70.722 12.478 -55.706 12.446

ExpandedLocal.rep

-27.586	12.398	-22.865	12.396	-12.045	12.371	42.816	12.055	60.03	12.085
129.644	12.224	141.338	12.243	326	13.98	338.98	13.49	352	13.05
357.61	8.44	359.52	6.96	366.96	2.07	368.12	1.62	373.5	.85
376	.85	378.92	2.29	380.88	3.17	381.13	3.35	388.67	8.16
395.5	12.55	398.52	12.65	469.435	12.15	477.453	12.283	478.175	12.287
480.092	12.296	547.56	12.691	573.265	12.725	582.614	12.733	588.252	12.72
625.389	12.61	638.607	12.596	687.774	12.467	707.412	12.575	722.827	12.72
756.837	13.333	758.353	13.349	759.61	13.379	809.295	14.307	827.987	14.494
852.783	14.674	863.041	14.734	869.227	14.731	887.005	14.683	903.427	14.704

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****					
-2432	.125	326	.035	395.5	.125

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
326	395.5	401	401	401	.1	.3	
Ineffective Flow	num=	2					
Sta L	Sta R	Elev	Permanent				
-2432	326	13.98	F				
398.52	903.427	12.65	F				

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 42372

INPUT

Description: copy of SELA 8.006  
 reach lengths adjusted  
 ineffective flows from  
 SELA

Station Elevation Data num= 53

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-211.156	13.223	-191.029	13.117	-134.272	12.749	-112.547	12.573	-93.064	12.319
-79.677	12.188	-46.427	11.007	-13.937	9.814	12.137	10.737	51.802	12.204
75.519	12.324	84.672	12.456	88.841	12.402	99.982	12.283	101.054	12.272
150	13.3	175	12.5	200	11.8	207	6	215	1.3
220	1	225	1	230	4.3	244	11	250	11.2
389.074	12.283	420.123	12.285	479.815	12.258	536.84	12.427	544.935	12.451
545.845	12.456	598.104	12.455	607.883	12.478	611.875	12.492	621.376	12.507
644.89	12.546	676.218	12.596	703.794	12.667	704.874	12.666	720.129	12.665
740.325	12.665	745.092	12.665	747.148	12.667	752.323	12.679	782.878	12.753
801.533	12.812	834.111	12.95	854.34	13.083	885.694	13.29	890.07	13.309
905.986	13.412	925.801	13.508	927.046	13.511				

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -211.156 .125 150 .035 244 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 150 244 461 461 461 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -211.156 150 13.3 F  
 250 927.046 11.2 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 41911

INPUT  
 Description: copy of SELA 7.91866\*  
 reach lengths adjusted  
 ineffective flows  
 from SELA

Station Elevation Data num= 60  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -491 13.077-436.991 12.713-436.445 12.708-427.555 12.632-404.121 12.431  
 -400.837 12.4-347.701 11.787 -338.38 11.75-312.576 11.577 -305.51 11.567  
 -260.323 12.259 -239.77 12.472-219.674 12.622-201.778 12.629-157.429 12.679  
 -132.325 12.577-126.117 12.552-108.303 12.452 -92.222 12.275 -56.872 11.811  
 -42.6 11.566 -29.718 10.935 12.373 9.896 23.102 9.748 73.613 11.305  
 88.805 11.983 95.292 11.783 200 11.47 206.18 5.88 212.23 1.52  
 213.25 1.04 217.67 .7 221 .7 226 3.1 240 10.87  
 284.32 10.341 285.912 10.542 287.588 10.609 293.189 10.726 298.238 10.806  
 351.545 11.606 355.437 11.608 413.27 11.703 421.053 11.701 449.97 11.931  
 478.887 11.705 480.238 11.701 484.35 11.653 484.676 11.65 485.187 11.651  
 537.453 12.396 554.915 12.529 568.635 12.815 578.28 13.18 610.359 14.59  
 625.011 15.033 643.66 15.101 648.377 15.111 655.071 15.152 711.696 15.218

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -491 .125 200 .035 240 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 200 240 462 462 462 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent

ExpandedLocal.rep

-491 88.81 11.98 F  
 240 711.696 10.87 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 41449

INPUT

Description: copy of SELA 7.83133\*  
 reach lengths adjusted  
 ineffective flows

from SELA

Station Elevation Data num= 156

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-2207	14.515	-2190.31	14.686	-2187.65	14.696	-2159.59	14.588	-2154.76	14.61
-2128.87	14.282	-2121.87	14.204	-2098.15	13.966	-2088.98	13.884	-2067.43	13.716
-2049.79	13.591	-2027.81	13.46	-1998.65	13.302	-1990.31	13.245	-1975.27	13.1
-1957.42	12.943	-1944.55	12.934	-1924.53	12.915	-1913.83	13.006	-1891.64	13.199
-1871.35	13.46	-1849.84	13.785	-1825.86	14.082	-1811.13	14.23	-1795.28	14.386
-1790.95	14.418	-1762.48	14.505	-1760.23	14.512	-1760.08	14.512	-1738.83	14.45
-1727.29	14.414	-1701.47	14.331	-1696.2	14.316	-1680.19	14.214	-1627.63	13.845
-1610.6	13.812	-1594.47	13.775	-1573.14	13.832	-1541.7	13.89	-1528.16	13.932
-1495.64	14.104	-1495	14.108	-1494.61	14.109	-1461.85	14.201	-1455.32	14.209
-1454.86	14.21	-1443.39	14.217	-1431.56	14.199	-1423.37	14.169	-1407.98	14.081
-1351.77	13.916	-1343.57	13.87	-1339.59	13.855	-1328.08	13.864	-1313.66	13.846
-1303.68	13.864	-1290.08	13.779	-1270.42	13.668	-1266.5	13.64	-1263.78	13.624
-1248.85	13.481	-1219.34	13.211	-1212.77	13.203	-1195.76	13.145	-1155.11	13.331
-1150.83	13.33	-1150.37	13.331	-1145.11	13.339	-1121.28	13.401	-1111.26	13.41
-1094.29	13.385	-1049	13.238	-1043.55	13.216	-1038.16	13.173	-1027.56	13.084
-975.853	12.642	-968.208	12.638	-952.152	12.673	-941.694	12.733	-917.239	12.949
-873.197	13.37	-854.363	13.384	-830.64	13.362	-804.7	13.298	-802.902	13.297
-770.451	13.286	-756.574	13.294	-741.682	13.299	-723.459	13.291	-703.282	13.255
-640.64	12.999	-637.772	12.989	-637.074	12.987	-635.02	12.971	-627.387	12.913
-577.569	12.532	-570.866	12.467	-550.055	12.298	-504.658	11.858	-485.576	11.924
-460.857	12.118	-411.735	12.177	-406.632	12.171	-404.655	12.167	-402.679	12.157
-374.915	12.091	-333.27	11.863	-330.635	11.843	-329.317	11.84	-306.181	11.741
-294.613	11.569	-259.909	10.52	-257.932	10.483	-255.955	10.481	-241.794	10.795
-223.288	11.097	-213.516	11.198	-190.244	11.722	-171.959	11.82	-157.201	11.846
-113.701	11.728	-95.679	11.69	-91.113	11.677	-87.064	11.667	-77.269	11.622
-25.026	11.295	-19.585	11.317	41.062	11.573	49.332	11.536	74.105	11.538
200	11.13	205.37	5.76	210.62	1.06	211.5	.77	215.33	.4
217	.4	222	1.9	236	10.73	265.974	11.073	277.012	11.231
304.986	12.111	307.07	12.116	328.653	12.196	337.947	12.233	391.695	12.243
403.869	12.225	427.245	12.218	448.098	12.177	465.771	12.121	474.785	12.169
520.304	12.636	548.444	12.953	577.741	13.102	585.274	13.141	592.51	13.123

ExpandedLocal.rep

594.508 13.113

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2207 .125 200 .035 236 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 200 236 462 462 462 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 -2207 41 11.57 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 40987

INPUT

Description: copy of SELA 7.744  
 Station Elevation Data num= 152  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -2194 14.515-2177.31 14.686-2174.65 14.696-2146.59 14.588-2141.76 14.61  
 -2115.87 14.282-2108.87 14.204-2085.15 13.966-2075.98 13.884-2054.43 13.716  
 -2036.79 13.591-2014.81 13.46-1985.65 13.302-1977.31 13.245-1962.27 13.1  
 -1944.42 12.943-1931.55 12.934-1911.53 12.915-1900.83 13.006-1878.64 13.199  
 -1858.35 13.46-1836.84 13.785-1812.86 14.082-1798.13 14.23-1782.28 14.386  
 -1777.95 14.418-1749.48 14.505-1747.23 14.512-1747.08 14.512-1725.83 14.45  
 -1714.29 14.414-1688.47 14.331 -1683.2 14.316-1667.19 14.214-1614.63 13.845  
 -1597.6 13.812-1581.47 13.775-1560.14 13.832 -1528.7 13.89-1515.16 13.932  
 -1482.64 14.104 -1482 14.108-1481.61 14.109-1448.85 14.201-1442.32 14.209  
 -1441.86 14.21-1430.39 14.217-1418.56 14.199-1410.37 14.169-1394.98 14.081  
 -1338.77 13.916-1330.57 13.87-1326.59 13.855-1315.08 13.864-1300.66 13.846  
 -1290.68 13.864-1277.08 13.779-1257.42 13.668 -1253.5 13.64-1250.78 13.624  
 -1235.85 13.481-1206.34 13.211-1199.77 13.203-1182.76 13.145-1142.11 13.331  
 -1137.83 13.33-1137.37 13.331-1132.11 13.339-1108.28 13.401-1098.26 13.41  
 -1081.29 13.385 -1036 13.238-1030.55 13.216-1025.16 13.173-1014.56 13.084  
 -962.853 12.642-955.208 12.638-939.152 12.673-928.694 12.733-904.239 12.949  
 -860.197 13.37-841.363 13.384 -817.64 13.362 -791.7 13.298-789.902 13.297  
 -757.451 13.286-743.574 13.294-728.682 13.299-710.459 13.291-690.282 13.255  
 -627.64 12.999-624.772 12.989-624.074 12.987 -622.02 12.971-614.387 12.913  
 -564.569 12.532-557.866 12.467-537.055 12.298-491.658 11.858-472.576 11.924  
 -447.857 12.118-398.735 12.177-393.632 12.171-391.655 12.167-389.679 12.157  
 -361.915 12.091 -320.27 11.863-317.635 11.843-316.317 11.84-293.181 11.741  
 -281.613 11.569-246.909 10.52-244.932 10.483-242.955 10.481-228.794 10.795  
 -210.288 11.097-200.516 11.198-177.244 11.722-158.959 11.82-144.201 11.846

ExpandedLocal.rep

-100.701	11.728	-82.679	11.69	-78.113	11.677	-74.064	11.667	-64.269	11.622
-12.026	11.295	-6.585	11.317	54.062	11.573	62.332	11.536	200	10.8
209	.6	213	.1	218	.7	232	10.6	278.974	11.073
290.012	11.231	317.986	12.111	320.07	12.116	341.653	12.196	350.947	12.233
404.695	12.243	416.869	12.225	440.245	12.218	461.098	12.177	478.771	12.121
487.785	12.169	533.304	12.636	561.444	12.953	590.741	13.102	598.274	13.141
605.51	13.123	607.508	13.113						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2194	.125	200	.035	232	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	200	232		20	20	20		.1	.3
Ineffective Flow			num=	2					
Sta L	Sta R	Elev	Permanent						
-2194	149.49	12	F						
322.71	607.508	12	F						

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 40967

INPUT

Description: Gause Blvd culverts  
 copy of SELA 7.74  
 reach lengths adjusted

Station Elevation Data num= 151

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2121	14.515	-2104.31	14.686	-2101.65	14.696	-2073.59	14.588	-2068.76	14.61
-2042.87	14.282	-2035.87	14.204	-2012.15	13.966	-2002.98	13.884	-1981.43	13.716
-1963.79	13.591	-1941.81	13.46	-1912.65	13.302	-1904.31	13.245	-1889.27	13.1
-1871.42	12.943	-1858.55	12.934	-1838.53	12.915	-1827.83	13.006	-1805.64	13.199
-1785.35	13.46	-1763.84	13.785	-1739.86	14.082	-1725.13	14.23	-1709.28	14.386
-1704.95	14.418	-1676.48	14.505	-1674.23	14.512	-1674.08	14.512	-1652.83	14.45
-1641.29	14.414	-1615.47	14.331	-1610.2	14.316	-1594.19	14.214	-1541.63	13.845
-1524.6	13.812	-1508.47	13.775	-1487.14	13.832	-1455.7	13.89	-1442.16	13.932
-1409.64	14.104	-1409	14.108	-1408.61	14.109	-1375.85	14.201	-1369.32	14.209
-1368.86	14.21	-1357.39	14.217	-1345.56	14.199	-1337.37	14.169	-1321.98	14.081
-1265.77	13.916	-1257.57	13.87	-1253.59	13.855	-1242.08	13.864	-1227.66	13.846
-1217.68	13.864	-1204.08	13.779	-1184.42	13.668	-1180.5	13.64	-1177.78	13.624
-1162.85	13.481	-1133.34	13.211	-1126.77	13.203	-1109.76	13.145	-1069.11	13.331
-1064.83	13.33	-1064.37	13.331	-1059.11	13.339	-1035.28	13.401	-1025.26	13.41
-1008.29	13.385	-963.009	13.238	-957.557	13.216	-952.166	13.173	-941.564	13.084



ExpandedLocal.rep

-889.853	12.642-882.208	12.638-866.152	12.673-855.694	12.733-831.239	12.949
-787.197	13.37-768.363	13.384 -744.64	13.362 -718.7	13.298-716.902	13.297
-684.451	13.286-670.574	13.294-655.682	13.299-637.459	13.291-617.282	13.255
-554.64	12.999-551.772	12.989-551.074	12.987 -549.02	12.971-541.387	12.913
-491.569	12.532-484.866	12.467-464.055	12.298-418.658	11.858-399.576	11.924
-374.857	12.118-325.735	12.177-320.632	12.171-318.655	12.167-316.679	12.157
-288.915	12.091 -247.27	11.863-244.635	11.843-243.317	11.84-220.181	11.741
-208.613	11.569-173.909	10.52-171.932	10.483-169.955	10.481-155.794	10.795
-137.288	11.097-127.516	11.198-104.244	11.722 -85.959	11.82 -71.201	11.846
-27.701	11.728 -9.679	11.69 -5.113	11.677 -1.064	11.667 8.731	11.622
60.974	11.295 66.415	11.317 127.062	11.573 135.332	11.536 441	11.7
452.2	10.5 467.5	2 468.5	.7 470.3	-1.5 485.2	-2.9
485.8	-3.6 500	-3.4 500	-3.3 510.2	-2.3 515	-.5
528.5	0 530	.7 540.7	8.3 556.9	10.6 562	11.9
606.304	12.636 634.444	12.953 663.741	13.102 671.274	13.141 678.51	13.123
680.508	13.113				

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
*****								
-2121	.125		441	.035		562	.125	

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	441	562		105	105	105		.1	.3
Ineffective Flow			num=	2					
Sta L	Sta R	Elev	Permanent						
-2121	479.05	12	F						
530.05	680.508	12	F						

CULVERT

RIVER: W14 Main  
 REACH: Lower RS: 40900

INPUT

Description: Gause Blvd  
 taken from SELA model  
 Distance from Upstream XS = 1.5  
 Deck/Roadway Width = 102  
 Weir Coefficient = 2.7  
 Upstream Deck/Roadway Coordinates  
 num= 2  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 0 12 1000 12

Upstream Bridge Cross Section Data

ExpandedLocal.rep

Station Elevation Data num= 24

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4535	18	-4300	17	-3700	16	-3330	15	-1790	14
-815	13	20	12	434.9	11.5	441	11.7	452.2	10.5
467.5	2	468.5	.7	470.3	-3.23	485.2	-3.23	485.8	-3.6
500	-3.4	500	-3.3	510.2	-3.23	515	-3.23	528.5	-3.23
530	.7	540.7	8.3	556.9	10.6	562	11.9		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-4535	.125	452.2	.035	556.9	.125

Bank Sta: Left Right Coeff Contr. Expan.

441	562		.1	.3
-----	-----	--	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-4535	479.05	12	F
530.05	562	12	F

Downstream Deck/Roadway Coordinates num= 2

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
0	12		1000	12	

Downstream Bridge Cross Section Data

Station Elevation Data num= 21

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4435	17	-3740	16	-3365	15	-1880	14	-950	13
-65	12	520.3	11.1	525.4	10.2	526.4	-3.7	539.7	-5.1
544.7	-4.3	554.7	-3.22	560	-3.22	569.6	-3.22	575.2	-3.22
583.4	-3.22	586.4	-2.5	589.5	-.7	606.8	9.8	615.9	6.7
621	10.8								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-4435	.125	525.4	.035	606.8	.125

Bank Sta: Left Right Coeff Contr. Expan.

520.3	606.8		.1	.3
-------	-------	--	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-4435	529.35	12	F
578.85	621	12	F

ExpandedLocal.rep

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name	Shape	Rise	Span				
Culvert #1	Box	12	12				

FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef

	1.5	102	.013	.013	0		.4
--	-----	-----	------	------	---	--	----

1

Number of Barrels = 4  
 Upstream Elevation = -3.23  
 Centerline Stations

Sta.	Sta.	Sta.	Sta.
486.55	498.55	510.55	522.55

Downstream Elevation = -3.22  
 Centerline Stations

Sta.	Sta.	Sta.	Sta.
536.1	548.1	560.1	572.1

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 40862

INPUT  
 Description: DS Gause Blvd Culverts  
 copy of SELA 7.72  
 Reach lengths adjusted

Station Elevation Data num= 161

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1867	14.515	-1850.31	14.686	-1847.65	14.696	-1819.59	14.588	-1814.76	14.61
-1788.87	14.282	-1781.87	14.204	-1758.15	13.966	-1748.98	13.884	-1727.43	13.716
-1709.79	13.591	-1687.81	13.46	-1658.65	13.302	-1650.31	13.245	-1635.27	13.1
-1617.42	12.943	-1604.55	12.934	-1584.53	12.915	-1573.83	13.006	-1551.64	13.199
-1531.35	13.46	-1509.84	13.785	-1485.86	14.082	-1471.13	14.23	-1455.28	14.386

ExpandedLocal.rep

-1450.95	14.418-1422.48	14.505-1420.23	14.512-1420.08	14.512-1398.83	14.45
-1387.29	14.414-1361.47	14.331 -1356.2	14.316-1340.19	14.214-1287.63	13.845
-1270.6	13.812-1254.47	13.775-1233.14	13.832 -1201.7	13.89-1188.16	13.932
-1155.64	14.104 -1155	14.108-1154.61	14.109-1121.85	14.201-1115.32	14.209
-1114.86	14.21-1103.39	14.217-1091.56	14.199-1083.37	14.169-1067.98	14.081
-1011.77	13.916-1003.57	13.87-999.596	13.855-988.082	13.864-973.661	13.846
-963.682	13.864-950.081	13.779-930.427	13.668-926.501	13.64-923.784	13.624
-908.859	13.481 -879.34	13.211-872.771	13.203 -855.76	13.145-815.115	13.331
-810.839	13.33-810.372	13.331-805.113	13.339-781.286	13.401-771.261	13.41
-754.295	13.385-709.009	13.238-703.557	13.216-698.166	13.173-687.564	13.084
-635.853	12.642-628.208	12.638-612.152	12.673-601.694	12.733-577.239	12.949
-533.197	13.37-514.363	13.384 -490.64	13.362 -464.7	13.298-462.902	13.297
-430.451	13.286-416.574	13.294-401.682	13.299-383.459	13.291-363.282	13.255
-300.64	12.999-297.772	12.989-297.074	12.987 -295.02	12.971-287.387	12.913
-237.569	12.532-230.866	12.467-210.055	12.298-164.658	11.858-145.576	11.924
-120.857	12.118 -71.735	12.177 -66.632	12.171 -64.655	12.167 -62.679	12.157
-34.915	12.091 6.73	11.863 9.365	11.843 10.683	11.84 33.819	11.741
45.387	11.569 80.091	10.52 82.068	10.483 84.045	10.481 98.206	10.795
116.712	11.097 126.484	11.198 149.756	11.722 168.041	11.82 182.799	11.846
226.299	11.728 244.321	11.69 248.887	11.677 252.936	11.667 262.731	11.622
314.974	11.295 320.415	11.317 381.062	11.573 389.332	11.536 414.105	11.538
520.3	11.1 525.4	10.2 526.4	-3.7 539.7	-5.1 544.7	-4.3
554.7	-3 560	-1.5 569.6	-2.4 575.2	-2.6 583.4	-2.4
586.4	-2.5 589.5	-.7 606.8	9.8 615.9	6.7 621	10.8
644.986	12.111 647.07	12.116 668.653	12.196 677.947	12.233 731.695	12.243
743.869	12.225 767.245	12.218 788.098	12.177 805.771	12.121 814.785	12.169
860.304	12.636 888.444	12.953 917.741	13.102 925.274	13.141 932.51	13.123
934.508	13.113				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1867	.125	520.3	.035	606.8	.125

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	520.3	606.8		64	64	.1	.3
Ineffective Flow			num=	2			
Sta L	Sta R	Elev	Permanent				
-1867	529.35	12	F				
578.85	934.508	12	F				

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 40798

INPUT

ExpandedLocal.rep

Description: copy of SELA 7.708

Station Elevation Data num= 117

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1708	13.422	-1700.53	13.397	-1643.45	13.12	-1628.1	12.967	-1610.5	12.995
-1583.87	11.8	-1569.96	11.458	-1544.61	11.417	-1523.53	12.193	-1511.66	12.676
-1493.36	12.998	-1461.11	13.306	-1445.89	13.357	-1445.77	13.357	-1417.99	13.239
-1346.08	12.801	-1345.52	12.798	-1345.18	12.792	-1278.7	11.598	-1261.6	12.223
-1221.16	12.896	-1211.87	12.951	-1179.75	13.154	-1177.98	13.162	-1173.04	13.157
-1150.54	13.144	-1113.03	13.089	-1112.13	13.088	-1112.08	13.088	-1111.96	13.087
-1079.06	12.858	-1031.65	12.059	-1013.01	11.802	-977.915	12.197	-946.971	12.484
-934.403	12.559	-913.948	12.694	-901.858	12.716	-854.813	12.779	-849.316	12.786
-847.903	12.785	-845.513	12.78	-824.639	12.71	-815.883	12.679	-814.88	12.674
-762.96	12.084	-748.835	11.963	-709.221	12.365	-682.789	12.52	-667.733	12.497
-649.766	12.526	-638.103	12.468	-623.118	12.407	-593.452	12.29	-574.749	12.232
-551.162	12.161	-542.38	12.125	-518.35	12.023	-510.01	11.968	-485.539	11.82
-469.953	11.67	-419.916	11.247	-412.902	11.206	-387.105	11.081	-360.594	11.034
-348.163	11.029	-330.09	10.962	-321.419	10.934	-298.181	11.168	-275.835	11.294
-246.826	11.444	-222.267	11.523	-209.793	11.537	-128.188	11.601	-125.3	11.6
-123.115	11.6	-107.36	11.652	-90.064	11.709	-88.943	11.714	-84.495	11.749
-23.963	12.124	-12.398	12.181	9.088	12.245	25.235	12.218	42.139	12.184
69.429	12.159	75.189	12.146	80.289	12.116	92.591	12.162	100.064	12.114
140.5	12.5	161	12.3	181.5	11.9	202	11.5	213.3	.5
221.5	-1.2	228.6	.6	243	11.1	253.2	12.2	304.236	12.128
320.952	12.223	344.332	12.356	344.564	12.356	365.091	12.36	401.105	12.282
403.906	12.274	405.535	12.281	442.722	12.448	466.93	12.636	481.537	12.775
488.289	12.887	520.352	13.243	545.046	13.47	559.168	13.597	571.001	13.671
589.718	13.886	630.873	14.097						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1708	.125	140.5	.035	253.2	.125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 140.5 253.2 487 487 487 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -1708 153.39 12 F  
 266.89 630.873 12 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 40311

INPUT

ExpandedLocal.rep

Description: copy of SELA 7.61575\*

reach lengths adjusted

Station Elevation Data

num= 116

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1563	13.422	1555.53	13.397	1498.45	13.12	-1483.1	12.967	-1465.5	12.995
-1438.87	11.8	-1424.96	11.458	-1399.61	11.417	-1378.53	12.193	-1366.66	12.676
-1348.36	12.998	-1316.11	13.306	-1300.89	13.357	-1300.77	13.357	-1272.99	13.239
-1201.08	12.801	-1200.52	12.798	-1200.18	12.792	-1133.7	11.598	-1116.6	12.223
-1076.16	12.896	-1066.87	12.951	-1034.75	13.154	-1032.98	13.162	-1028.04	13.157
-1005.54	13.144	-968.037	13.089	-967.136	13.088	-967.084	13.088	-966.961	13.087
-934.062	12.858	-886.654	12.059	-868.016	11.802	-832.915	12.197	-801.971	12.484
-789.403	12.559	-768.948	12.694	-756.858	12.716	-709.813	12.779	-704.316	12.786
-702.903	12.785	-700.513	12.78	-679.639	12.71	-670.883	12.679	-669.88	12.674
-617.96	12.084	-603.835	11.963	-564.221	12.365	-537.789	12.52	-522.733	12.497
-504.766	12.526	-493.103	12.468	-478.118	12.407	-448.452	12.29	-429.749	12.232
-406.162	12.161	-397.38	12.125	-373.35	12.023	-365.01	11.968	-340.539	11.82
-324.953	11.67	-274.916	11.247	-267.902	11.206	-242.105	11.081	-215.594	11.034
-203.163	11.029	-185.09	10.962	-176.419	10.934	-153.181	11.168	-130.835	11.294
-101.826	11.444	-77.267	11.523	-64.793	11.537	16.812	11.601	19.7	11.6
21.885	11.6	37.64	11.652	54.936	11.709	56.057	11.714	60.505	11.749
121.037	12.124	132.602	12.181	154.088	12.245	170.235	12.218	187.139	12.184
214.429	12.159	220.189	12.146	225.289	12.116	237.591	12.162	245.064	12.114
278.829	11.886	346.1	11.7	358.7	2.58	359.69	2.21	361.51	-.11
367.85	-.8	374.55	1.87	388.15	10.7	449.236	12.128	465.952	12.223
489.332	12.356	489.564	12.356	510.091	12.36	546.105	12.282	548.906	12.274
550.535	12.281	587.722	12.448	611.93	12.636	626.537	12.775	633.289	12.887
665.352	13.243	690.046	13.47	704.168	13.597	716.001	13.671	734.718	13.886
775.873	14.097								

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1563	.125	346.1	.035	388.15	.125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 346.1 388.15 162 162 162 .1 .3

Ineffective Flow

num= 1

Sta L	Sta R	Elev	Permanent
-1563	154.1	12.24	F

CROSS SECTION

RIVER: W14 Main

REACH: Lower

RS: 40149

INPUT

ExpandedLocal.rep

Description:

Station Elevation Data num= 114

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1423	13.422	-1415.53	13.397	-1358.45	13.12	-1343.1	12.967	-1325.5	12.995
-1298.87	11.8	-1284.96	11.458	-1259.61	11.417	-1238.53	12.193	-1226.66	12.676
-1208.36	12.998	-1176.11	13.306	-1160.89	13.357	-1160.77	13.357	-1132.99	13.239
-1061.08	12.801	-1060.52	12.798	-1060.18	12.792	-993.7	11.598	-976.6	12.223
-936.164	12.896	-926.872	12.951	-894.753	13.154	-892.98	13.162	-888.044	13.157
-865.541	13.144	-828.037	13.089	-827.136	13.088	-827.084	13.088	-826.961	13.087
-794.062	12.858	-746.654	12.059	-728.016	11.802	-692.915	12.197	-661.971	12.484
-649.403	12.559	-628.948	12.694	-616.858	12.716	-569.813	12.779	-564.316	12.786
-562.903	12.785	-560.513	12.78	-539.639	12.71	-530.883	12.679	-529.88	12.674
-477.96	12.084	-463.835	11.963	-424.221	12.365	-397.789	12.52	-382.733	12.497
-364.766	12.526	-353.103	12.468	-338.118	12.407	-308.452	12.29	-289.749	12.232
-266.162	12.161	-257.38	12.125	-233.35	12.023	-225.01	11.968	-200.539	11.82
-184.953	11.67	-134.916	11.247	-127.902	11.206	-102.105	11.081	-75.594	11.034
-63.163	11.029	-45.09	10.962	-36.419	10.934	-13.181	11.168	9.165	11.294
38.174	11.444	62.733	11.523	75.207	11.537	156.812	11.601	159.7	11.6
161.885	11.6	177.64	11.652	194.936	11.709	196.057	11.714	200.505	11.749
261.037	12.124	272.602	12.181	294.088	12.245	310.235	12.218	327.139	12.184
354.429	12.159	360.189	12.146	365.289	12.116	377.591	12.162	385.064	12.114
490.2	11.9	505.2	4.1	507.2	-.2	514.2	-.4	533.3	10.3
561.923	11.172	589.236	12.128	605.952	12.223	629.332	12.356	629.564	12.356
650.091	12.36	686.105	12.282	688.906	12.274	690.535	12.281	727.722	12.448
751.93	12.636	766.537	12.775	773.289	12.887	805.352	13.243	830.046	13.47
844.168	13.597	856.001	13.671	874.718	13.886	915.873	14.097		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1423	.125	490.2	.035	533.3	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	490.2	533.3		35	35	35		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1423	462.37	12.01	F
563.26	915.873	12.01	F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 40114

INPUT  
 Description: Florida Avenue

ExpandedLocal.rep

copy of SELA 7.579

Station Elevation Data num= 130

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
169	13.422	176.47	13.397	233.545	13.12	248.893	12.967	266.492	12.995
293.121	11.8	307.035	11.458	332.385	11.417	353.466	12.193	365.332	12.676
383.638	12.998	415.885	13.306	431.101	13.357	431.227	13.357	459.002	13.239
530.917	12.801	531.471	12.798	531.819	12.792	598.3	11.598	615.4	12.223
655.836	12.896	665.128	12.951	697.247	13.154	699.02	13.162	703.956	13.157
726.459	13.144	763.963	13.089	764.864	13.088	764.916	13.088	765.039	13.087
797.938	12.858	845.346	12.059	863.984	11.802	899.085	12.197	930.029	12.484
942.597	12.559	963.052	12.694	975.142	12.716	1022.187	12.779	1027.684	12.786
1029.097	12.785	1031.487	12.781	1052.361	12.711	1061.117	12.679	1062.12	12.674
1114.04	12.084	1128.165	11.963	1167.779	12.365	1194.211	12.521	1209.267	12.497
1227.234	12.526	1238.897	12.468	1253.882	12.407	1283.548	12.291	1302.251	12.232
1325.838	12.161	1334.62	12.125	1358.65	12.023	1366.99	11.968	1391.461	11.82
1407.047	11.671	1457.084	11.247	1464.098	11.206	1489.895	11.081	1516.406	11.034
1528.837	11.029	1546.91	10.962	1555.581	10.934	1578.819	11.168	1601.165	11.294
1630.174	11.444	1654.733	11.523	1667.207	11.537	1748.812	11.601	1751.7	11.6
1753.885	11.6	1769.64	11.652	1786.936	11.709	1788.057	11.714	1792.505	11.749
1853.037	12.124	1864.602	12.181	1886.088	12.245	1902.235	12.218	1919.139	12.184
1946.429	12.159	1952.189	12.146	1957.289	12.116	1969.591	12.162	1977.064	12.114
2056	12.58	2070	11.5	2070.01	11.5	2081	11.5	2084	3
2084.01	3.2	2084.415	3.2	2085.585	3.2	2090	4.75	2096	1.75
2097.415	1.6	2098.585	1.6	2099	1.6	2099.01	1.6	2100	1.75
2111	7.5	2112	7.5	2112.01	7.5	2113	7.5	2113.01	7.5
2115	4.75	2126	11.65	2151	12.542	197.952	12.223	2221.332	12.356
2221.564	12.356	2242.091	12.362	2278.105	12.282	2280.906	12.274	2282.535	12.281
2319.722	12.448	2343.93	12.636	2358.537	12.775	2365.289	12.887	2397.352	13.243
2422.046	13.472	2436.168	13.597	2448.001	13.671	2466.718	13.886	2507.873	14.097

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
169	.125	2070	.035	2126	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	2070	2126		32	32	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
169	2081.13	12.01	F
2112.05	2507.873	12.01	F

BRIDGE

RIVER: W14 Main  
 REACH: Lower

RS: 40100



ExpandedLocal.rep

INPUT

Description: Florida Avenue Bridge  
 taken from SELA model  
 Distance from Upstream XS = .05  
 Deck/Roadway Width = 31.9  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 4			
Sta	Hi	Cord	Lo Cord
2056	12.01	11.12	2112
2151	12.01		

Upstream Bridge Cross Section Data

Station Elevation Data num= 130									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
169	13.422	176.47	13.397	233.545	13.12	248.893	12.967	266.492	12.995
293.121	11.8	307.035	11.458	332.385	11.417	353.466	12.193	365.332	12.676
383.638	12.998	415.885	13.306	431.101	13.357	431.227	13.357	459.002	13.239
530.917	12.801	531.471	12.798	531.819	12.792	598.3	11.598	615.4	12.223
655.836	12.896	665.128	12.951	697.247	13.154	699.02	13.162	703.956	13.157
726.459	13.144	763.963	13.089	764.864	13.088	764.916	13.088	765.039	13.087
797.938	12.858	845.346	12.059	863.984	11.802	899.085	12.197	930.029	12.484
942.597	12.559	963.052	12.694	975.142	12.716	1022.187	12.779	1027.684	12.786
1029.097	12.785	1031.487	12.781	1052.361	12.711	1061.117	12.679	1062.12	12.674
1114.04	12.084	1128.165	11.963	1167.779	12.365	1194.211	12.521	1209.267	12.497
1227.234	12.526	1238.897	12.468	1253.882	12.407	1283.548	12.291	1302.251	12.232
1325.838	12.161	1334.62	12.125	1358.65	12.023	1366.99	11.968	1391.461	11.82
1407.047	11.671	1457.084	11.247	1464.098	11.206	1489.895	11.081	1516.406	11.034
1528.837	11.029	1546.91	10.962	1555.581	10.934	1578.819	11.168	1601.165	11.294
1630.174	11.444	1654.733	11.523	1667.207	11.537	1748.812	11.601	1751.7	11.6
1753.885	11.6	1769.64	11.652	1786.936	11.709	1788.057	11.714	1792.505	11.749
1853.037	12.124	1864.602	12.181	1886.088	12.245	1902.235	12.218	1919.139	12.184
1946.429	12.159	1952.189	12.146	1957.289	12.116	1969.591	12.162	1977.064	12.114
2056	12.58	2070	11.5	2070.01	11.5	2081	11.5	2084	3
2084.01		32084.415		32085.585	3.2	2090	4.75	2096	1.75
2097.415	1.642	2098.585	1.6	2099	1.6	2099.01	1.6	2100	1.75
2111	1.35	2112	7.5	2112.01	7.5	2113	7.5	2113.01	7.5
2115	4.75	2126	11.65	2151	12.542	197.952	12.223	2221.332	12.356
2221.564	12.356	2242.091	12.362	2278.105	12.282	2280.906	12.274	2282.535	12.281
2319.722	12.448	2343.93	12.636	2358.537	12.775	2365.289	12.887	2397.352	13.243
2422.046	13.472	2436.168	13.597	2448.001	13.671	2466.718	13.886	2507.873	14.097

Manning's n Values num= 3					
Sta	n	Val	Sta	n	Val
*****					

ExpandedLocal.rep

169 .125 2070 .035 2126 .125

Bank Sta: Left Right Coeff Contr. Expan.  
 2070 2126 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 169 2081.13 12.01 F  
 2112.052507.873 12.01 F

Downstream Deck/Roadway Coordinates

num= 4

Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord
2056	12.01	11.12	2112	12.01	11.12	2112	12.01	7.5
2151	12.01							

Downstream Bridge Cross Section Data

Station Elevation Data num= 131

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
169	13.422	176.47	13.397	233.545	13.12	248.893	12.967	266.492	12.995
293.121	11.8	307.035	11.458	332.385	11.417	353.466	12.193	365.332	12.676
383.638	12.998	415.885	13.306	431.101	13.357	431.227	13.357	459.002	13.239
530.917	12.801	531.471	12.798	531.819	12.792	598.3	11.598	615.4	12.223
655.836	12.896	665.128	12.951	697.247	13.154	699.02	13.162	703.956	13.157
726.459	13.144	763.963	13.089	764.864	13.088	764.916	13.088	765.039	13.087
797.938	12.858	845.346	12.059	863.984	11.802	899.085	12.197	930.029	12.484
942.597	12.559	963.052	12.694	975.142	12.716	1022.187	12.779	1027.684	12.786
1029.097	12.785	1031.487	12.781	1052.361	12.711	1061.117	12.679	1062.12	12.674
1114.04	12.084	1128.165	11.963	1167.779	12.365	1194.211	12.521	1209.267	12.497
1227.234	12.526	1238.897	12.468	1253.882	12.407	1283.548	12.291	1302.251	12.232
1325.838	12.161	1334.62	12.125	1358.65	12.023	1366.99	11.968	1391.461	11.82
1407.047	11.671	1457.084	11.247	1464.098	11.206	1489.895	11.081	1516.406	11.034
1528.837	11.029	1546.91	10.962	1555.581	10.934	1578.819	11.168	1601.165	11.294
1630.174	11.444	1654.733	11.523	1667.207	11.537	1748.812	11.601	1751.7	11.6
1753.885	11.6	1769.64	11.652	1786.936	11.709	1788.057	11.714	1792.505	11.749
1853.037	12.124	1864.602	12.181	1886.088	12.245	1902.235	12.218	1919.139	12.184
1946.429	12.159	1952.189	12.146	1957.289	12.116	1969.591	12.162	1977.064	12.114
2056	12.58	2070	11.5	2070.01	11.5	2081	11.5	2084	3
2084.01		32084.415		32085.585	3.2	2090	4.75	2096	1.75
2097.415	1.642	2098.585	1.6	2099	1.6	2099.01	1.6	2100	1.75
2111	1.35	2112	7.5	2112.01	7.5	2113	7.5	2113.01	7.5
2115	4.75	2126	11.65	2151	12.542	2181.236	12.128	2197.952	12.223
2221.332	12.356	2221.564	12.356	2242.091	12.362	2278.105	12.282	2280.906	12.274
2282.535	12.281	2319.722	12.448	2343.93	12.636	2358.537	12.775	2365.289	12.887
2397.352	13.243	2422.046	13.472	2436.168	13.597	2448.001	13.671	2466.718	13.886
2507.873	14.097								

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 169 .125 2070 .035 2126 .125

Bank Sta: Left Right Coeff Contr. Expan.  
 2070 2126 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 1692081.155 12.01 F  
 2112.052507.873 12.01 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 2

Pier Data

Pier Station Upstream= 2085 Downstream= 2085  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.08 10 1.08 15  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.08 10 1.08 15

Pier Data

Pier Station Upstream= 2098 Downstream= 2098  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.08 10 1.08 15  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.08 10 1.08 15

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data  
 Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method  
Energy Only

Additional Bridge Parameters

- Add Friction component to Momentum
- Do not add Weight component to Momentum
- Class B flow critical depth computations use critical depth inside the bridge at the upstream end
- Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main  
REACH: Lower RS: 40082

INPUT

Description: Florida Avenue  
copy of SELA 7.573

Station Elevation Data num= 131

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
169	13.422	176.47	13.397	233.545	13.12	248.893	12.967	266.492	12.995
293.121	11.8	307.035	11.458	332.385	11.417	353.466	12.193	365.332	12.676
383.638	12.998	415.885	13.306	431.101	13.357	431.227	13.357	459.002	13.239
530.917	12.801	531.471	12.798	531.819	12.792	598.3	11.598	615.4	12.223
655.836	12.896	665.128	12.951	697.247	13.154	699.02	13.162	703.956	13.157
726.459	13.144	763.963	13.089	764.864	13.088	764.916	13.088	765.039	13.087
797.938	12.858	845.346	12.059	863.984	11.802	899.085	12.197	930.029	12.484
942.597	12.559	963.052	12.694	975.142	12.716	1022.187	12.779	1027.684	12.786
1029.097	12.785	1031.487	12.781	1052.361	12.711	1061.117	12.679	1062.12	12.674
1114.04	12.084	1128.165	11.963	1167.779	12.365	1194.211	12.521	1209.267	12.497
1227.234	12.526	1238.897	12.468	1253.882	12.407	1283.548	12.291	1302.251	12.232
1325.838	12.161	1334.62	12.125	1358.65	12.023	1366.99	11.968	1391.461	11.82
1407.047	11.671	1457.084	11.247	1464.098	11.206	1489.895	11.081	1516.406	11.034
1528.837	11.029	1546.91	10.962	1555.581	10.934	1578.819	11.168	1601.165	11.294
1630.174	11.444	1654.733	11.523	1667.207	11.537	1748.812	11.601	1751.7	11.6
1753.885	11.6	1769.64	11.652	1786.936	11.709	1788.057	11.714	1792.505	11.749
1853.037	12.124	1864.602	12.181	1886.088	12.245	1902.235	12.218	1919.139	12.184
1946.429	12.159	1952.189	12.146	1957.289	12.116	1969.591	12.162	1977.064	12.114
2056	12.58	2070	11.5	2070.01	11.5	2081	11.5	2084	3
2084.01		32084.415		32085.585	3.2	2090	4.75	2096	1.75
2097.415	1.642	2098.585	1.6	2099	1.6	2099.01	1.6	2100	1.75
2111	1.35	2112	7.5	2112.01	7.5	2113	7.5	2113.01	7.5
2115	4.75	2126	11.65	2151	12.542	2181.236	12.128	2197.952	12.223
2221.332	12.356	2221.564	12.356	2242.091	12.362	2278.105	12.282	2280.906	12.274

ExpandedLocal.rep

2282.535 12.2812319.722 12.448 2343.93 12.6362358.537 12.7752365.289 12.887  
 2397.352 13.2432422.046 13.472436.168 13.5972448.001 13.6712466.718 13.886  
 2507.873 14.097

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 169 .125 2070 .035 2126 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 2070 2126 2 2 2 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 1692081.155 12.01 F  
 2112.052507.873 12.01 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 40080

INPUT

Description: copy of SELA 7.572  
 reach lengths adjusted  
 ineffective flows from  
 SELA

Station Elevation Data num= 123  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1396 13.422-1388.53 13.397-1331.45 13.12 -1316.1 12.967 -1298.5 12.995  
 -1271.87 11.8-1257.96 11.458-1232.61 11.417-1211.53 12.193-1199.66 12.676  
 -1181.36 12.998-1149.11 13.306-1133.89 13.357-1133.77 13.357-1105.99 13.239  
 -1034.08 12.801-1033.52 12.798-1033.18 12.792 -966.7 11.598 -949.6 12.223  
 -909.164 12.896-899.872 12.951-867.753 13.154 -865.98 13.162-861.044 13.157  
 -838.541 13.144-801.037 13.089-800.136 13.088-800.084 13.088-799.961 13.087  
 -767.062 12.858-719.654 12.059-701.016 11.802-665.915 12.197-634.971 12.484  
 -622.403 12.559-601.948 12.694-589.858 12.716-542.813 12.779-537.316 12.786  
 -535.903 12.785-533.513 12.78-512.639 12.71-503.883 12.679 -502.88 12.674  
 -450.96 12.084-436.835 11.963-397.221 12.365-370.789 12.52-355.733 12.497  
 -337.766 12.526-326.103 12.468-311.118 12.407-281.452 12.29-262.749 12.232  
 -239.162 12.161 -230.38 12.125 -206.35 12.023 -198.01 11.968-173.539 11.82  
 -157.953 11.67-107.916 11.247-100.902 11.206 -75.105 11.081 -48.594 11.034  
 -36.163 11.029 -18.09 10.962 -9.419 10.934 13.819 11.168 36.165 11.294  
 65.174 11.444 89.733 11.523 102.207 11.537 183.812 11.601 186.7 11.6  
 188.885 11.6 204.64 11.652 221.936 11.709 223.057 11.714 227.505 11.749  
 288.037 12.124 299.602 12.181 321.088 12.245 337.235 12.218 354.139 12.184  
 381.429 12.159 387.189 12.146 392.289 12.116 404.591 12.162 412.064 12.114

ExpandedLocal.rep

445.829	11.886	454.106	11.846	500	12.5	511	11.7	515	7.9
516	4.3	519	2.7	519.5	3	525	.2	534	-.7
538.4	.3	544	0	550	3.8	554	5.4	557	11.5
616.236	12.128	632.952	12.223	656.332	12.356	656.564	12.356	677.091	12.36
713.105	12.282	715.906	12.274	717.535	12.281	754.722	12.448	778.93	12.636
793.537	12.775	800.289	12.887	832.352	13.243	857.046	13.47	871.168	13.597
883.001	13.671	901.718	13.886	942.873	14.097				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1396	.125	500	.035	557	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	500	557		42	42	42		.1	.3
Ineffective Flow		num=	2						
Sta L	Sta R	Elev	Permanent						
-1396	497.19	12.01	F						
569.585	942.873	12.01	F						

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 40038

INPUT

Description: copy of SELA 7.564  
 reach lengths adjusted

Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1396	13.422	-1388.53	13.397	-1331.45	13.12	-1316.1	12.967	-1298.5	12.995
-1271.87	11.8	-1257.96	11.458	-1232.61	11.417	-1211.53	12.193	-1199.66	12.676
-1181.36	12.998	-1149.11	13.306	-1133.89	13.357	-1133.77	13.357	-1105.99	13.239
-1034.08	12.801	-1033.52	12.798	-1033.18	12.792	-966.7	11.598	-949.6	12.223
-909.164	12.896	-899.872	12.951	-867.753	13.154	-865.98	13.162	-861.044	13.157
-838.541	13.144	-801.037	13.089	-800.136	13.088	-800.084	13.088	-799.961	13.087
-767.062	12.858	-719.654	12.059	-701.016	11.802	-665.915	12.197	-634.971	12.484
-622.403	12.559	-601.948	12.694	-589.858	12.716	-542.813	12.779	-537.316	12.786
-535.903	12.785	-533.513	12.78	-512.639	12.71	-503.883	12.679	-502.88	12.674
-450.96	12.084	-436.835	11.963	-397.221	12.365	-370.789	12.52	-355.733	12.497
-337.766	12.526	-326.103	12.468	-311.118	12.407	-281.452	12.29	-262.749	12.232
-239.162	12.161	-230.38	12.125	-206.35	12.023	-198.01	11.968	-173.539	11.82
-157.953	11.67	-107.916	11.247	-100.902	11.206	-75.105	11.081	-48.594	11.034
-36.163	11.029	-18.09	10.962	-9.419	10.934	13.819	11.168	36.165	11.294
65.174	11.444	89.733	11.523	102.207	11.537	183.812	11.601	186.7	11.6
188.885	11.6	204.64	11.652	221.936	11.709	223.057	11.714	227.505	11.749

ExpandedLocal.rep

288.037	12.124	299.602	12.181	321.088	12.245	337.235	12.218	354.139	12.184
381.429	12.159	387.189	12.146	392.289	12.116	404.591	12.162	412.064	12.114
445.829	11.886	454.106	11.846	456.653	11.751	507	11.4	526.2	10.5
537.3	3.9	539.3	-.3	545.3	-.5	551.4	.3	552.4	3.8
567.5	11.8	572	13.4	616.236	12.128	632.952	12.223	656.332	12.356
656.564	12.356	677.091	12.36	713.105	12.282	715.906	12.274	717.535	12.281
754.722	12.448	778.93	12.636	793.537	12.775	800.289	12.887	832.352	13.243
857.046	13.47	871.168	13.597	883.001	13.671	901.718	13.886	942.873	14.097

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1396	.125	507	.035	572	.125

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
507	572	756	756	756	.1	.3	
Ineffective Flow	num=	2					
Sta L	Sta R	Elev	Permanent				
-1396	321	12.24	F				
572	942.873	13.4	F				

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 39282

INPUT

Description:

Station Elevation Data num= 149

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1323	13.067	-1281.12	12.95	-1261.57	12.723	-1247.56	12.542	-1238.52	12.259
-1196.54	11.279	-1185.29	11.01	-1180.44	10.889	-1176.02	11.094	-1146.88	12.647
-1136.56	12.617	-1113.32	12.819	-1100.46	12.865	-1079.76	12.996	-1072.85	12.969
-1071.35	12.966	-1060.16	12.954	-1041.27	12.92	-1003.19	12.802	-961.016	12.673
-954.903	12.649	-946.224	12.58	-907.812	12.383	-880.756	12.013	-845.163	12.299
-840.625	12.322	-838.452	12.337	-835.744	12.356	-832.279	12.396	-811.86	12.64
-775.307	13.05	-766.54	13.195	-760.365	13.289	-736.206	13.211	-732.798	13.183
-722.948	13.155	-710.947	13.081	-656.321	12.686	-631.077	12.407	-623.007	12.314
-611.486	12.093	-589.694	11.629	-542.261	12.112	-526.475	12.266	-517.782	12.363
-489.753	12.642	-487.782	12.645	-461.134	12.682	-456.439	12.687	-439.389	12.694
-389.812	12.677	-368.863	12.657	-356.499	12.653	-344.262	12.609	-332.808	12.562
-323.327	12.527	-310.977	12.428	-290.236	12.268	-261.703	11.998	-224.056	11.62
-215.818	11.557	-190.965	11.402	-186.57	11.389	-157.875	11.261	-153.118	11.245
-126.531	11.183	-120.499	11.112	-91.694	11.004	-69.667	10.666	-67.907	10.657
-47.829	10.598	-25.875	10.746	-15.021	10.703	6.933	10.711	28.641	10.633
39.742	10.629	61.45	10.591	72.55	10.584	115.966	10.481	138.167	10.472

ExpandedLocal.rep

149.267	10.393	170.975	10.176	192.683	10.275	203.783	10.267	247.2	10.392
258.093	10.412	270.886	10.452	274.671	10.401	281.824	10.358	344.32	11.06
354.54	10.76	363.6	10.15	375.86	4.77	377.9	4.28	380.47	2.16
386.57	2.02	388.2	-.65	394.28	-.26	395.39	-.19	396.56	1.57
399.49	2.26	401.23	4.5	407.4	7.44	414.35	10.95	418.83	11.78
519.323	10.206	537.347	10.264	547.006	10.25	562.393	10.261	568.094	10.271
589.3	10.316	608.024	10.345	617.772	10.36	651.486	10.299	677.382	10.244
694.948	10.207	701.874	10.197	717.817	10.173	738.41	10.265	752.092	10.294
781.872	10.541	798.604	10.639	807.922	10.662	825.334	10.698	884.093	11.138
912.259	11.322	914.885	11.337	917.907	11.356	974.568	11.654	999.183	11.812
1017.952	11.897	1031.165	11.928	1042.645	11.964	1052.945	11.971	1062.938	11.99
1074.395	11.931	1096.199	11.801	1111.773	11.538	1154.221	11.386	1162.721	11.453
1205.217	11.833	1229.242	12.051	1234.047	12.068	1282.829	12.202	1329.025	12.188
1339.848	12.213	1393.7	12.423	1395.547	12.425	1399.662	12.428		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1323	.125	344.32	.035	418.83	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	344.32	418.83		253	253	253		.1	.3
Ineffective Flow			num=	2					
	Sta L	Sta R	Elev	Permanent					
	-1323	344.3	11.06	F					
	418.81	1399.662	11.78	F					

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 39029

INPUT

Description: copy of SELA 7.373  
 reach lengths adjusted

Station Elevation Data num= 154

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2431	11.988	-2423.73	12.056	-2364.31	12.337	-2352.73	12.342	-2330.87	12.499
-2322.29	12.44	-2267.14	12.163	-2261.41	12.137	-2235.19	12.046	-2203.38	11.959
-2197.11	11.939	-2187.76	11.905	-2163.67	11.843	-2146.11	11.815	-2130.23	11.803
-2104.46	11.816	-2091.65	11.784	-2065.58	11.779	-2063.72	11.776	-2063.35	11.775
-2035.79	11.657	-2029.91	11.638	-2021.16	11.614	-1996.47	11.481	-1970.37	11.462
-1951.99	11.486	-1929.59	11.475	-1929.52	11.475	-1924.32	11.478	-1905.61	11.481
-1896.76	11.472	-1895.51	11.468	-1893.85	11.463	-1861.42	11.374	-1837	11.274
-1827.33	11.235	-1807.13	11.076	-1793.24	10.995	-1777.25	10.903	-1759.15	10.763
-1738.19	10.656	-1701.63	10.302	-1690.98	10.185	-1687.63	10.145	-1663.86	9.905



ExpandedLocal.rep

-1658.42	9.855-1656.89	9.843-1631.83	9.651 -1622.8	9.599-1594.02	9.347
-1554.63	9.187-1552.07	9.177-1542.99	9.178-1486.45	9.14-1464.24	9.24
-1452.36	9.288-1448.62	9.29-1422.11	9.403-1419.12	9.413-1418.27	9.416
-1416.77	9.416-1365.94	9.545 -1350.1	9.537-1321.81	9.538-1316.01	9.517
-1312.76	9.51-1301.24	9.565-1281.92	9.565-1259.58	9.344-1247.94	9.31
-1247.84	9.31-1229.79	9.165-1215.03	8.972 -1210	9.023 -1184	8.88
-1149.4	8.666-1116.99	8.877-1083.77	9.218-1068.36	9.283-1050.96	9.387
-1032.98	9.397-1018.15	9.394 -1002.9	9.372-989.125	9.35-952.531	9.318
-934.908	9.358-904.151	9.436-870.091	9.406-837.704	9.3-821.288	8.83
-804.48	8.818-772.867	9.713-755.666	9.989-740.458	10.04 -704.81	10.251
-690.045	9.983-680.885	9.924-672.443	9.865-657.135	9.672-642.279	9.538
-624.187	9.195-602.138	8.968-591.239	9.064-566.117	8.696-558.292	8.628
-529.819	8.156-525.344	8.103-523.402	8.095-492.396	8.318-491.908	8.316
-481.34	8.391-460.414	8.57-458.389	8.562-397.425	8.517-393.552	8.529
-373.676	8.584-327.657	8.736-295.981	8.697-261.761	8.741-239.431	8.752
-228.813	8.733-224.207	8.724-164.781	8.65-161.219	8.647-158.674	8.637
-97.925	8.402 -97.256	8.4 -95.976	8.396 -64.433	8.26 -63.795	8.259
-15.756	8.143 29.127	8.143 34.036	8.144 63.382	8.322 70.55	8.394
127.125	8.575 132.505	8.538 175.8	10.8 191.9	10.6 201	9.8
216	4.7 229.1	4.5 231.1	-.8 238.1	-.7 244.1	-.6
246.1	3.1 253.2	6.2 261.2	10.1 343.63	7.398 351.68	7.516
358.565	7.881 390.134	8.927 409.168	9.132 409.182	9.132	

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2431	.125	191.9	.035	261.2	.125

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
191.9	261.2	760	760	760	.1	.3
Ineffective Flow	num=	2				
Sta L	Sta R	Elev	Permanent			
-2431	175.8	10.8	F			
261.2	409.182	10.1	F			

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 38269

INPUT

Description: copy of SELA 7.229\*  
 reach lengths adjusted

Station Elevation Data num= 166

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2274	11.988-2266.73	12.056-2207.31	12.337-2195.73	12.342-2173.87	12.499				

ExpandedLocal.rep

-2165.29	12.44-2110.14	12.163-2104.41	12.137-2078.19	12.046-2046.38	11.959
-2040.11	11.939-2030.76	11.905-2006.67	11.843-1989.11	11.815-1973.23	11.803
-1947.46	11.816-1934.65	11.784-1908.58	11.779-1906.72	11.776-1906.35	11.775
-1878.79	11.657-1872.91	11.638-1864.16	11.614-1839.47	11.481-1813.37	11.462
-1794.99	11.486-1772.59	11.475-1772.52	11.475-1767.32	11.478-1748.61	11.481
-1739.76	11.472-1738.51	11.468-1736.85	11.463-1704.42	11.374 -1680	11.274
-1670.33	11.235-1650.13	11.076-1636.24	10.995-1620.25	10.903-1602.15	10.763
-1581.19	10.656-1544.63	10.302-1533.98	10.185-1530.63	10.145-1506.86	9.905
-1501.42	9.855-1499.89	9.843-1474.83	9.651 -1465.8	9.599-1437.02	9.347
-1397.63	9.187-1395.07	9.177-1385.99	9.178-1329.45	9.14-1307.24	9.24
-1295.36	9.288-1291.62	9.29-1265.11	9.403-1262.12	9.413-1261.27	9.416
-1259.77	9.416-1208.94	9.545 -1193.1	9.537-1164.81	9.538-1159.01	9.517
-1155.76	9.51-1144.24	9.565-1124.92	9.565-1102.58	9.344-1090.94	9.31
-1090.84	9.31-1072.79	9.165-1058.03	8.972 -1053	9.023 -1027	8.88
-992.405	8.666-959.993	8.877-926.779	9.218-911.367	9.283-893.967	9.387
-875.989	9.397-861.154	9.394-845.909	9.372-832.125	9.35-795.531	9.318
-777.908	9.358-747.151	9.436-713.091	9.406-680.704	9.3-664.288	8.83
-647.48	8.818-615.867	9.713-598.666	9.989-583.458	10.04 -547.81	10.251
-533.045	9.983-523.885	9.924-515.443	9.865-500.135	9.672-485.279	9.538
-467.187	9.195-445.138	8.968-434.239	9.064-409.117	8.696-401.292	8.628
-372.819	8.156-368.344	8.103-366.402	8.095-335.396	8.318-334.908	8.316
-324.34	8.391-303.414	8.57-301.389	8.562-240.425	8.517-236.552	8.529
-216.676	8.584-170.657	8.736-138.981	8.697-104.761	8.741 -82.431	8.752
-71.813	8.733 -67.207	8.724 -7.781	8.65 -4.219	8.647 -1.674	8.637
59.075	8.402 59.744	8.4 61.024	8.396 92.567	8.26 93.205	8.259
141.244	8.143 186.127	8.143 191.036	8.144 220.382	8.322 227.55	8.394
271.49	10.46 286.78	10.19 294.58	9.97 307.16	9.66 317.67	9.54
334.53	9.16 340.76	8.96 352.08	8.66 362	8.05 370.08	2.94
375.23	1.88 381.62	1.74 386.79	1.59 388.55	-1.1 392.98	.75
395.69	1.89 396.78	2.05 398.04	4.09 402.54	6.28 407.6	8.95
418.49	9.27 427.16	9.47 436.6	9.5 454.63	9.56 472.73	10.01
500.63	7.398 508.68	7.516 515.565	7.881 547.134	8.927 566.168	9.132
566.182	9.132				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2274	.125	271.49	.035	472.73	.125

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	271.49	472.73		253	253	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-2274	271.49	10.46	F
472.73	566.182	10.01	F

CROSS SECTION

ExpandedLocal.rep

RIVER: W14 Main  
 REACH: Lower

RS: 38016

INPUT

Description: copy of SELA 7.181

Station Elevation Data num= 155

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2155	11.988	-2147.73	12.056	-2088.31	12.337	-2076.73	12.342	-2054.87	12.499
-2046.29	12.44	-1991.14	12.163	-1985.41	12.137	-1959.19	12.046	-1927.38	11.959
-1921.11	11.939	-1911.76	11.905	-1887.67	11.843	-1870.11	11.815	-1854.23	11.803
-1828.46	11.816	-1815.65	11.784	-1789.58	11.779	-1787.72	11.776	-1787.35	11.775
-1759.79	11.657	-1753.91	11.638	-1745.16	11.614	-1720.47	11.481	-1694.37	11.462
-1675.99	11.486	-1653.59	11.475	-1653.52	11.475	-1648.32	11.478	-1629.61	11.481
-1620.76	11.472	-1619.51	11.468	-1617.85	11.463	-1585.42	11.374	-1561	11.274
-1551.33	11.235	-1531.13	11.076	-1517.24	10.995	-1501.25	10.903	-1483.15	10.763
-1462.19	10.656	-1425.63	10.302	-1414.98	10.185	-1411.63	10.145	-1387.86	9.905
-1382.42	9.855	-1380.89	9.843	-1355.83	9.651	-1346.8	9.599	-1318.02	9.347
-1278.63	9.187	-1276.07	9.177	-1266.99	9.178	-1210.45	9.14	-1188.24	9.24
-1176.36	9.288	-1172.62	9.29	-1146.11	9.403	-1143.12	9.413	-1142.27	9.416
-1140.77	9.416	-1089.94	9.545	-1074.1	9.537	-1045.81	9.538	-1040.01	9.517
-1036.76	9.51	-1025.24	9.565	-1005.92	9.565	-983.586	9.344	-971.942	9.31
-971.843	9.31	-953.795	9.165	-939.03	8.972	-934.001	9.023	-908.005	8.88
-873.405	8.666	-840.993	8.877	-807.779	9.218	-792.367	9.283	-774.967	9.387
-756.989	9.397	-742.154	9.394	-726.909	9.372	-713.125	9.35	-676.531	9.318
-658.908	9.358	-628.151	9.436	-594.091	9.406	-561.704	9.3	-545.288	8.83
-528.48	8.818	-496.867	9.713	-479.666	9.989	-464.458	10.04	-428.81	10.251
-414.045	9.983	-404.885	9.924	-396.443	9.865	-381.135	9.672	-366.279	9.538
-348.187	9.195	-326.138	8.968	-315.239	9.064	-290.117	8.696	-282.292	8.628
-253.819	8.156	-249.344	8.103	-247.402	8.095	-216.396	8.318	-215.908	8.316
-205.34	8.391	-184.414	8.57	-182.389	8.562	-121.425	8.517	-117.552	8.529
-97.676	8.584	-51.657	8.736	-19.981	8.697	14.239	8.741	36.569	8.752
47.187	8.733	51.793	8.724	111.219	8.65	114.781	8.647	117.326	8.637
178.075	8.402	178.744	8.4	180.024	8.396	211.567	8.26	212.205	8.259
260.244	8.143	305.127	8.143	310.036	8.144	339.382	8.322	346.55	8.394
403.125	8.575	408.505	8.538	438.115	8.063	448.049	7.944	474.151	7.293
475	8.4	500	7.2	523	6.3	530	-.8	540	-1.1
546	-1.4	549	4.4	554	7.8	566	8.6	619.63	7.398
627.68	7.516	634.565	7.881	666.134	8.927	685.168	9.132	685.182	9.132

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2155	.125	523	.035	566	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	523	566		16	16	.1	.3

ExpandedLocal.rep

Ineffective Flow		num=	2
Sta L	Sta R	Elev	Permanent
-2155	476.47	13.1	F
597.66	685.182	13.1	F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 38000

INPUT

Description: 5' US Fremaux Road bridge  
 copy of SELA 7.178

Station Elevation Data		num=	155						
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-2117	11.988	-2109.73	12.056	-2050.31	12.337	-2038.73	12.342	-2016.87	12.499
-2008.29	12.44	-1953.14	12.163	-1947.41	12.137	-1921.19	12.046	-1889.38	11.959
-1883.11	11.939	-1873.76	11.905	-1849.67	11.843	-1832.11	11.815	-1816.23	11.803
-1790.46	11.816	-1777.65	11.784	-1751.58	11.779	-1749.72	11.776	-1749.35	11.775
-1721.79	11.657	-1715.91	11.638	-1707.16	11.614	-1682.47	11.481	-1656.37	11.462
-1637.99	11.486	-1615.59	11.475	-1615.52	11.475	-1610.32	11.478	-1591.61	11.481
-1582.76	11.472	-1581.51	11.468	-1579.85	11.463	-1547.42	11.374	-1523	11.274
-1513.33	11.235	-1493.13	11.076	-1479.24	10.995	-1463.25	10.903	-1445.15	10.763
-1424.19	10.656	-1387.63	10.302	-1376.98	10.185	-1373.63	10.145	-1349.86	9.905
-1344.42	9.855	-1342.89	9.843	-1317.83	9.651	-1308.8	9.599	-1280.02	9.347
-1240.63	9.187	-1238.07	9.177	-1228.99	9.178	-1172.45	9.14	-1150.24	9.24
-1138.36	9.288	-1134.62	9.29	-1108.11	9.403	-1105.12	9.413	-1104.27	9.416
-1102.77	9.416	-1051.94	9.545	-1036.1	9.537	-1007.81	9.538	-1002.01	9.517
-998.765	9.51	-987.242	9.565	-967.927	9.565	-945.586	9.344	-933.942	9.31
-933.843	9.31	-915.795	9.165	-901.03	8.972	-896.001	9.023	-870.005	8.88
-835.405	8.666	-802.993	8.877	-769.779	9.218	-754.367	9.283	-736.967	9.387
-718.989	9.397	-704.154	9.394	-688.909	9.372	-675.125	9.35	-638.531	9.318
-620.908	9.358	-590.151	9.436	-556.091	9.406	-523.704	9.3	-507.288	8.83
-490.48	8.818	-458.867	9.713	-441.666	9.989	-426.458	10.04	-390.81	10.251
-376.045	9.983	-366.885	9.924	-358.443	9.865	-343.135	9.672	-328.279	9.538
-310.187	9.195	-288.138	8.968	-277.239	9.064	-252.117	8.696	-244.292	8.628
-215.819	8.156	-211.344	8.103	-209.402	8.095	-178.396	8.318	-177.908	8.316
-167.34	8.391	-146.414	8.57	-144.389	8.562	-83.425	8.517	-79.552	8.529
-59.676	8.584	-13.657	8.736	18.019	8.697	52.239	8.741	74.569	8.752
85.187	8.733	89.793	8.724	149.219	8.65	152.781	8.647	155.326	8.637
216.075	8.402	216.744	8.4	218.024	8.396	249.567	8.26	250.205	8.259
298.244	8.143	343.127	8.143	348.036	8.144	377.382	8.322	384.55	8.394
441.125	8.575	446.505	8.538	476.115	8.063	517.35	8.5	518.2	4
520	4.1	529.5	3.5	536.8	.6	540	.5	545	-.3
554.3	.1	558.4	3.1	560	3.5	563.35	8.5	657.63	7.398
665.68	7.516	672.565	7.881	704.134	8.927	723.168	9.132	723.182	9.132

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2117 .125 517.35 .035 563.35 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 517.35 563.35 69 69 69 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -2117 494.12 13.1 F  
 583.31 723.182 13.1 F

BRIDGE

RIVER: W14 Main  
 REACH: Lower RS: 37950

INPUT

Description: Fremaux Avenue Bridge  
 taken from SELA model  
 Distance from Upstream XS = 5.85  
 Deck/Roadway Width = 57.3  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 2  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 499 13.1 8.9 581 13.1 8.9

Upstream Bridge Cross Section Data

Station Elevation Data num= 25  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -4660 14 -3730 13 -1640 12 -1130 11 80 10  
 499.7 10.6 500 8.6 500.8 7.3 518.2 4 519.4 3.7  
 520.6 3.7 529.5 3.5 536.8 .6 539.4 .5 540 .5  
 540.6 .5 545 -.3 554.3 .1 558.4 3.1 559.4 3.5  
 560.6 3.5 567.7 5.1 579.6 9.7 581 10.6 890 8.92

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -4660 .125 499.7 .035 560.6 .125

Bank Sta: Left Right Coeff Contr. Expan.  
 500 579.6 .1 .3

ExpandedLocal.rep

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -4660 494.12 13.1 F  
 583.31 890 13.1 F

Downstream Deck/Roadway Coordinates  
 num= 2  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 500 13.1 8.9 581 13.1 8.9

Downstream Bridge Cross Section Data  
 Station Elevation Data num= 22  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -2145 10 -750 10 -380 10.2 87 10 500 10.4  
 500 9 501 7.7 516 6 519.4 4.6 520.6 4.6  
 528 2.1 537 1 539.4 .3 540.6 .3 542 -.2  
 552 -.9 559.4 -.4 560.6 -.4 562 0 578 7.2  
 579.6 9 580 10.8

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2145 .125 500 .035 562 .125

Bank Sta: Left Right Coeff Contr. Expan.  
 500 579.6 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -2145 497.155 13.1 F  
 582.385 580 13.1 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 3

Pier Data  
 Pier Station Upstream= 520 Downstream= 520  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*

```

      1.2      8      1.2      10.4
Downstream  num=      2
      Width  Elev   Width  Elev
*****
      1.2      8      1.2      10.4

```

Pier Data

```

Pier Station      Upstream=      540      Downstream=      540
Upstream      num=      2
      Width  Elev   Width  Elev
*****
      1.2      8      1.2      10.4
Downstream  num=      2
      Width  Elev   Width  Elev
*****
      1.2      8      1.2      10.4

```

Pier Data

```

Pier Station      Upstream=      560      Downstream=      560
Upstream      num=      2
      Width  Elev   Width  Elev
*****
      1.2      8      1.2      10.4
Downstream  num=      2
      Width  Elev   Width  Elev
*****
      1.2      8      1.2      10.4

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth  
inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main

REACH: Lower

RS: 37931

INPUT

Description: 5' DS Fremaux Road Bridge  
copy of SELA 7.165

Station Elevation Data num= 153

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2117	11.988	2109.73	12.056	2050.31	12.337	2038.73	12.342	2016.87	12.499
-2008.29	12.44	1953.14	12.163	1947.41	12.137	1921.19	12.046	1889.38	11.959
-1883.11	11.939	1873.76	11.905	1849.67	11.843	1832.11	11.815	1816.23	11.803
-1790.46	11.816	1777.65	11.784	1751.58	11.779	1749.72	11.776	1749.35	11.775
-1721.79	11.657	1715.91	11.638	1707.16	11.614	1682.47	11.481	1656.37	11.462
-1637.99	11.486	1615.59	11.475	1615.52	11.475	1610.32	11.478	1591.61	11.481
-1582.76	11.472	1581.51	11.468	1579.85	11.463	1547.42	11.374	-1523	11.274
-1513.33	11.235	1493.13	11.076	1479.24	10.995	1463.25	10.903	1445.15	10.763
-1424.19	10.656	1387.63	10.302	1376.98	10.185	1373.63	10.145	1349.86	9.905
-1344.42	9.855	1342.89	9.843	1317.83	9.651	-1308.8	9.599	1280.02	9.347
-1240.63	9.187	1238.07	9.177	1228.99	9.178	1172.45	9.14	1150.24	9.24
-1138.36	9.288	1134.62	9.29	1108.11	9.403	1105.12	9.413	1104.27	9.416
-1102.77	9.416	1051.94	9.545	-1036.1	9.537	1007.81	9.538	1002.01	9.517
-998.765	9.51	987.242	9.565	967.927	9.565	945.586	9.344	933.942	9.31
-933.843	9.31	915.795	9.165	-901.03	8.972	896.001	9.023	870.005	8.88
-835.405	8.666	802.993	8.877	769.779	9.218	754.367	9.283	736.967	9.387
-718.989	9.397	704.154	9.394	688.909	9.372	675.125	9.35	638.531	9.318
-620.908	9.358	590.151	9.436	556.091	9.406	523.704	9.3	507.288	8.83
-490.48	8.818	458.867	9.713	441.666	9.989	426.458	10.04	-390.81	10.251
-376.045	9.983	366.885	9.924	358.443	9.865	343.135	9.672	328.279	9.538
-310.187	9.195	288.138	8.968	277.239	9.064	252.117	8.696	244.292	8.628
-215.819	8.156	211.344	8.103	209.402	8.095	178.396	8.318	177.908	8.316
-167.34	8.391	146.414	8.57	144.389	8.562	-83.425	8.517	-79.552	8.529
-59.676	8.584	-13.657	8.736	18.019	8.697	52.239	8.741	74.569	8.752
85.187	8.733	89.793	8.724	149.219	8.65	152.781	8.647	155.326	8.637
216.075	8.402	216.744	8.4	218.024	8.396	249.567	8.26	250.205	8.259
298.244	8.143	343.127	8.143	348.036	8.144	377.382	8.322	384.55	8.394
441.125	8.575	446.505	8.538	476.115	8.063	523	8.5	528	2.1
537	1	540	.3	542	-.2	552	-.9	560	-.4
562	0	569	8.5	657.63	7.398	665.68	7.516	672.565	7.881
704.134	8.927	723.168	9.132	723.182	9.132				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2117	.125	523	.035	569	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	523	569		42	42	.1	.3
Ineffective Flow			num=	2			



ExpandedLocal.rep

Sta L	Sta R	Elev	Permanent
-2117	497.155	13.1	F
582.385	723.182	13.1	F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 37889

INPUT

Description: copy of SELA 7.157  
 reach lengths adjusted

Station Elevation Data		num= 152	
Sta	Elev	Sta	Elev
*****			
-2095	11.988	-2087.73	12.056
-1986.29	12.44	-1931.14	12.163
-1861.11	11.939	-1851.76	11.905
-1768.46	11.816	-1755.65	11.784
-1699.79	11.657	-1693.91	11.638
-1615.99	11.486	-1593.59	11.475
-1560.76	11.472	-1559.51	11.468
-1491.33	11.235	-1471.13	11.076
-1402.19	10.656	-1365.63	10.302
-1322.42	9.855	-1320.89	9.843
-1218.63	9.187	-1216.07	9.177
-1116.36	9.288	-1112.62	9.29
-1080.77	9.416	-1029.94	9.545
-976.765	9.51	-965.242	9.565
-911.843	9.31	-893.795	9.165
-813.405	8.666	-780.993	8.877
-696.989	9.397	-682.154	9.394
-598.908	9.358	-568.151	9.436
-468.48	8.818	-436.867	9.713
-354.045	9.983	-344.885	9.924
-288.187	9.195	-266.138	8.968
-193.819	8.156	-189.344	8.103
-145.34	8.391	-124.414	8.57
-37.676	8.584	8.343	8.736
107.187	8.733	111.793	8.724
238.075	8.402	238.744	8.4
320.244	8.143	365.127	8.143
463.125	8.575	477.8	9.4
554	4.7	558.1	-.8
588.47	9.1	679.63	7.398
745.168	9.132	745.182	9.132

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2095 .125 531.7 .035 588.47 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 531.7 588.47 771 771 771 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -2095 501.995 13.1 F  
 629.225 745.182 13.1 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 37118

INPUT

Description: copy of SELA 7.011\*  
 reach lengths adjusted

Station Elevation Data num= 135  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -2101 10.323 -2057.3 10.568-2049.92 10.603-2047.23 10.622-2024.33 10.708  
 -2012.31 10.985-1998.75 11.419-1961.56 11.508-1947.57 11.604 -1931.5 11.218  
 -1896.39 10.484-1872.62 10.295-1865.82 10.266-1845.21 10.207-1837.69 10.222  
 -1821.54 10.285-1794.04 10.397-1770.09 10.404-1767.85 10.406-1766.56 10.402  
 -1762.5 10.396-1732.94 10.356-1703.36 10.23-1698.03 10.214-1694.34 10.195  
 -1674.04 9.934-1666.03 9.858 -1660.7 9.872-1628.22 10.013-1618.05 10.134  
 -1563.62 10.632-1558.41 10.652-1538.01 10.648-1492.42 10.45-1488.59 10.421  
 -1486.81 10.425-1481.88 10.448-1455.02 10.551-1431.12 10.589-1420.93 10.587  
 -1399.61 10.564-1375.56 10.51-1336.59 10.382 -1307 10.271-1289.58 10.248  
 -1258.79 10.413 -1223.9 10.538-1210.54 10.463-1191.07 10.367-1167.93 10.096  
 -1125.39 9.579-1116.01 9.487-1092.55 9.364 -1084.5 9.351-1032.75 9.248  
 -1026.88 9.213-1021.48 9.22-994.046 9.172-979.599 9.139-965.137 9.102  
 -961.222 9.105-952.915 9.06-909.501 8.813-868.573 8.672-862.778 8.593  
 -836.385 8.334-823.287 8.295-797.149 7.868-789.821 7.856-764.334 8.034  
 -739.821 7.952-722.889 7.931-675.445 7.812-665.891 7.832-645.621 7.992  
 -611.267 8.267-600.262 8.405-578.881 8.665-568.521 8.731-567.418 8.738  
 -551.45 8.848-533.714 8.883-507.375 8.702-500.009 8.668-495.449 8.636  
 -476.069 8.548-446.511 8.364-432.601 8.261-419.226 8.14-386.312 7.827  
 -365.192 7.765-332.826 7.839-304.458 7.892-297.784 7.915-277.174 7.964  
 -264.079 7.993-241.159 8.035-198.852 8.077-196.671 8.08-189.583 8.075  
 -166.844 8.057-165.661 8.057 -158.04 8.035-101.303 7.774 -97.438 7.755  
 -67.801 7.654 -63.083 7.643 -31.808 7.569 -30.6 7.564 1.007 7.529  
 1.882 7.524 33.823 7.42 34.364 7.417 35.923 7.408 87.109 7.105  
 99.205 7.033 99.712 7.029 163.516 6.62 165.084 6.613 223.239 6.809

ExpandedLocal.rep

224.851	6.814	230.742	6.841	244.852	6.841	306.814	6.852	348.592	6.779
420.8	8.2	426.73	6.12	433.87	5.22	439.98	3.16	443.5	-.66
450.47	-1.37	455.05	-.15	459.02	1.02	460.99	3.16	473.4	9.43

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2101	.125	420.8	.035	473.4	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	420.8	473.4		193	193		.1	.3
Ineffective Flow	num=		1					
Sta L	Sta R	Elev	Permanent					
-2101	-318	13.1	F					

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 36925

INPUT

Description: copy of SELA 6.9745\*  
 reach lengths adjusted

Station Elevation Data num= 138

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2217	10.323	-2173.3	10.568	-2165.92	10.603	-2163.23	10.622	-2140.33	10.708
-2128.31	10.985	-2114.75	11.419	-2077.56	11.508	-2063.57	11.604	-2047.5	11.218
-2012.39	10.484	-1988.62	10.295	-1981.82	10.266	-1961.21	10.207	-1953.69	10.222
-1937.54	10.285	-1910.04	10.397	-1886.09	10.404	-1883.85	10.406	-1882.56	10.402
-1878.5	10.396	-1848.94	10.356	-1819.36	10.23	-1814.03	10.214	-1810.34	10.195
-1790.04	9.934	-1782.03	9.858	-1776.7	9.872	-1744.22	10.013	-1734.05	10.134
-1679.62	10.632	-1674.41	10.652	-1654.01	10.648	-1608.42	10.45	-1604.59	10.421
-1602.81	10.425	-1597.88	10.448	-1571.02	10.551	-1547.12	10.589	-1536.93	10.587
-1515.61	10.564	-1491.56	10.51	-1452.59	10.382	-1423	10.271	-1405.58	10.248
-1374.79	10.413	-1339.9	10.538	-1326.54	10.463	-1307.07	10.367	-1283.93	10.096
-1241.39	9.579	-1232.01	9.487	-1208.55	9.364	-1200.5	9.351	-1148.75	9.248
-1142.88	9.213	-1137.48	9.22	-1110.04	9.172	-1095.59	9.139	-1081.13	9.102
-1077.22	9.105	-1068.91	9.06	-1025.5	8.813	-984.573	8.672	-978.778	8.593
-952.385	8.334	-939.287	8.295	-913.149	7.868	-905.821	7.856	-880.334	8.034
-855.821	7.952	-838.889	7.931	-791.445	7.812	-781.891	7.832	-761.621	7.992
-727.267	8.267	-716.262	8.405	-694.881	8.665	-684.521	8.731	-683.418	8.738
-667.45	8.848	-649.714	8.883	-623.375	8.702	-616.009	8.668	-611.449	8.636
-592.069	8.548	-562.511	8.364	-548.601	8.261	-535.226	8.14	-502.312	7.827
-481.192	7.765	-448.826	7.839	-420.458	7.892	-413.784	7.915	-393.174	7.964
-380.079	7.993	-357.159	8.035	-314.852	8.077	-312.671	8.08	-305.583	8.075
-282.844	8.057	-281.661	8.057	-274.04	8.035	-217.303	7.774	-213.438	7.755

ExpandedLocal.rep

-183.801	7.654	-179.083	7.643	-147.808	7.569	-146.6	7.564	-114.993	7.529
-114.118	7.524	-82.177	7.42	-81.636	7.417	-80.077	7.408	-28.891	7.105
-16.795	7.033	-16.288	7.029	47.516	6.62	49.084	6.613	107.239	6.809
108.851	6.814	114.742	6.841	128.852	6.841	190.814	6.852	232.592	6.779
268.49	8.13	281.95	7.87	285.66	7.78	309.9	7.4	314.87	3.96
320.84	3.05	325.95	1.61	328.9	-.53	334.73	-1.33	339.03	.02
342.74	1.44	344.59	2.93	356.2	8.67				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2217	.125	268.49	.035	356.2	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	268.49	356.2		192	192	192		.1	.3
Ineffective Flow			num=	1					
Sta L	Sta R	Elev	Permanent						
-2217	-511	13.1	F						

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 36733

INPUT

Description: copy of SELA 6.938

Station Elevation Data num= 133

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2332	10.323	-2288.3	10.568	-2280.92	10.603	-2278.23	10.622	-2255.33	10.708
-2243.31	10.985	-2229.75	11.419	-2192.56	11.508	-2178.57	11.604	-2162.5	11.218
-2127.39	10.484	-2103.62	10.295	-2096.82	10.266	-2076.21	10.207	-2068.69	10.222
-2052.54	10.285	-2025.04	10.397	-2001.09	10.404	-1998.85	10.406	-1997.56	10.402
-1993.5	10.396	-1963.94	10.356	-1934.36	10.23	-1929.03	10.214	-1925.34	10.195
-1905.04	9.934	-1897.03	9.858	-1891.7	9.872	-1859.22	10.013	-1849.05	10.134
-1794.62	10.632	-1789.41	10.652	-1769.01	10.648	-1723.42	10.45	-1719.59	10.421
-1717.81	10.425	-1712.88	10.448	-1686.02	10.551	-1662.12	10.589	-1651.93	10.587
-1630.61	10.564	-1606.56	10.51	-1567.59	10.382	-1538	10.271	-1520.58	10.248
-1489.79	10.413	-1454.9	10.538	-1441.54	10.463	-1422.07	10.367	-1398.93	10.096
-1356.39	9.579	-1347.01	9.487	-1323.55	9.364	-1315.5	9.351	-1263.75	9.248
-1257.88	9.213	-1252.48	9.22	-1225.04	9.172	-1210.59	9.139	-1196.13	9.102
-1192.22	9.105	-1183.91	9.06	-1140.5	8.813	-1099.57	8.672	-1093.77	8.593
-1067.38	8.334	-1054.28	8.295	-1028.14	7.868	-1020.82	7.856	-995.334	8.034
-970.821	7.952	-953.889	7.931	-906.445	7.812	-896.891	7.832	-876.621	7.992
-842.267	8.267	-831.262	8.405	-809.881	8.665	-799.521	8.731	-798.418	8.738
-782.45	8.848	-764.714	8.883	-738.375	8.702	-731.009	8.668	-726.449	8.636
-707.069	8.548	-677.511	8.364	-663.601	8.261	-650.226	8.14	-617.312	7.827

ExpandedLocal.rep

-596.192	7.765-563.826	7.839-535.458	7.892-528.784	7.915-508.174	7.964
-495.079	7.993-472.159	8.035-429.852	8.077-427.671	8.08-420.583	8.075
-397.844	8.057-396.661	8.057 -389.04	8.035-332.303	7.774-328.438	7.755
-298.801	7.654-294.083	7.643-262.808	7.569 -261.6	7.564-229.993	7.529
-229.118	7.524-197.177	7.42-196.636	7.417-195.077	7.408-143.891	7.105
-131.795	7.033-131.288	7.029 -67.484	6.62 -65.916	6.613 -7.761	6.809
-6.149	6.814 -.258	6.841 13.852	6.841 75.814	6.852 117.592	6.779
131.488	6.746 168.245	6.477 193	8.5 199	6.6 203	1.8
219	-1.3 223	.2 239	8.5		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2332	.125	193	.035	239	.125

\*\*\*\*\*

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
193	239	20	20	20	.1	.3
Ineffective Flow	num=	2				
Sta L	Sta R	Elev	Permanent			
-2332	181.51	9	F			
256.51	239	9	F			

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 36713

INPUT

Description: 1' US Cousin Street Bridge  
 copy of SELA 6.935

Station Elevation Data num= 138

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2322	10.323	-2278.3	10.568	-2270.92	10.603	-2268.23	10.622	-2245.33	10.708
-2233.31	10.985	-2219.75	11.419	-2182.56	11.508	-2168.57	11.604	-2152.5	11.218
-2117.39	10.484	-2093.62	10.295	-2086.82	10.266	-2066.21	10.207	-2058.69	10.222
-2042.54	10.285	-2015.04	10.397	-1991.09	10.404	-1988.85	10.406	-1987.56	10.402
-1983.5	10.396	-1953.94	10.356	-1924.36	10.23	-1919.03	10.214	-1915.34	10.195
-1895.04	9.934	-1887.03	9.858	-1881.7	9.872	-1849.22	10.013	-1839.05	10.134
-1784.62	10.632	-1779.41	10.652	-1759.01	10.648	-1713.42	10.45	-1709.59	10.421
-1707.81	10.425	-1702.88	10.448	-1676.02	10.551	-1652.12	10.589	-1641.93	10.587
-1620.61	10.564	-1596.56	10.51	-1557.59	10.382	-1528	10.271	-1510.58	10.248
-1479.79	10.413	-1444.9	10.538	-1431.54	10.463	-1412.07	10.367	-1388.93	10.096
-1346.39	9.579	-1337.01	9.487	-1313.55	9.364	-1305.5	9.351	-1253.75	9.248
-1247.88	9.213	-1242.48	9.22	-1215.04	9.172	-1200.59	9.139	-1186.13	9.102
-1182.22	9.105	-1173.91	9.06	-1130.5	8.813	-1089.57	8.672	-1083.77	8.593
-1057.38	8.334	-1044.28	8.295	-1018.14	7.868	-1010.82	7.856	-985.334	8.034

ExpandedLocal.rep

-960.821	7.952-943.889	7.931-896.445	7.812-886.891	7.832-866.621	7.992
-832.267	8.267-821.262	8.405-799.881	8.665-789.521	8.731-788.418	8.738
-772.45	8.848-754.714	8.883-728.375	8.702-721.009	8.668-716.449	8.636
-697.069	8.548-667.511	8.364-653.601	8.261-640.226	8.14-607.312	7.827
-586.192	7.765-553.826	7.839-525.458	7.892-518.784	7.915-498.174	7.964
-485.079	7.993-462.159	8.035-419.852	8.077-417.671	8.08-410.583	8.075
-387.844	8.057-386.661	8.057 -379.04	8.035-322.303	7.774-318.438	7.755
-288.801	7.654-284.083	7.643-252.808	7.569 -251.6	7.564-219.993	7.529
-219.118	7.524-187.177	7.42-186.636	7.417-185.077	7.408-133.891	7.105
-121.795	7.033-121.288	7.029 -57.484	6.62 -55.916	6.613 2.239	6.809
3.851	6.814 9.742	6.841 23.852	6.841 85.814	6.852 127.592	6.779
141.488	6.746 178.245	6.477 200	8.7 200.1	3.7 201	3.7
203	-.5 214	-1 219	.4 228	-.2 235	4.6
238	6.8 240	8.3 245	8.3		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2322	.125	200	.035	245	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	200	245		15	15		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-2322	201	9	F
237	245	9	F

BRIDGE

RIVER: W14 Main  
 REACH: Lower RS: 36710

INPUT

Description: Cousin Street  
 Distance from Upstream XS = 1  
 Deck/Roadway Width = 13  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num=	9	Sta Hi Cord Lo Cord				Sta Hi Cord Lo Cord				Sta Hi Cord Lo Cord					
-2000	9	194	9.32	201	9.32	202	9.32	8.48	236	9.32	8.48	243	9.32	245	9

Upstream Bridge Cross Section Data

Station Elevation Data num= 138

ExpandedLocal.rep

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2322	10.323	-2278.3	10.568	-2270.92	10.603	-2268.23	10.622	-2245.33	10.708
-2233.31	10.985	-2219.75	11.419	-2182.56	11.508	-2168.57	11.604	-2152.5	11.218
-2117.39	10.484	-2093.62	10.295	-2086.82	10.266	-2066.21	10.207	-2058.69	10.222
-2042.54	10.285	-2015.04	10.397	-1991.09	10.404	-1988.85	10.406	-1987.56	10.402
-1983.5	10.396	-1953.94	10.356	-1924.36	10.23	-1919.03	10.214	-1915.34	10.195
-1895.04	9.934	-1887.03	9.858	-1881.7	9.872	-1849.22	10.013	-1839.05	10.134
-1784.62	10.632	-1779.41	10.652	-1759.01	10.648	-1713.42	10.45	-1709.59	10.421
-1707.81	10.425	-1702.88	10.448	-1676.02	10.551	-1652.12	10.589	-1641.93	10.587
-1620.61	10.564	-1596.56	10.51	-1557.59	10.382	-1528	10.271	-1510.58	10.248
-1479.79	10.413	-1444.9	10.538	-1431.54	10.463	-1412.07	10.367	-1388.93	10.096
-1346.39	9.579	-1337.01	9.487	-1313.55	9.364	-1305.5	9.351	-1253.75	9.248
-1247.88	9.213	-1242.48	9.22	-1215.04	9.172	-1200.59	9.139	-1186.13	9.102
-1182.22	9.105	-1173.91	9.06	-1130.5	8.813	-1089.57	8.672	-1083.77	8.593
-1057.38	8.334	-1044.28	8.295	-1018.14	7.868	-1010.82	7.856	-985.334	8.034
-960.821	7.952	-943.889	7.931	-896.445	7.812	-886.891	7.832	-866.621	7.992
-832.267	8.267	-821.262	8.405	-799.881	8.665	-789.521	8.731	-788.418	8.738
-772.45	8.848	-754.714	8.883	-728.375	8.702	-721.009	8.668	-716.449	8.636
-697.069	8.548	-667.511	8.364	-653.601	8.261	-640.226	8.14	-607.312	7.827
-586.192	7.765	-553.826	7.839	-525.458	7.892	-518.784	7.915	-498.174	7.964
-485.079	7.993	-462.159	8.035	-419.852	8.077	-417.671	8.08	-410.583	8.075
-387.844	8.057	-386.661	8.057	-379.04	8.035	-322.303	7.774	-318.438	7.755
-288.801	7.654	-284.083	7.643	-252.808	7.569	-251.6	7.564	-219.993	7.529
-219.118	7.524	-187.177	7.42	-186.636	7.417	-185.077	7.408	-133.891	7.105
-121.795	7.033	-121.288	7.029	-57.484	6.62	-55.916	6.613	2.239	6.809
3.851	6.814	9.742	6.841	23.852	6.841	85.814	6.852	127.592	6.779
141.488	6.746	178.245	6.477	200	8.7	200.1	3.7	201	3.7
203	-.5	214	-1	219	.4	228	-.2	235	4.6
238	6.8	240	8.3	245	8.3				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2322	.125	200	.035	245	.125

Bank Sta: Left Right Coeff Contr. Expan.

Left	Right	Coeff	Contr.	Expan.
200	245		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-2322	201	9	F
237	245	9	F

Downstream Deck/Roadway Coordinates num= 8

Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord
-2000	9		194	9.32		201	9.32	

ExpandedLocal.rep

202	9.32	5.5	202	9.32	8.48	236	9.32	8.48
236	9.32	4.72	242	9.32				

Downstream Bridge Cross Section Data

Station Elevation Data num= 137

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-2322	10.323	-2278.3	10.568	-2270.92	10.603	-2268.23	10.622	-2245.33	10.708
-2233.31	10.985	-2219.75	11.419	-2182.56	11.508	-2168.57	11.604	-2152.5	11.218
-2117.39	10.484	-2093.62	10.295	-2086.82	10.266	-2066.21	10.207	-2058.69	10.222
-2042.54	10.285	-2015.04	10.397	-1991.09	10.404	-1988.85	10.406	-1987.56	10.402
-1983.5	10.396	-1953.94	10.356	-1924.36	10.23	-1919.03	10.214	-1915.34	10.195
-1895.04	9.934	-1887.03	9.858	-1881.7	9.872	-1849.22	10.013	-1839.05	10.134
-1784.62	10.632	-1779.41	10.652	-1759.01	10.648	-1713.42	10.45	-1709.59	10.421
-1707.81	10.425	-1702.88	10.448	-1676.02	10.551	-1652.12	10.589	-1641.93	10.587
-1620.61	10.564	-1596.56	10.51	-1557.59	10.382	-1528	10.271	-1510.58	10.248
-1479.79	10.413	-1444.9	10.538	-1431.54	10.463	-1412.07	10.367	-1388.93	10.096
-1346.39	9.579	-1337.01	9.487	-1313.55	9.364	-1305.5	9.351	-1253.75	9.248
-1247.88	9.213	-1242.48	9.22	-1215.04	9.172	-1200.59	9.139	-1186.13	9.102
-1182.22	9.105	-1173.91	9.06	-1130.5	8.813	-1089.57	8.672	-1083.77	8.593
-1057.38	8.334	-1044.28	8.295	-1018.14	7.868	-1010.82	7.856	-985.334	8.034
-960.821	7.952	-943.889	7.931	-896.445	7.812	-886.891	7.832	-866.621	7.992
-832.267	8.267	-821.262	8.405	-799.881	8.665	-789.521	8.731	-788.418	8.738
-772.45	8.848	-754.714	8.883	-728.375	8.702	-721.009	8.668	-716.449	8.636
-697.069	8.548	-667.511	8.364	-653.601	8.261	-640.226	8.14	-607.312	7.827
-586.192	7.765	-553.826	7.839	-525.458	7.892	-518.784	7.915	-498.174	7.964
-485.079	7.993	-462.159	8.035	-419.852	8.077	-417.671	8.08	-410.583	8.075
-387.844	8.057	-386.661	8.057	-379.04	8.035	-322.303	7.774	-318.438	7.755
-288.801	7.654	-284.083	7.643	-252.808	7.569	-251.6	7.564	-219.993	7.529
-219.118	7.524	-187.177	7.42	-186.636	7.417	-185.077	7.408	-133.891	7.105
-121.795	7.033	-121.288	7.029	-57.484	6.62	-55.916	6.613	2.239	6.809
3.851	6.814	9.742	6.841	23.852	6.841	85.814	6.852	127.592	6.779
141.488	6.746	178.245	6.477	199	8.4	200	2.8	200	1.2
202	-.2	217	-.3	219	.3	229	-.6	236	3.2
238	5.4	242	8.8						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****					
-2322	.125	199	.035	242	.125

Bank Sta: Left	Right	Coeff	Contr.	Expan.
199	242		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-2322	201.5	9	F
236.5	242	9	F



ExpandedLocal.rep

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 1

Pier Data

Pier Station Upstream= 219 Downstream= 219

Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 8 1 9

Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 8 1 9

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth  
inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main

REACH: Lower RS: 36698

INPUT

Description: 1' DS Cousin Street Bridge

copy of SELA 6.931

Station Elevation Data num= 137  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

ExpandedLocal.rep

```

*****
-2322 10.323 -2278.3 10.568-2270.92 10.603-2268.23 10.622-2245.33 10.708
-2233.31 10.985-2219.75 11.419-2182.56 11.508-2168.57 11.604 -2152.5 11.218
-2117.39 10.484-2093.62 10.295-2086.82 10.266-2066.21 10.207-2058.69 10.222
-2042.54 10.285-2015.04 10.397-1991.09 10.404-1988.85 10.406-1987.56 10.402
-1983.5 10.396-1953.94 10.356-1924.36 10.23-1919.03 10.214-1915.34 10.195
-1895.04 9.934-1887.03 9.858 -1881.7 9.872-1849.22 10.013-1839.05 10.134
-1784.62 10.632-1779.41 10.652-1759.01 10.648-1713.42 10.45-1709.59 10.421
-1707.81 10.425-1702.88 10.448-1676.02 10.551-1652.12 10.589-1641.93 10.587
-1620.61 10.564-1596.56 10.51-1557.59 10.382 -1528 10.271-1510.58 10.248
-1479.79 10.413 -1444.9 10.538-1431.54 10.463-1412.07 10.367-1388.93 10.096
-1346.39 9.579-1337.01 9.487-1313.55 9.364 -1305.5 9.351-1253.75 9.248
-1247.88 9.213-1242.48 9.22-1215.04 9.172-1200.59 9.139-1186.13 9.102
-1182.22 9.105-1173.91 9.06 -1130.5 8.813-1089.57 8.672-1083.77 8.593
-1057.38 8.334-1044.28 8.295-1018.14 7.868-1010.82 7.856-985.334 8.034
-960.821 7.952-943.889 7.931-896.445 7.812-886.891 7.832-866.621 7.992
-832.267 8.267-821.262 8.405-799.881 8.665-789.521 8.731-788.418 8.738
-772.45 8.848-754.714 8.883-728.375 8.702-721.009 8.668-716.449 8.636
-697.069 8.548-667.511 8.364-653.601 8.261-640.226 8.14-607.312 7.827
-586.192 7.765-553.826 7.839-525.458 7.892-518.784 7.915-498.174 7.964
-485.079 7.993-462.159 8.035-419.852 8.077-417.671 8.08-410.583 8.075
-387.844 8.057-386.661 8.057 -379.04 8.035-322.303 7.774-318.438 7.755
-288.801 7.654-284.083 7.643-252.808 7.569 -251.6 7.564-219.993 7.529
-219.118 7.524-187.177 7.42-186.636 7.417-185.077 7.408-133.891 7.105
-121.795 7.033-121.288 7.029 -57.484 6.62 -55.916 6.613 2.239 6.809
3.851 6.814 9.742 6.841 23.852 6.841 85.814 6.852 127.592 6.779
141.488 6.746 178.245 6.477 199 8.4 200 2.8 200 1.2
202 -.2 217 -.3 219 .3 229 -.6 236 3.2
238 5.4 242 8.8

```

```

Manning's n Values          num=      3
Sta   n Val      Sta   n Val      Sta   n Val
*****
-2322   .125      199   .035      242   .125

```

```

Bank Sta: Left   Right   Lengths: Left Channel   Right   Coeff Contr.   Expan.
          199     242           18     18           18           .1           .3
Ineffective Flow          num=      2
Sta L   Sta R   Elev Permanent
-2322   201.5     9         F
236.5   242     9         F

```

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 36680

ExpandedLocal.rep

INPUT

Description: 20' DS Cousin Street  
copy of SELA 6.928

Reach Lengths adjusted

Station Elevation Data

num= 134

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2322	10.323	-2278.3	10.568	-2270.92	10.603	-2268.23	10.622	-2245.33	10.708
-2233.31	10.985	-2219.75	11.419	-2182.56	11.508	-2168.57	11.604	-2152.5	11.218
-2117.39	10.484	-2093.62	10.295	-2086.82	10.266	-2066.21	10.207	-2058.69	10.222
-2042.54	10.285	-2015.04	10.397	-1991.09	10.404	-1988.85	10.406	-1987.56	10.402
-1983.5	10.396	-1953.94	10.356	-1924.36	10.23	-1919.03	10.214	-1915.34	10.195
-1895.04	9.934	-1887.03	9.858	-1881.7	9.872	-1849.22	10.013	-1839.05	10.134
-1784.62	10.632	-1779.41	10.652	-1759.01	10.648	-1713.42	10.45	-1709.59	10.421
-1707.81	10.425	-1702.88	10.448	-1676.02	10.551	-1652.12	10.589	-1641.93	10.587
-1620.61	10.564	-1596.56	10.51	-1557.59	10.382	-1528	10.271	-1510.58	10.248
-1479.79	10.413	-1444.9	10.538	-1431.54	10.463	-1412.07	10.367	-1388.93	10.096
-1346.39	9.579	-1337.01	9.487	-1313.55	9.364	-1305.5	9.351	-1253.75	9.248
-1247.88	9.213	-1242.48	9.22	-1215.04	9.172	-1200.59	9.139	-1186.13	9.102
-1182.22	9.105	-1173.91	9.06	-1130.5	8.813	-1089.57	8.672	-1083.77	8.593
-1057.38	8.334	-1044.28	8.295	-1018.14	7.868	-1010.82	7.856	-985.334	8.034
-960.821	7.952	-943.889	7.931	-896.445	7.812	-886.891	7.832	-866.621	7.992
-832.267	8.267	-821.262	8.405	-799.881	8.665	-789.521	8.731	-788.418	8.738
-772.45	8.848	-754.714	8.883	-728.375	8.702	-721.009	8.668	-716.449	8.636
-697.069	8.548	-667.511	8.364	-653.601	8.261	-640.226	8.14	-607.312	7.827
-586.192	7.765	-553.826	7.839	-525.458	7.892	-518.784	7.915	-498.174	7.964
-485.079	7.993	-462.159	8.035	-419.852	8.077	-417.671	8.08	-410.583	8.075
-387.844	8.057	-386.661	8.057	-379.04	8.035	-322.303	7.774	-318.438	7.755
-288.801	7.654	-284.083	7.643	-252.808	7.569	-251.6	7.564	-219.993	7.529
-219.118	7.524	-187.177	7.42	-186.636	7.417	-185.077	7.408	-133.891	7.105
-121.795	7.033	-121.288	7.029	-57.484	6.62	-55.916	6.613	2.239	6.809
3.851	6.814	9.742	6.841	23.852	6.841	85.814	6.852	127.592	6.779
141.488	6.746	178.245	6.477	186.5	8.5	200.5	4.9	208.6	-.5
219.6	-1.2	227.7	-.5	242.7	8.5	250.8	8.6		

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2322	.125	186.5	.035	242.7	.125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
186.5 242.7 1003 1003 1003 .1 .3

Ineffective Flow

num= 2

Sta L	Sta R	Elev	Permanent
-2322	193.61	9	F
245.45	250.8	9	F

ExpandedLocal.rep

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 35677

INPUT

Description: Copy of SELA 6.738\*  
 Reach Lengths adjusted

Station Elevation Data num= 31

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1986.67	10.33	-1560.28	9.46	-1311.88	9.17	-1132.27	8.72	-524.77	8.05
-408.94	7.96	-273.01	7.57	91.08	7.17	139.63	7.15	187.91	7.13
188.17	7.13	206.29	7.17	231.77	7.09	236.72	7.1	246.43	7.17
250.14	7.14	257.25	7.17	282.73	7.68	285.26	7.73	287.81	7.78
294	7.6	301	8.5	305.07	3.54	306.29	3.24	313.41	-.69
323.07	-1.6	331.74	-.62	333.67	.22	337.2	3.01	347.8	8.83
353.2	8.9								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1986.67	.05	301	.035	347.8	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	301	347.8		251	251		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
-1986.67	301	8.5	F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 35426

INPUT

Description: copy of SELA 6.6905\*

Station Elevation Data num= 31

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1913.33	10.67	-1480.56	9.91	-1228.44	9.59	-1046.13	8.86	-429.53	8.11
-311.97	7.98	-174.01	7.29	195.54	6.68	244.81	6.68	293.82	6.67
294.09	6.67	312.47	6.74	338.34	6.78	343.36	6.8	353.21	6.93
356.99	6.89	364.2	6.84	390.06	6.86	392.63	6.87	395.21	6.86
401.5	6.7	405	8.5	411.04	1.82	412.09	1.59	418.21	-.87
426.53	-2	435.78	-.73	437.83	-.14	441.6	3.45	452.9	9.17

ExpandedLocal.rep

455.6 9.2

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1913.33 .05 405 .035 452.9 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 405 452.9 257 257 257 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 -1913.33 405 8.5 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 35169

INPUT

Description: 5' US Daney Street

Station Elevation Data num= 36  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 9.077 25.057 9.075 173.443 8.6 321.83 7.939 518.879 6.635  
 556.999 6.54 568.096 6.417 589.871 6.349 647.191 5.97 815.418 5.397  
 913.878 5.6111012.338 5.437 1165 8 1173 7.5 1180 6  
 1187 3.2 1193 1.3 1196 -1.7 1203 -1.9 1213 -3.2  
 1221 -3.2 1228 -1.5 1230 2.4 1234 5.3 1238 6.3  
 1258.69 7.4471300.635 7.0031319.902 7.0041358.531 6.581451.865 6.524  
 1573.392 6.0731771.766 6.11805.054 6.2562001.913 6.2722011.008 6.359  
 2021.483 6.293

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 1165 .035 1238 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1165 1238 38 38 38 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 1170.53 6.4 F  
 1237.582021.483 6.4 F

BRIDGE

ExpandedLocal.rep

RIVER: W14 Main  
 REACH: Lower RS: 35150

INPUT

Description: Daney Street Bridge  
 taken from O&W/Duplantis Summit Fremaux  
 development model of W-14

Distance from Upstream XS = 5  
 Deck/Roadway Width = 28  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 23

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0	9.81				72	9.94				261	9.06			
357	8.31				483	7.58				542	7.25			
596	7.15				846	6.65				908	6.68			
957	6.45				1007	6.4				1066	7			
1121	8.3				1165.9	8.7				1175.5	11.6	8.1		
1194	11.6	8.1			1195.01	11.6	8.1			1213	11.6	8.1		
1214.01	11.6	8.1			1232.5	11.6	8.1			1232.7	9.9	7.9		
1235.5	9.3				1258.69	7.45								

Upstream Bridge Cross Section Data

Station Elevation Data num= 36

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	9.077	25.057	9.075	173.443	8.6	321.83	7.939	518.879	6.635
556.999	6.54	568.096	6.417	589.871	6.349	647.191	5.97	815.418	5.397
913.878	5.6111	1012.338	5.437	1165	8	1173	7.5	1180	6
1187	3.2	1193	1.3	1196	-1.7	1203	-1.9	1213	-3.2
1221	-3.2	1228	-1.5	1230	2.4	1234	5.3	1238	6.3
1258.69	7.4471	1300.635	7.0031	1319.902	7.0041	1358.531	6.5814	151.865	6.524
1573.392	6.0731	1771.766	6.1180	5.054	6.2562	001.913	6.2722	011.008	6.359
2021.483	6.293								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	1165	.035	1238	.1

Bank Sta: Left Right Coeff Contr. Expan.  
 1165 1238 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	1170.53	6.4	F
1237.582	2021.483	6.4	F

ExpandedLocal.rep

Downstream Deck/Roadway Coordinates

num= 23

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0		9.81			72		9.94			261		9.06		
357		8.31			483		7.58			542		7.25		
596		7.15			846		6.65			908		6.68		
957		6.45			1007		6.4			1066		7		
1121		8.3			1165.9		8.7			1175.5		11.6		8.1
1194		11.6	8.1	1195.01		11.6	8.1			1213		11.6		8.1
1214.01		11.6	8.1	1232.5		11.6	8.1			1232.7		9.9		7.9
1235.5		9.3		1258.69		7.45								

Downstream Bridge Cross Section Data

Station Elevation Data num= 27

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	9.08	25.06	9.07	173.44	8.6	321.83	7.94	518.88	6.64
557	6.54	568.1	6.42	589.87	6.35	647.19	5.97	815.42	5.4
913.88	5.61	1012.34	5.44	1148.72	7.73	1181.5	-3.2	1221.5	-3.2
1252.39	7.1	1258.69	7.45	1300.64	7	1319.9	7	1358.53	6.58
1451.86	6.52	1573.39	6.07	1771.77	6.1	1805.05	6.26	2001.91	6.27
2011.01	6.36	2021.48	6.29						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	1148.72	.035	1252.39	.1

Bank Sta: Left Right Coeff Contr. Expan.  
 1148.72 1252.39 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	1173.03	6.4	F
1235.08	2021.48	6.4	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 2

Pier Data

Pier Station Upstream=1194.505 Downstream=1194.505

```

Upstream      num=      2
  Width  Elev   Width  Elev
*****
      1    -2     1     8.1

```

```

Downstream    num=      2
  Width  Elev   Width  Elev
*****
      1   -.29    1     8.1

```

Pier Data

Pier Station Upstream=1213.505 Downstream=1213.505

```

Upstream      num=      2
  Width  Elev   Width  Elev
*****
      1  -2.05    1     8.1

```

```

Downstream    num=      2
  Width  Elev   Width  Elev
*****
      1  -1.91    1     8.1

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main

REACH: Lower RS: 35131

INPUT

Description: 5' DS Daney Street

```

Station Elevation Data num=      27
  Sta   Elev   Sta   Elev   Sta   Elev   Sta   Elev   Sta   Elev
*****
      0   9.08  25.06  9.07 173.44   8.6  321.83   7.94  518.88   6.64

```



ExpandedLocal.rep

557	6.54	568.1	6.42	589.87	6.35	647.19	5.97	815.42	5.4
913.88	5.61	1012.34	5.44	1148.72	7.73	1181.5	-3.2	1221.5	-3.2
1252.39	7.1	1258.69	7.45	1300.64	7	1319.9	7	1358.53	6.58
1451.86	6.52	1573.39	6.07	1771.77	6.1	1805.05	6.26	2001.91	6.27
2011.01	6.36	2021.48	6.29						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	1148.72	.035	1252.39	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1148.72	1252.39		239	232		.1	.3
Ineffective Flow			num=	2				
Sta L	Sta R	Elev	Permanent					
0	1173.03	6.4	F					
1235.08	2021.48	6.4	F					

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 34899

INPUT  
 Description:

Station Elevation Data num= 26

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	8.62	142.95	8.86	200.48	8.83	364.92	8.51	664.78	7.37
1010.61	6.41	1117.03	6.24	1276.37	6.27	1306.69	6.34	1332.98	6.63
1344.15	7.52	1376	-3.1	1416	-3.1	1443.39	6.03	1469.79	6.36
1503.85	6.05	1553.08	6.07	1700.79	6.35	1799.26	6.4	1807.81	6.32
1891.75	6.36	1897.73	6.46	2019.79	6.32	2191.55	6.52	2242.38	6.7
2294.97	7.09								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	1344.15	.035	1443.39	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1344.15	1443.39		850	853		.1	.3

CROSS SECTION

RIVER: W14 Main

ExpandedLocal.rep

REACH: Lower

RS: 34046

INPUT

Description:

Station Elevation Data num= 30											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	8.22	14.47	8.18	52.81	7.57	142.05	7.05	204.55	6.78		
281.28	6.58	448.65	6.34	498.18	6.15	572.21	6.21	795.34	6.1		
841.87	6.2	1042.97	6.29	1075.35	6.62	1090.35	6.68	1120	-3.2		
1160	-3.2	1186.16	5.52	1193.45	5.43	1290.59	5.77	1664.62	6.43		
1739.54	6.68	1808.23	6.81	1951.84	6.79	1975.44	6.72	2089.2	6.82		
2239.05	7.24	2338.96	7.12	2438.86	7.16	2538.76	7.38	2552.04	7.49		

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.06	1090.35	.035	1186.16	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1090.35	1186.16		819	841		.1	.3

CROSS SECTION

RIVER: W14 Main

REACH: Lower

RS: 33199

INPUT

Description:

Station Elevation Data num= 25											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	6.31	54.51	6.55	75.05	6.55	103.98	6.53	154.99	6.43		
197.35	6.13	230.14	5.94	270.8	5.56	278.43	5.48	290.73	4.76		
322.09	5.97	352	-4	392	-4	417.43	4.48	429.46	4.21		
462.88	6.26	515.01	9.43	528.22	9.83	539.43	9.93	577.59	9.97		
605.21	9.89	650.57	9.88	676.34	9.56	702.04	9.44	707	9.42		

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.06	322.09	.035	417.43	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	322.09	417.43		639	633		.1	.3

CROSS SECTION

ExpandedLocal.rep

RIVER: W14 Main

REACH: Lower

RS: 32566

INPUT

Description:

Station Elevation Data num= 60

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	9.11	48.74	9.02	95.86	8.91	97.96	8.91	102.29	8.9
147.18	8.78	158.19	8.76	224.46	8.6	245.63	8.53	266.36	8.46
294.85	8.39	315.07	8.32	373.69	8.17	431.3	7.98	442.52	7.94
448.31	7.92	491.74	7.78	534.28	7.64	554.77	7.56	624.16	7.41
639.41	7.36	652.01	7.33	656.71	7.32	708.72	7.2	741.2	7.11
767.76	7.03	792.34	6.94	822.66	6.86	830.38	6.84	848.19	6.8
892.18	6.4	940.26	5.93	941.59	5.93	943.92	5.91	970.19	5.71
982.41	5.6	1010	-3.6	1050	-3.6	1082.94	7.38	1091.15	6.36
1122.08	6.83	1139.3	7.14	1209.73	7.46	1222	7.45	1236.09	7.44
1252.44	7.36	1284.48	7.29	1336.17	7.16	1368.79	7.39	1399.39	7.53
1424.74	7.51	1453.86	7.49	1492.32	7.41	1525.82	7.72	1537.38	7.78
1550.65	7.74	1604.96	7.09	1644.44	6.66	1652.26	6.65	1667.99	6.76

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	982.41	.035	1082.94	.125

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
982.41	1082.94	613	625	664	.1	.3	

CROSS SECTION

RIVER: W14 Main

REACH: Lower

RS: 31941

INPUT

Description:

Station Elevation Data num= 28

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	9.39	105.12	9.65	164.94	9.67	266.58	9.46	393.61	8.44
464.59	7.67	489.47	6.91	521	-3.6	561	-3.6	594.8	7.67
608.09	7.52	708.21	7.2	791.43	7.59	832.09	7.62	1001.52	6.7
1067.72	6.56	1232.58	6.76	1250.34	6.88	1266.31	6.82	1396.07	7.2
1431.94	7.11	1488.28	7.83	1596.87	8.48	1608.51	8.47	1836.48	9.39
1871.75	9.66	1916.63	9.61	2065.92	9.86				

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 489.47 .035 594.8 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 489.47 594.8 727 761 803 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 31180

INPUT

Description:

Station Elevation Data num= 34  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 9.17 29.42 9.35 187.32 10.7 232.55 10.95 347.38 10.72  
 431.09 9.05 450.56 8.78 499.38 8.66 540.28 8.37 575 -3.2  
 615 -3.2 647.5 7.63 647.86 7.49 672.29 7.59 719.32 8.27  
 724 8.31 746.44 8.54 775.98 7.77 845.01 7.83 871 8.44  
 907.34 8.54 943.69 8.22 974.57 8.27 993.03 8.2 1008.99 8.3  
 1042.38 8.25 1140.9 8.6 1237.55 8.62 1288.65 8.54 1387.44 8.63  
 1604.39 9.11 1879.65 9.05 1928.9 8.86 1966.82 8.85

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 540.28 .035 647.5 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 540.28 647.5 694 701 702 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 30479

INPUT

Description:

Station Elevation Data num= 24  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 9.46 65.29 9.83 203.78 10.78 251.89 10.93 332.11 10.86

ExpandedLocal.rep

473.61	10.32	689.1	10.19	782.7	8.93	933.63	8.56	969.5	-3.4
1009.5	-3.4	1045.84	8.71	1063.85	7.79	1106.25	7.3	1129.38	7.2
1207.45	7.56	1359.64	7.25	1436.13	7.45	1545.59	8.15	1761.12	8.89
1975.22	9.85	2175.81	10.18	2228.25	10.09	2287.01	10.16		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	933.63	.035	1045.84	.06

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	933.63	1045.84		674	725	748		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 29754

INPUT

Description:

Station Elevation Data num= 50

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	11.15	11.67	11.13	64.56	10.98	74.51	10.95	81.06	10.93
161.64	10.67	200.19	10.61	210.21	10.58	222.83	10.58	263.03	10.59
280.27	10.61	301.97	10.76	335.48	10.9	381.1	10.9	388.71	10.91
418.07	10.91	451.56	10.91	455.4	10.91	460.24	10.9	514.4	10.76
539.38	10.67	566.48	10.58	626.85	10.17	640.08	10.04	665.56	9.76
697.65	9.39	735.62	8.89	765.65	8.77	765.78	8.77	772.13	8.74
845.26	10.01	887	-3.9	927	-3.9	965.04	8.78	972.28	7.59
980.12	7.94	990.22	7.96	998.1	7.98	1039.57	8.12	1090.66	8.14
1102.9	8.23	1161.1	8.34	1191.24	8.37	1199.26	8.38	1241.53	8.47
1269.11	8.52	1326.6	8.58	1352.22	8.57	1362.92	8.56	1400.49	8.49

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	845.26	.035	965.04	.06

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	845.26	965.04		838	832	830		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 28922

ExpandedLocal.rep

INPUT

Description:

Station Elevation Data num= 27

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	11.04	64.2	10.88	87.56	10.83	107.74	10.76	143.25	10.53
170.17	10.43	188.04	10.26	200.77	10.1	232.12	9.82	276.13	9.34
313.98	8.92	342.43	8.65	370.59	8.37	396.03	8.19	406.55	8.1
460.72	7.3	462.4	7.77	498	-4.1	538	-4.1	578.65	9.45
581.71	9.34	625.28	12.14	631.11	12.88	641.38	13.08	674	13.35
680.48	13.4	682.76	13.34						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.09	462.4	.035	578.65	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	462.4	578.65		309	311		.1	.3

CROSS SECTION

RIVER: W14 Main

REACH: Lower RS: 28661

INPUT

Description: US I-10

Station Elevation Data num= 20

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.283	14.653	13.171	39.244	12.336	44	13.7	55	11.6
68	5.7	76	1.3	87	-3.1	99	-3.1	108	-1.3
119	-4.4	127	-5	138	1.4	147	6.2	155	9.9
165	12	197.265	12.73	220.224	13.258	263.66	13.48	265.526	13.483

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.09	55	.035	165	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	55	165		189	189		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	55.56	14	T
161.85	265.526	14	T

ExpandedLocal.rep

BRIDGE

RIVER: W14 Main

REACH: Lower RS: 28567

INPUT

Description: I-10 Bridge

Distance from Upstream XS = 3

Deck/Roadway Width = 184

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 15

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-1		14			58.6	16.94	13.5	60.01	16.94	13.5				
78.1	16.94	13.5	79.51	16.94	13.5	97.6	16.94	13.5						
99.01	16.94	13.5	117.1	16.94	13.5	118.51	16.94	13.5						
136.6	16.94	13.5	138.01	16.94	13.5	158.8	16.94	13.5						
199	14		249	14		299	14							

Upstream Bridge Cross Section Data

Station Elevation Data num= 20

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.283	14.653	13.171	39.244	12.336	44	13.7	55	11.6
68	5.7	76	1.3	87	-3.1	99	-3.1	108	-1.3
119	-4.4	127	-5	138	1.4	147	6.2	155	9.9
165	12	197.265	12.73	220.224	13.258	263.66	13.48	265.526	13.483

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.09	55	.035	165	.06

Bank Sta: Left Right Coeff Contr. Expan.  
 55 165 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	55.56	14	T
161.85	265.526	14	T

Downstream Deck/Roadway Coordinates

num= 15

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-11		14			48	16.94	13.5	50	16.94	13.5				

ExpandedLocal.rep

68	16.94	13.5	70	16.94	13.5	88	16.94	13.5
89	16.94	13.5	107	16.94	13.5	109	16.94	13.5
127	16.94	13.5	128	16.94	13.5	149	16.94	13.5
189	14		239	14		289	14	

Downstream Bridge Cross Section Data

Station Elevation Data num= 23

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.561	4.066	13.625	7.723	13.584	13.661	13.134	39	12.8
47	11	57	5.9	64	1.3	77	-4	88	-4.6
100	-2.5	110	-3.6	120	-2.2	128	1.4	135	5.6
146	10.6	151	11.7	154	13.1	161.451	12.899	163.868	13.01
178.533	13.622	208.353	13.49	212.284	13.522				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	47	.035	151	.125

Bank Sta: Left Right Coeff Contr. Expan.  
 47 151 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	46.44	14	T
150.5	212.284	14	T

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 4

Pier Data

Pier Station Upstream= 78 Downstream= 78

Upstream num= 2

Width	Elev	Width	Elev
1.5	-5	1.5	16.94

Downstream num= 2

Width	Elev	Width	Elev
1.5	-5	1.5	16.94



ExpandedLocal.rep

Pier Data

Pier Station Upstream= 98 Downstream= 98  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.4 -5 1.4 17  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.4 -5 1.4 17

Pier Data

Pier Station Upstream= 118 Downstream= 118  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.4 -5 1.4 16.94  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.4 -5 1.4 16.94

Pier Data

Pier Station Upstream= 137 Downstream= 137  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.4 -5 1.4 16.94  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.4 -5 1.4 16.94

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy  
 Momentum Cd = 2  
 Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Pressure and Weir flow  
 Submerged Inlet Cd =  
 Submerged Inlet + Outlet Cd = .8  
 Max Low Cord = 13.5

Additional Bridge Parameters

Add Friction component to Momentum

ExpandedLocal.rep

Do not add Weight component to Momentum  
Class B flow critical depth computations use critical depth  
inside the bridge at the upstream end  
Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main  
REACH: Lower RS: 28472

INPUT

Description: DS I-10

Station Elevation Data num= 23									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.561	4.066	13.625	7.723	13.584	13.661	13.134	39	12.8
47	11	57	5.9	64	1.3	77	-4	88	-4.6
100	-2.5	110	-3.6	120	-2.2	128	1.4	135	5.6
146	10.6	151	11.7	154	13.1	161.451	12.899	163.868	13.01
178.533	13.622	208.353	13.49	212.284	13.522				

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.125	47	.035	151	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	47	151		674	674		.1	.3

Ineffective Flow num= 2			
Sta L	Sta R	Elev	Permanent
0	46.44	14	T
150.5	212.284	14	T

CROSS SECTION

RIVER: W14 Main  
REACH: Lower RS: 27798

INPUT

Description:

Station Elevation Data num= 62									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5.508	32.031	6.044	90.674	6.493	159.724	5.427	169.55	4.106
208.937	-.802	286.854	-1.016	302.207	-1.044	312.537	-1.044	356.575	-1.101
1193.194	-1.183	1206.81	-1.211	1638.235	-1.221	1708.093	-1.083	1777.951	-.802

ExpandedLocal.rep

1812.88	-.8021846.785	7.0881847.809	7.351849.028	7.184	1857	3.57			
1860	2.43	1867	-.16	1882	-3.73	1887	-4.62	1903	-5.37
1920	-3.47	1924	-3.55	1934	-3.84	1948	-2.63	1949	-2.51
1959	.33	1967	3.18	1969	3.6	1976	5.51979.624		6.368
1979.642	6.3721987.286	7.3822049.239	-.8022091.682	3.2012118.836		6.127			
2126.48	5.4842134.124	4.6852161.279	-.8022188.433	-.8022198.625		-.825			
2203.721	-.8432265.674	-1.1732300.473	-1.2262335.271	-1.2292350.559		-1.215			
2436.58	-1.0432459.665	-.9652494.814	-.8022528.844	3.7862544.186		4.904			
2550.965	4.9412568.474	5.1942642.931	1.1072689.964	8.4482692.304		8.748			
2694.294	8.6982741.676	9.966							

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.031849.028	.0351979.642	.03		

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
1849.028	1979.642	828	828	828	.1	.3
Ineffective Flow	num=	2				
Sta L	Sta R	Elev	Permanent			
0	1847.8	7.35	F			
1987.292	741.676	7.382	F			

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 26970

INPUT

Description:

Station Elevation Data num= 48

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	8.337	6.377	8.352	8.458	8.359	43.345	8.398	62.562	8.418
79.573	8.454	118.747	8.464	138.982	8.513	167.867	8.454	205.06	8.399
231.117	8.265	260.716	7.925	289.522	8.318	322.817	8.798	348.607	9.114
367.027	9.509	391.588	9.685	402.179	9.609	410	7.577	417	3.08
424	.94	427	0	434	-1.81	449	-4.79	453	-5.32
469	-6.23	483	-4.56	487	-4.36	495	-4.11	507.5	-3.11
508	-3.05	517	-.88	525	1.09	526	1.35	532	2.67
535	5.04	539	6.27	541	7.334	542.875	7.565	576.886	9.663
609.48	9.911	611.693	9.898	614.002	9.896	659.191	9.406	745.805	9.557
749.19	9.573	752.671	9.613	815.496	9.794				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

ExpandedLocal.rep

0 .125 410 .035 541 .125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	410	541		546 546	536		.1	.3
Ineffective Flow	num=		1					
Sta L	Sta R	Elev	Permanent					
0	391.59	9.69	F					

CROSS SECTION

RIVER: W14 Main  
REACH: Lower RS: 26424

INPUT

Description:

Station Elevation Data	num=		26						
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
0	9.317	45.765	10.224	89.239	10.19	106.334	10.399	142.378	9.918
150.911	9.848	153.644	9.227	206	10	214	5.4	219	1.2
226	-1.6	241	-5.5	255	-6.8	267	-4.9	281	-3.4
292	-.3	297	.8	299	3.6	303	5.4	308	8
329.942	10.013	349.321	10.02	359.402	10.236	364.859	10.252	373.632	10.005
405.032	9.619								

Manning's n Values	num=		3						
Sta	n Val	Sta	n Val	Sta	n Val				
*****									
0	.125	206	.035	308	.125				

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	206	308		204 204	204		.1	.3

CROSS SECTION

RIVER: W14 Main  
REACH: Lower RS: 26220

INPUT

Description:

Station Elevation Data	num=		12						
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
0	11	129	10.78	154	11.52	167	1.21	180	-4.92
200	-7.37	220	-5.67	240	-3.67	246	1.23	260	10.81
285	10.65	400	11						

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .125 154 .035 260 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 154 260 51 51 51 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 26169

INPUT

Description: 3' US Kingspoint Blvd

Station Elevation Data num= 12  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 11 129 10.78 154 11.52 167 1.21 180 -4.92  
 200 -7.37 220 -5.67 240 -3.67 246 1.23 260 10.81  
 285 10.65 400 11

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .125 154 .035 260 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 154 260 38 38 38 .1 .3

BRIDGE

RIVER: W14 Main  
 REACH: Lower RS: 26152

INPUT

Description: Kingspoint Blvd Bridge

Distance from Upstream XS = 3

Deck/Roadway Width = 32

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 6  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 0 11 11 154 10.43 9.34 171.5 10.43 9.34

ExpandedLocal.rep

188.5 10.43 9.34 189.5 10.43 9.34 400 11 11

Upstream Bridge Cross Section Data

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	11	129	10.78	154	11.52	167	1.21	180	-4.92
200	-7.37	220	-5.67	240	-3.67	246	1.23	260	10.81
285	10.65	400	11						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	154	.035	260	.125

Bank Sta: Left Right Coeff Contr. Expan.  
 154 260 .1 .3

Downstream Deck/Roadway Coordinates

num= 6

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
0	11	11	154	10.43	9.34	171.5	10.43	9.34
188.5	10.43	9.34	189.5	10.43	9.34	400	11	11

Downstream Bridge Cross Section Data

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	11	129	10.78	154	11.52	167	1.21	180	-4.92
200	-7.37	220	-5.67	240	-3.67	246	1.23	260	10.81
285	10.65	400	11						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	154	.035	260	.125

Bank Sta: Left Right Coeff Contr. Expan.  
 154 260 .1 .3

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 3

Pier Data

Pier Station      Upstream=      189      Downstream=      189  
Upstream      num=      2  
    Width      Elev      Width      Elev  
\*\*\*\*\*  
    1      0      1      11  
Downstream      num=      2  
    Width      Elev      Width      Elev  
\*\*\*\*\*  
    1      0      1      11

Pier Data

Pier Station      Upstream=      207      Downstream=      207  
Upstream      num=      2  
    Width      Elev      Width      Elev  
\*\*\*\*\*  
    1      0      1      11  
Downstream      num=      2  
    Width      Elev      Width      Elev  
\*\*\*\*\*  
    1      0      1      11

Pier Data

Pier Station      Upstream=      225      Downstream=      225  
Upstream      num=      2  
    Width      Elev      Width      Elev  
\*\*\*\*\*  
    1      0      1      11  
Downstream      num=      2  
    Width      Elev      Width      Elev  
\*\*\*\*\*  
    1      0      1      11

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

    Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

    Energy Only

Additional Bridge Parameters

    Add Friction component to Momentum

    Do not add Weight component to Momentum

ExpandedLocal.rep

Class B flow critical depth computations use critical depth inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main
REACH: Lower RS: 26131

INPUT

Description: 3' DS Kingspoint Blvd

Station Elevation Data num= 12
Table with 10 columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Data points include (0, 11), (129, 10.78), (154, 11.52), (167, 1.21), (180, -4.92), (200, -7.37), (220, -5.67), (240, -3.67), (246, 1.23), (260, 10.81), (285, 10.65), (400, 11).

Manning's n Values num= 3
Table with 6 columns: Sta, n Val, Sta, n Val, Sta, n Val. Data points include (0, .125), (154, .035), (260, .125).

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
Table with 8 columns. Data points include (154, 260), (93, 93), (.1, .3).

CROSS SECTION

RIVER: W14 Main
REACH: Lower RS: 26038

INPUT

Description:

Station Elevation Data num= 12
Table with 10 columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Data points include (0, 11), (129, 10.78), (154, 11.52), (167, 1.21), (180, -4.92), (200, -7.37), (220, -5.67), (240, -3.67), (246, 1.23), (260, 10.81), (285, 10.65), (400, 11).

Manning's n Values num= 3
Table with 6 columns: Sta, n Val, Sta, n Val, Sta, n Val. Data points include (0, .125), (154, .035), (260, .125).

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
Table with 8 columns. Data points include (154, 260), (93, 93), (.1, .3).



154 260 879 879 879 .1 .3

CROSS SECTION

RIVER: W14 Main
REACH: Lower RS: 25159

INPUT

Description:

Station Elevation Data num= 13
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
0 10 3.15 8.09 340 7.3 346 3.11 360 3.26
380 -6.96 390 -6.86 400 -7.06 420 -7.26 430 -4.26
440 1.99 449 8.32 474 10.33

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
0 .125 340 .035 449 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
340 449 52 52 52 .1 .3

CROSS SECTION

RIVER: W14 Main
REACH: Lower RS: 25107

INPUT

Description: US Voters Road

Station Elevation Data num= 8
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
0 10 315 8.09 340 8.2 381 8.2 381.01 -4.2
455 -4.2 455.01 8.7 474 10.33

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
0 .125 381 .035 455.01 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
381 455.01 27 27 27 .1 .3

Ineffective Flow num= 2
Sta L Sta R Elev Permanent

ExpandedLocal.rep

0 380 10 F  
 456 474 10 F

BRIDGE

RIVER: W14 Main  
 REACH: Lower RS: 25086

INPUT

Description: Voters Road Bridge  
 Distance from Upstream XS = 1  
 Deck/Roadway Width = 25  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 11

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0	10	10	315	11	8.09	340	11	8.2						
346	11	8.2	381	11	8.2	398	11	8.7						
399	11	8.7	416	11	8.7	435	11	8.7						
455	11	8.7	474	10.33	10.33									

Upstream Bridge Cross Section Data

Station Elevation Data num= 8

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	10	315	8.09	340	8.2	381	8.2	381.01	-4.2
455	-4.2	455.01	8.7	474	10.33				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	381	.035	455.01	.125

Bank Sta: Left Right Coeff Contr. Expan.  
 381 455.01 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	380	10	F
456	474	10	F

Downstream Deck/Roadway Coordinates

num= 11

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0	10	10	315	11	8.09	340	11	8.2						
346	11	8.2	381	11	8.2	398	11	8.7						

ExpandedLocal.rep

399 11 8.7 416 11 8.7 435 11 8.7  
455 11 8.7 474 10.33 10.33

Downstream Bridge Cross Section Data

Station Elevation Data num= 13

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
\*\*\*\*\*  
0 10 315 8.09 340 8.2 346 8.2 360 8.2  
381 8.2 381.01 -4.2 398 -4.2 398.01 -4.2 399 -4.2  
455 -4.2 455.01 8.7 474 10.33

Manning's n Values num= 3

Sta n Val Sta n Val Sta n Val  
\*\*\*\*\*  
0 .125 381 .035 455.01 .125

Bank Sta: Left Right Coeff Contr. Expan.  
381 455.01 .1 .3

Ineffective Flow num= 2

Sta L Sta R Elev Permanent  
0 380 10 F  
456 474 10 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
Maximum allowable submergence for weir flow = .98  
Elevation at which weir flow begins =  
Energy head used in spillway design =  
Spillway height used in design =  
Weir crest shape = Broad Crested

Number of Piers = 3

Pier Data

Pier Station Upstream= 398.5 Downstream= 398.5

Upstream num= 2  
Width Elev Width Elev

\*\*\*\*\*  
1 0 1 10.33

Downstream num= 2  
Width Elev Width Elev

\*\*\*\*\*  
1 0 1 10.33

Pier Data

Pier Station Upstream= 416.5 Downstream= 416.5

Upstream num= 2  
Width Elev Width Elev

```

*****
      1      0      1  10.33
Downstream  num=      2
      Width  Elev   Width  Elev
*****
      1      0      1  10.33

```

Pier Data

```

Pier Station      Upstream=  435.5      Downstream=  435.5
Upstream          num=      2
      Width  Elev   Width  Elev
*****
      1      0      1  10.33
Downstream        num=      2
      Width  Elev   Width  Elev
*****
      1      0      1  10.33

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main

REACH: Lower

RS: 25080

INPUT

Description: DS Voters Road

Station Elevation Data num= 13

```

      Sta   Elev   Sta   Elev   Sta   Elev   Sta   Elev   Sta   Elev
*****
      0     10    315    8.09   340    8.2    346    8.2    360    8.2
      381    8.2  381.01  -4.2   398   -4.2  398.01  -4.2   399   -4.2
      455   -4.2  455.01    8.7   474  10.33

```

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .125 381 .035 455.01 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 381 455.01 90 90 90 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 380 10 F  
 456 474 10 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 24990

INPUT

Description:

Station Elevation Data num= 18  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 22 9.14 26 7.04 33 4.54 40 2.04 43.28 .95  
 46 .04 60 -2.29 80 -5.19 100 -4.39 120 -3.49  
 131 .04 135 3.64 140 5.84 145 8.64 155 9.14  
 164 9.64 170 11.34 176 13.14

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 22 .125 40 .035 135 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 40 135 2724 2724 2724 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 22266

INPUT

Description:

Station Elevation Data num= 22  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*

ExpandedLocal.rep

0	13.16	15	11.06	30	9.36	45	7.46	56	6.36
70	5.66	85	4.86	93	4.46	96	2.46	98	.76
100	-.99	120	-5.59	140	-6.89	160	-6.19	180	.21
186	.76	190	2.96	200	5.76	210	5.66	213	6.26
225	10.16	236	13.86						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.065	96	.035	190	.065

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	96	190		1252	1252		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 21014

INPUT

Description:

Station Elevation Data num= 22

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.16	15	11.06	30	9.36	45	7.46	56	6.36
70	5.66	85	4.86	93	4.46	96	2.46	98	.76
100	-.99	120	-5.59	140	-6.89	160	-6.19	180	.21
186	.76	190	2.96	200	5.76	210	5.66	213	6.26
225	10.16	236	13.86						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	96	.035	190	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	96	190		1394	1394		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 19620

INPUT

Description: 55' US Confluence with W-15 Main

Station Elevation Data num= 22

ExpandedLocal.rep

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.16	15	11.06	30	9.36	45	7.46	56	6.36
70	5.66	85	4.86	93	4.46	96	2.46	98	.76
100	-.99	120	-5.59	140	-6.89	160	-6.19	180	.21
186	.76	190	2.96	200	5.76	210	5.66	213	6.26
225	10.16	236	13.86						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	96	.035	190	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	96	190		0	0		.1	.3

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 4743

INPUT

Description:

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	12.8	29	13.2	47	13.1	53	8.3	59	7.5
72	5.8	80	7.1	89	12.5	117	13.9	162	13.7

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	47	.05	89	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	47	89		1	1		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	48.5	14.5	F
89.5	162	14.5	F

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 4742

ExpandedLocal.rep

INPUT

Description:

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	12.8	29	13.2	47	13.1	53	8.3	59	7.5
72	5.8	80	7.1	89	12.5	117	13.9	162	13.7

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	47	.05	89	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	47	89		54	54		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	48.5	14.5	F
89.5	162	14.5	F

CULVERT

RIVER: West Diversion

REACH: Main RS: 4716

INPUT

Description: West Diversion Canal #8

LA Hwy No. 11

Distance from Upstream XS = 6.5

Deck/Roadway Width = 41

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 5

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0	14.5				18	14.5				62	14.6			
130	14.6				185	14.7								

Upstream Bridge Cross Section Data

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	12.8	29	13.2	47	13.1	53	8.3	59	7.5
72	5.8	82	7.1	89	12.5	117	13.9	162	13.7

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val



ExpandedLocal.rep

\*\*\*\*\*  
 0 .035 47 .05 89 .035

Bank Sta: Left Right Coeff Contr. Expan.  
 47 89 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 48.5 14.5 F  
 89.5 162 14.5 F

Downstream Deck/Roadway Coordinates  
 num= 5

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0	14.5				29	14.5				73	14.6			
141	14.6				196	14.7								

Downstream Bridge Cross Section Data

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	12.5	29	12.6	51	10.1	54	5.5	61	2.2
68	5	74	6.6	76	4.8	81	4.2	90	5.4
95	12.6	116	13.1						

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 0 .035 51 .05 95 .035

Bank Sta: Left Right Coeff Contr. Expan.  
 51 95 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 54.75 14.5 F  
 89.25 116 14.5 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 5

Culvert Name	Shape	Rise	Span
--------------	-------	------	------

Culvert #3           Box    4.15       4  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length    Top n   Bottom n   Depth Blocked   Entrance Loss Coef  
 Exit Loss Coef  
                   6.5       41       .012       .012           0           .5  
           1  
 Upstream   Elevation = 8.1  
             Centerline Station = 57  
 Downstream Elevation = 7.9  
             Centerline Station = 60

Culvert Name       Shape       Rise       Span  
 Culvert #2           Box    4.15       4  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length    Top n   Bottom n   Depth Blocked   Entrance Loss Coef  
 Exit Loss Coef  
                   6.5       41       .012       .012           0           .5  
           1  
 Upstream   Elevation = 8.1  
             Centerline Station = 63  
 Downstream Elevation = 7.9  
             Centerline Station = 66

Culvert Name       Shape       Rise       Span  
 Culvert #1           Box    4.15       4  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length    Top n   Bottom n   Depth Blocked   Entrance Loss Coef  
 Exit Loss Coef  
                   6.5       41       .012       .012           0           .5  
           1  
 Upstream   Elevation = 8.1  
             Centerline Station = 69  
 Downstream Elevation = 7.9  
             Centerline Station = 72

Culvert Name       Shape       Rise       Span  
 Culvert #4           Box    4.15       4  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length    Top n   Bottom n   Depth Blocked   Entrance Loss Coef  
 Exit Loss Coef

1  
 6.5 42 .012 .012 0 .5  
 1  
 Upstream Elevation = 8.1  
 Centerline Station = 75  
 Downstream Elevation = 7.9  
 Centerline Station = 78

Culvert Name Shape Rise Span  
 Culvert #5 Box 4.15 4  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 6.5 42 .012 .012 0 .5

1  
 Upstream Elevation = 8.1  
 Centerline Station = 81  
 Downstream Elevation = 7.9  
 Centerline Station = 84

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 4688

INPUT

Description:

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	12.5	29	12.6	51	10.1	54	5.5	61	2.2
68	5	74	6.6	76	4.8	81	4.2	90	5.4
95	12.6	116	13.1						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	51	.05	95	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 51 95 1 1 1 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	54.75	14.5	F
89.25	116	14.5	F

ExpandedLocal.rep

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 4687

INPUT

Description:

Station Elevation Data num= 8

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-315.5	14	-293	6.5	54	6.5	61	2.2	68	5
74	6.6	421	6.5	442	14				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-315.5	.035	54	.03	74	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	54	74		627	627		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-315.5	53.75	14.5	F
90.25	442	14.5	F

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 4060

INPUT

Description:

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-370	14	-347	6.5	0	6.5	46	5.1	62	4.6
67	3.7	75	5	102	6.5	449	6.5	472	14

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-370	.035	46	.03	75	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	46	75		369	369		.1	.3

ExpandedLocal.rep

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 3692

INPUT

Description:

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-342	14	-319	6.5	28	6.5	72	5.4	77	3.6
80	2.9	87	3.7	90	5.4	107	6.5	454	6.5
477	14								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-342	.035	72	.03	90	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

72	90	1	1	1	.1	.3
----	----	---	---	---	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-342	63.14	14.1	F
96.86	477	14.1	F

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 3691

INPUT

Description:

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	7.1	28	6.8	72	5.4	77	3.6	80	2.9
87	3.7	90	5.4	107	5.8	131	5.3	162	5

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.01	72	.05	90	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

72	90	131	131	131	.1	.3
----	----	-----	-----	-----	----	----

ExpandedLocal.rep

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 64.14 14.1 F  
 95.86 162 14.1 F

CULVERT

RIVER: West Diversion  
 REACH: Main RS: 3626

INPUT

Description: West Diversion Canal #6  
 Distance from Upstream XS = 11.5  
 Deck/Roadway Width = 108  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 6  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 0 14.1 23 14.1 56 14.3  
 80 14.5 112 14.5 162 14.5

Upstream Bridge Cross Section Data

Station Elevation Data num= 10  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 7.1 28 6.8 72 5.4 77 3.6 80 2.9  
 87 3.7 90 5.4 107 5.8 131 5.3 162 5

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .01 72 .05 90 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 72 90 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 64.14 14.1 F  
 95.86 162 14.1 F

Downstream Deck/Roadway Coordinates

num= 6  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 0 14.1 31 14.1 65 14.3  
 88 14.5 121 14.5 139 14.5

ExpandedLocal.rep

Downstream Bridge Cross Section Data

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.5	27	13.6	56	12.9	74	10.5	83	4.2
88	2.8	95	4.5	107	9.3	121	9.7	139	9.9

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.01	74	.05	107	.1

Bank Sta: Left Right Coeff Contr. Expan.

74	107	.1	.3
----	-----	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	77.89	14.1	F
98.11	139	14.1	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name	Shape	Rise	Span	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
Culvert #1	Pipe Arch	6	8.71							
FHWA Chart # 34- 18 inch corner radius; Corrugated metal										
FHWA Scale # 1 - 90 Degree headwall										
Solution Criteria = Highest U.S. EG										
1				11.5	108	.024	.024	0		.7
Upstream	Elevation = 4									
	Centerline Station = 80									
Downstream	Elevation = 3.1									
	Centerline Station = 88									

CROSS SECTION

RIVER: West Diversion

REACH: Main RS: 3560

INPUT

Description:

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.5	27	13.6	56	12.9	74	10.5	83	4.6
88	3.5	95	4.5	107	9.3	121	9.7	139	9.9

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.01	74	.05	107	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	74	107		783	783		.1	.3

Ineffective Flow	num=	2	
Sta L	Sta R	Elev	Permanent
0	77.89	14.1	F
98.11	139	14.1	F

CROSS SECTION

RIVER: West Diversion REACH: Main RS: 2777

INPUT

Description:

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	9	25	9.4	45	8.9	49	3.1	52	2.5
57	3.3	63	8.7	72	12	78	10.4	95	9.3

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.01	45	.05	63	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	45	63		551	551		.1	.3

CROSS SECTION

RIVER: West Diversion



REACH: Main RS: 2226

INPUT

Description:

Station Elevation Data num= 7

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	8.2	30	8.6	34	2.8	37	2.6	39	2.7
43	7.1	69	9.2						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.01	30	.05	43	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	30	43		116	116		.1	.3

BRIDGE

RIVER: West Diversion  
REACH: Main RS: 2168

INPUT

Description: Railroad

Bridge from Survey

Distance from Upstream XS = 52

Deck/Roadway Width = 12

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 5

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
0	14.7		3	14.8	12	63	14.9	12
122	14.8		183	14.8				

Upstream Bridge Cross Section Data

Station Elevation Data num= 7

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	8.2	30	8.6	34	2.8	37	2.6	39	2.7
43	7.1	69	9.2						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.01	30	.05	43	.1

ExpandedLocal.rep

Bank Sta: Left    Right    Coeff Contr.    Expan.  
                  30        43                   .1            .3

Downstream Deck/Roadway Coordinates

num=            5  
       Sta Hi Cord Lo Cord        Sta Hi Cord Lo Cord        Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
       -41    14.7                   -10    14.8            12        52    14.9            12  
       110    14.8                   177    14.8

Downstream Bridge Cross Section Data

Station Elevation Data        num=            8  
       Sta    Elev        Sta    Elev        Sta    Elev        Sta    Elev        Sta    Elev  
 \*\*\*\*\*  
       -41    8.7            0        8            6        3            12    2.4            17    3.2  
       24    8.7            38    4.3            63    7.4

Manning's n Values

num=            3  
       Sta    n Val        Sta    n Val        Sta    n Val  
 \*\*\*\*\*  
       -41    .01            0        .05            24        .1

Bank Sta: Left    Right    Coeff Contr.    Expan.  
                  0        24                   .1            .3

Upstream Embankment side slope        =        0 horiz. to 1.0 vertical  
 Downstream Embankment side slope     =        0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow =        .98  
 Elevation at which weir flow begins     =  
 Energy head used in spillway design     =  
 Spillway height used in design         =  
 Weir crest shape                         = Broad Crested

Number of Piers = 5

Pier Data

Pier Station        Upstream=        13        Downstream=        -3  
 Upstream        num=            2  
       Width    Elev        Width    Elev  
 \*\*\*\*\*  
       1        0        1        12  
 Downstream       num=            2  
       Width    Elev        Width    Elev  
 \*\*\*\*\*  
       1        0        1        12

Pier Data

Pier Station Upstream= 24 Downstream= 3

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 12

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 12

Pier Data

Pier Station Upstream= 37 Downstream= 11

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 12

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 12

Pier Data

Pier Station Upstream= 48 Downstream= 19

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 12

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 12

Pier Data

Pier Station Upstream= 57 Downstream= 34

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 12

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 12

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

ExpandedLocal.rep

High Flow Method  
Energy Only

Additional Bridge Parameters  
Add Friction component to Momentum  
Do not add Weight component to Momentum  
Class B flow critical depth computations use critical depth  
inside the bridge at the upstream end  
Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: West Diversion  
REACH: Main RS: 2110

INPUT

Description:

Station Elevation Data num= 8

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-41	8.7	0	8	6	3	12	2.4	17	3.2
24	8.7	38	4.3	63	7.4				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-41	.01	0	.05	24	.1

Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	0	24	350	350	350		.1	.3

CROSS SECTION

RIVER: West Diversion  
REACH: Main RS: 1760

INPUT

Description:

Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	8.7	24	8.2	43	6	49	2.1	53	1.5
55	1.4	57	5.6	77	7	104	7.9		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

ExpandedLocal.rep

Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
0	.01	43	.05	57	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	43	57		54	54		.1	.3
Ineffective Flow			num=	2				
Sta L	Sta R	Elev	Permanent					
0	34.74	10.3	F					
68.45	104	10.3	F					

CULVERT

RIVER: West Diversion  
 REACH: Main RS: 1733

INPUT

Description: Carnation Street  
 Culvert from Survey  
 Distance from Upstream XS = 12.5  
 Deck/Roadway Width = 29  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num=	4										
Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0	10.5			52	10.8			93	10.6		
145	10.3										

Upstream Bridge Cross Section Data

Station Elevation Data	num=			9					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0	8.7	24	8.2	43	6	49	2.1	53	1.5
55	1.4	57	5.6	77	7	104	7.9		

Manning's n Values

num=	3				
Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
0	.01	43	.05	57	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	43	57		.1	.3
Ineffective Flow			num=	2	
Sta L	Sta R	Elev	Permanent		
0	34.74	10.3	F		
68.45	104	10.3	F		

ExpandedLocal.rep

Downstream Deck/Roadway Coordinates

```

num=      4
  Sta Hi Cord Lo Cord      Sta Hi Cord Lo Cord      Sta Hi Cord Lo Cord
*****
    0    10.5              52    10.8              93    10.6
  145    10.3
  
```

Downstream Bridge Cross Section Data

```

Station Elevation Data      num=      9
  Sta   Elev   Sta   Elev   Sta   Elev   Sta   Elev   Sta   Elev
*****
    0     9    20    8.1    38    8.1    43    1.1    51    .3
   55    1.6    62     8    82    8.2   106    8.7
  
```

Manning's n Values

```

num=      3
  Sta   n Val   Sta   n Val   Sta   n Val
*****
    0    .01    38    .05    62    .1
  
```

```

Bank Sta: Left   Right   Coeff Contr.   Expan.
           38     62         .1         .3
  
```

```

Ineffective Flow      num=      2
  Sta L   Sta R   Elev Permanent
    0   38.39   10.3      F
  59.61   106   10.3      F
  
```

```

Upstream Embankment side slope      =      0 horiz. to 1.0 vertical
Downstream Embankment side slope    =      0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =      .98
Elevation at which weir flow begins  =
Energy head used in spillway design  =
Spillway height used in design       =
Weir crest shape                     = Broad Crested
  
```

Number of Culverts = 1

```

Culvert Name      Shape      Rise      Span
Culvert #1       Pipe Arch      6      8.71
FHWA Chart # 34- 18 inch corner radius; Corrugated metal
FHWA Scale # 1 - 90 Degree headwall
Solution Criteria = Highest U.S. EG
Culvert Upstrm Dist Length      Top n Bottom n Depth Blocked Entrance Loss Coef
Exit Loss Coef
           12.5      29      .024      .024      0      .7
  1
Upstream Elevation = 2.2
Centerline Station = 51.6
  
```

Downstream Elevation = 2.1  
 Centerline Station = 49

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 1706

INPUT

Description:

Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	9	20	8.1	38	8.1	43	1.1	51	.3
55	1.6	62	8	82	8.2	106	8.7		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.01	38	.05	62	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	38	62		437	437	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	38.39	10.3	F
59.61	106	10.3	F

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 1269

INPUT

Description:

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	8.4	9	6.8	18	5.9	25	5	27	1.9
35	1.1	40	2.1	43	5	54	6.5	73	7.6

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.01	25	.05	43	.1

ExpandedLocal.rep

Bank Sta: Left    Right    Lengths: Left Channel    Right    Coeff Contr.    Expan.  
                  25       43                    87       87       87                    .1       .3  
 Ineffective Flow       num=       1  
                  Sta L    Sta R       Elev Permanent  
                  71.25    73       9       F

CULVERT

RIVER: West Diversion  
 REACH: Main                    RS: 1226

INPUT

Description: Magnolia Street  
 Bridge Data from Survey  
 Distance from Upstream XS =       26  
 Deck/Roadway Width               =       35  
 Weir Coefficient                   =       2.6  
 Upstream Deck/Roadway Coordinates

num=       4  
                  Sta Hi Cord Lo Cord       Sta Hi Cord Lo Cord       Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
                  0       9                    12       9                    63       9.1  
                  117       9.1

Upstream Bridge Cross Section Data

Station Elevation Data       num=       10  
                  Sta    Elev       Sta    Elev       Sta    Elev       Sta    Elev       Sta    Elev  
 \*\*\*\*\*  
                  0       8.4       9       6.8       18       5.9       23       5       25       1.9  
                  35       1.1       46       2.1       47       5       54       6.5       73       7.6

Manning's n Values

num=       3  
                  Sta    n Val       Sta    n Val       Sta    n Val  
 \*\*\*\*\*  
                  0       .01       23       .05       47       .1

Bank Sta: Left    Right    Coeff Contr.    Expan.  
                  23       47                    .1       .3

Ineffective Flow       num=       1  
                  Sta L    Sta R       Elev Permanent  
                  71.25    73       9       F

Downstream Deck/Roadway Coordinates

num=       5  
                  Sta Hi Cord Lo Cord       Sta Hi Cord Lo Cord       Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
                  0       9.2                    27       9.1                    83       9



ExpandedLocal.rep

134 9.1 188 9.1

Downstream Bridge Cross Section Data

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	6.7	24	8	43	5.6	49	1.4	58	0
70	.4	71	4.3	83	6.2	99	7.4	117	7

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	43	.05	71	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	43	71		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	34.75	9	F
81.25	117	9	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name	Shape	Rise	Span
Culvert #1	Box	4	6.5

FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG

Culvert	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
1	26	35	.012	.012	0		.5

Number of Barrels = 3  
 Upstream Elevation = 2.5  
 Centerline Stations  
 Sta. Sta. Sta.  
 28 35 42  
 Downstream Elevation = 2.5  
 Centerline Stations  
 Sta. Sta. Sta.

51 58 65

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 1182

INPUT

Description:

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	6.7	24	8	43	5.6	50	1.4	58	0
61	.4	63	4.3	83	6.2	99	7.4	117	7

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	43	.05	63	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	43	63	1182	1182	1182		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	34.75	9	F
81.25	117	9	F

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 0

INPUT

Description:

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	4.3	27	3.8	51	4.3	56	-.9	62	-.3
72	5	84	7.9	91	9.6	116	8.3	147	7.7

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	51	.05	72	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.

STORAGE AREA: Haas Rd Pond  
Volume Method : Rating Curve

Elevation	Volume
12	0
13	27.43
14	55.15
15	83.17
16	111.48
17	140.09
18	169
19	198.21
20	227.72
21	257.53
22	287.65
23	318.07
24	348.8

HEC-RAS Plan: 10 Yr ECM 032012 Profile: Max WS

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
West Diversion	Main	4743	Max WS	146.40	5.80	12.62		12.63	0.000091	0.76	192.25	43.90	0.06
West Diversion	Main	4742	Max WS	146.40	5.80	12.62		12.63	0.000091	0.76	192.25	43.90	0.06
West Diversion	Main	4716		Culvert									
West Diversion	Main	4688	Max WS	135.17	2.20	12.56		12.57	0.000018	0.49	277.33	83.52	0.03
West Diversion	Main	4687	Max WS	135.07	2.20	12.56		12.57	0.000010	0.58	259.19	749.15	0.04
West Diversion	Main	4060	Max WS	182.51	3.70	12.56		12.56	0.000000	0.05	5043.15	833.16	0.00
West Diversion	Main	3692	Max WS	210.39	2.90	12.55		12.56	0.000018	0.87	266.91	810.13	0.05
West Diversion	Main	3691	Max WS	210.47	2.90	12.55		12.59	0.000017	0.50	253.53	162.00	0.03
West Diversion	Main	3626		Culvert									
West Diversion	Main	3560	Max WS	210.34	3.50	11.55		11.58	0.000227	1.53	137.22	72.85	0.10
West Diversion	Main	2777	Max WS	264.37	2.50	11.44		11.48	0.000051	0.65	264.21	91.38	0.04
West Diversion	Main	2226	Max WS	295.00	2.60	11.40	6.56	11.46	0.000064	0.71	267.00	69.00	0.05
West Diversion	Main	2168		Bridge									
West Diversion	Main	2110	Max WS	297.60	2.40	11.42		11.43	0.000022	0.47	502.75	104.00	0.03
West Diversion	Main	1760	Max WS	318.39	1.40	11.41		11.43	0.000020	0.47	479.94	104.00	0.03
West Diversion	Main	1733		Culvert									
West Diversion	Main	1706	Max WS	280.25	0.30	11.18		11.20	0.000025	0.53	437.33	106.00	0.03
West Diversion	Main	1269	Max WS	300.23	1.10	11.17		11.20	0.000019	0.51	416.66	73.00	0.03
West Diversion	Main	1226		Culvert									
West Diversion	Main	1182	Max WS	300.23	0.00	11.17		11.17	0.000060	0.91	622.11	117.00	0.05
West Diversion	Main	0	Max WS	297.97	-0.90	11.11		11.12	0.000036	0.73	788.23	147.00	0.04
W14 Main	Upper	54648	Max WS	10.00	12.65	15.97		15.97	0.000005	0.15	64.65	23.64	0.02
W14 Main	Upper	54337	Max WS	9.96	12.60	15.97		15.97	0.000005	0.15	65.08	23.64	0.02
W14 Main	Upper	54284	Max WS	16.52	12.30	15.97		15.97	0.000026	0.40	40.89	17.48	0.04
W14 Main	Upper	54280		Culvert									
W14 Main	Upper	54178	Max WS	15.95	12.00	15.93		15.93	0.000025	0.40	40.04	16.85	0.04
W14 Main	Upper	54157	Max WS	18.60	12.40	15.93		15.93	0.000036	0.39	47.39	16.76	0.04
W14 Main	Upper	53993	Max WS	39.25	12.05	15.90		15.91	0.000129	0.76	51.80	18.84	0.08
W14 Main	Upper	53830	Max WS	59.88	11.70	15.85		15.87	0.000235	1.04	57.39	20.89	0.11
W14 Main	Upper	53666	Max WS	80.67	11.35	15.78		15.81	0.000327	1.26	63.97	22.77	0.13
W14 Main	Upper	53502	Max WS	101.50	11.00	15.71		15.74	0.000382	1.41	71.94	24.32	0.14
W14 Main	Upper	53222	Max WS	137.03	10.80	15.45		15.53	0.000908	2.22	61.60	17.69	0.21
W14 Main	Upper	53154	Max WS	145.66	10.50	15.45		15.48	0.000209	1.41	103.03	44.28	0.12
W14 Main	Upper	53150		Culvert									
W14 Main	Upper	53112	Max WS	145.61	10.40	15.32		15.37	0.000544	1.79	81.22	31.01	0.17
W14 Main	Upper	53064	Max WS	151.69	10.30	15.30		15.34	0.000459	1.53	98.89	32.11	0.15
W14 Main	Upper	52895	Max WS	173.04	9.76	15.21		15.25	0.000472	1.63	106.38	33.06	0.16
W14 Main	Upper	52726	Max WS	194.36	9.22	15.12		15.16	0.000471	1.70	114.66	33.97	0.16
W14 Main	Upper	52557	Max WS	215.63	8.68	15.03		15.07	0.000463	1.75	123.55	34.79	0.16
W14 Main	Upper	52388	Max WS	236.78	8.14	14.94		14.99	0.000446	1.78	133.31	35.57	0.16
W14 Main	Upper	52219	Max WS	257.84	7.60	14.86		14.91	0.000421	1.79	144.03	36.22	0.16
W14 Main	Upper	51937	Max WS	292.70	7.10	14.72		14.78	0.000412	1.85	157.96	37.18	0.16
W14 Main	Upper	51654	Max WS	327.40	6.60	14.59		14.65	0.000398	1.90	172.06	37.85	0.16
W14 Main	Upper	51372	Max WS	361.71	6.10	14.47		14.53	0.000381	1.94	186.24	38.31	0.16
W14 Main	Upper	51089	Max WS	395.86	5.60	14.35		14.41	0.000365	1.98	200.22	38.56	0.15

HEC-RAS Plan: 10 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Upper	50807	Max WS	429.62	5.10	14.24		14.30	0.000349	2.01	214.05	39.26	0.15
W14 Main	Upper	50524	Max WS	463.20	4.60	14.13		14.20	0.000335	2.03	235.00	95.14	0.15
W14 Main	Upper	50235	Max WS	497.05	4.52	14.01		14.08	0.000408	2.21	227.49	90.99	0.16
W14 Main	Upper	49946	Max WS	530.68	4.44	13.85		13.94	0.000501	2.41	221.03	69.70	0.18
W14 Main	Upper	49656	Max WS	563.60	4.36	13.66		13.77	0.000621	2.63	214.73	48.35	0.20
W14 Main	Upper	49367	Max WS	588.47	4.28	13.43		13.55	0.000763	2.84	207.29	39.16	0.22
W14 Main	Upper	49078	Max WS	590.84	4.20	13.15		13.29	0.000883	2.98	198.39	38.52	0.23
W14 Main	Upper	49062	Max WS	597.49	4.10	13.20	7.33	13.28	0.000366	2.31	259.06	36.73	0.15
W14 Main	Upper	49060		Bridge									
W14 Main	Upper	48993	Max WS	592.58	4.10	13.15		13.23	0.000367	2.30	257.31	36.67	0.15
W14 Main	Upper	48951	Max WS	572.74	4.20	13.00		13.19	0.001139	3.52	162.80	27.93	0.26
W14 Main	Upper	48591	Max WS	583.70	3.40	12.84		12.90	0.000221	2.13	477.19	76.04	0.13
W14 Main	Upper	48412	Max WS	543.70	4.60	12.70		12.82	0.000683	2.82	259.93	76.84	0.20
W14 Main	Upper	48301	Max WS	528.45	4.60	12.62		12.74	0.000678	2.79	253.27	76.08	0.20
W14 Main	Mid	48154	Max WS	382.06	3.50	12.62		12.70	0.000396	2.24	191.38	102.50	0.17
W14 Main	Mid	47747	Max WS	327.62	4.60	12.51		12.56	0.000215	1.78	244.79	75.21	0.13
W14 Main	Mid	47604	Max WS	282.29	4.10	12.48		12.52	0.000206	1.68	308.33	728.73	0.13
W14 Main	Mid	47278	Max WS	255.26	4.10	12.45		12.46	0.000075	1.01	714.29	953.81	0.08
W14 Main	Mid	47072	Max WS	239.29	2.90	12.42		12.44	0.000119	1.33	280.60	949.62	0.10
W14 Main	Mid	46231	Max WS	223.92	3.10	12.29		12.32	0.000145	1.40	162.45	379.29	0.11
W14 Main	Mid	45970	Max WS	225.30	2.10	12.26		12.28	0.000122	1.30	175.89	296.77	0.09
W14 Main	Mid	45631	Max WS	229.65	2.90	12.21		12.24	0.000123	1.31	180.61	1145.92	0.09
W14 Main	Mid	45461	Max WS	233.35	1.10	12.19		12.22	0.000126	1.31	178.78	1117.21	0.09
W14 Main	Mid	45123	Max WS	241.07	1.20	12.12		12.16	0.000223	1.52	198.43	1282.42	0.12
W14 Main	Mid	44719	Max WS	252.60	1.30	12.01		12.05	0.000284	1.74	145.73	1254.02	0.14
W14 Main	Mid	44444	Max WS	260.76	1.60	11.99		12.00	0.000024	0.72	371.26	1177.12	0.05
W14 Main	Mid	44393	Max WS	262.24	1.60	11.99		12.00	0.000025	0.73	371.13	1177.02	0.05
W14 Main	Mid	44040	Max WS	272.66	1.60	11.98		11.99	0.000023	0.70	390.65	116.20	0.05
W14 Main	Mid	44008	Max WS	273.69	1.60	11.99		11.99	0.000009	0.54	504.18	160.84	0.03
W14 Main	Mid	44006		Culvert									
W14 Main	Mid	43938	Max WS	273.31	1.40	11.94		11.95	0.000012	0.65	422.64	119.16	0.04
W14 Main	Mid	43892	Max WS	274.62	1.60	11.93		11.95	0.000050	0.98	280.87	41.35	0.07
W14 Main	Mid	43729	Max WS	274.54	1.60	11.92		11.94	0.000050	0.98	280.53	41.33	0.07
W14 Main	Lower	43600	Max WS	563.57	1.60	11.92		11.99	0.000211	2.01	280.53	41.33	0.14
W14 Main	Lower	43256	Max WS	563.51	1.80	11.82		11.90	0.000303	2.15	261.62	47.92	0.16
W14 Main	Lower	43246	Max WS	564.21	-5.40	11.81	4.85	11.89	0.000380	2.32	243.15	34.87	0.15
W14 Main	Lower	43220		Bridge									
W14 Main	Lower	43216	Max WS	564.15	1.40	11.74		11.85	0.000385	2.55	221.56	34.72	0.18
W14 Main	Lower	43174	Max WS	567.05	0.70	11.75		11.83	0.000304	2.32	244.56	43.50	0.16
W14 Main	Lower	42773	Max WS	594.73	0.85	11.63		11.70	0.000281	2.26	263.26	40.33	0.16
W14 Main	Lower	42372	Max WS	622.18	1.00	11.52		11.59	0.000258	2.19	293.08	184.24	0.15
W14 Main	Lower	41911	Max WS	653.55	0.70	11.36		11.45	0.000325	2.45	317.02	248.32	0.17
W14 Main	Lower	41449	Max WS	684.57	0.40	11.14		11.27	0.000453	2.85	247.44	136.43	0.19
W14 Main	Lower	40987	Max WS	714.02	0.10	10.83		11.00	0.000669	3.36	215.35	90.20	0.23
W14 Main	Lower	40967	Max WS	716.05	-3.60	10.93		10.95	0.000022	1.08	663.45	150.42	0.05

HEC-RAS Plan: 10 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Lower	40900		Culvert									
W14 Main	Lower	40862	Max WS	715.86	-5.10	10.92		10.93	0.000017	1.02	701.55	140.63	0.05
W14 Main	Lower	40798	Max WS	719.70	-1.20	10.85		10.94	0.000283	2.42	297.89	39.98	0.16
W14 Main	Lower	40311	Max WS	750.95	-0.80	10.63		10.75	0.000436	2.81	267.36	40.46	0.19
W14 Main	Lower	40149	Max WS	761.01	-0.40	10.50		10.66	0.000660	3.20	238.83	47.03	0.23
W14 Main	Lower	40114	Max WS	762.99	1.35	10.47	5.32	10.64	0.000609	3.27	233.14	42.76	0.21
W14 Main	Lower	40100		Bridge									
W14 Main	Lower	40082	Max WS	761.88	1.35	10.40		10.57	0.000625	3.30	230.95	42.62	0.21
W14 Main	Lower	40080	Max WS	763.25	-0.70	10.49		10.56	0.000190	2.09	364.87	44.24	0.13
W14 Main	Lower	40038	Max WS	764.27	-0.50	10.38		10.55	0.000740	3.32	230.11	38.40	0.24
W14 Main	Lower	39282	Max WS	796.54	-0.65	9.89		10.03	0.000574	2.95	270.30	48.06	0.22
W14 Main	Lower	39029	Max WS	809.57	-0.80	9.80		9.89	0.000423	2.49	325.66	1905.56	0.19
W14 Main	Lower	38269	Max WS	852.72	-1.10	9.19		9.32	0.001040	2.99	285.01	1143.26	0.28
W14 Main	Lower	38016	Max WS	867.80	-1.40	8.94		9.11	0.000732	3.32	349.06	1084.25	0.24
W14 Main	Lower	38000	Max WS	868.85	-0.30	8.97	4.08	9.08	0.000396	2.74	341.04	1097.80	0.18
W14 Main	Lower	37950		Bridge									
W14 Main	Lower	37931	Max WS	868.66	-0.90	8.86		8.96	0.000287	2.50	365.03	1047.49	0.16
W14 Main	Lower	37889	Max WS	871.00	-1.40	8.77		8.94	0.000864	3.33	266.71	903.35	0.27
W14 Main	Lower	37118	Max WS	917.01	-1.37	8.23		8.35	0.000677	3.01	866.75	1104.75	0.24
W14 Main	Lower	36925	Max WS	928.56	-1.33	8.08		8.19	0.001124	2.93	763.20	1050.47	0.29
W14 Main	Lower	36733	Max WS	939.98	-1.30	7.76		8.04	0.001203	4.18	225.28	556.54	0.32
W14 Main	Lower	36713	Max WS	941.21	-1.00	7.81	3.03	8.02	0.000609	3.61	260.87	600.37	0.24
W14 Main	Lower	36710		Bridge									
W14 Main	Lower	36698	Max WS	941.21	-0.60	7.80		8.00	0.000481	3.52	267.54	592.76	0.22
W14 Main	Lower	36680	Max WS	942.29	-1.20	7.81		7.98	0.000649	3.34	282.44	603.47	0.24
W14 Main	Lower	35677	Max WS	1002.09	-1.60	6.80		7.08	0.001114	4.21	238.08	41.71	0.31
W14 Main	Lower	35426	Max WS	1017.33	-2.00	6.47		6.77	0.001225	4.39	231.91	40.74	0.32
W14 Main	Lower	35169	Max WS	1032.98	-3.20	6.41	0.67	6.49	0.000335	2.45	828.59	1101.53	0.17
W14 Main	Lower	35150		Bridge									
W14 Main	Lower	35131	Max WS	1033.04	-3.20	6.44		6.47	0.000094	1.44	1150.78	1149.96	0.10
W14 Main	Lower	34899	Max WS	1047.14	-3.10	6.41		6.45	0.000115	1.60	763.37	1001.68	0.11
W14 Main	Lower	34046	Max WS	1099.04	-3.20	6.31		6.35	0.000120	1.65	874.64	1091.95	0.11
W14 Main	Lower	33199	Max WS	1150.27	-4.00	6.22		6.25	0.000097	1.57	843.35	277.01	0.10
W14 Main	Lower	32566	Max WS	1188.15	-3.60	6.13		6.18	0.000135	1.76	689.84	159.44	0.12
W14 Main	Lower	31941	Max WS	1227.09	-3.60	6.03		6.08	0.000154	1.85	663.52	97.78	0.13
W14 Main	Lower	31180	Max WS	1274.12	-3.20	5.87		5.94	0.000210	2.09	610.04	94.46	0.14
W14 Main	Lower	30479	Max WS	1317.37	-3.40	5.71		5.79	0.000220	2.15	613.84	94.69	0.15
W14 Main	Lower	29754	Max WS	1361.86	-3.90	5.56		5.63	0.000204	2.11	646.86	96.76	0.14
W14 Main	Lower	28922	Max WS	1414.42	-4.10	5.37		5.45	0.000218	2.18	648.20	96.84	0.15
W14 Main	Lower	28661	Max WS	1431.98	-5.00	5.23	-0.14	5.35	0.000385	2.82	507.66	76.32	0.19
W14 Main	Lower	28567		Bridge									
W14 Main	Lower	28472	Max WS	1431.89	-4.60	4.78		4.91	0.000404	2.90	494.52	74.92	0.20
W14 Main	Lower	27798	Max WS	1474.54	-5.37	4.66		4.71	0.000150	1.84	802.17	2380.50	0.12
W14 Main	Lower	26970	Max WS	1525.63	-6.23	4.54		4.59	0.000132	1.78	856.52	119.64	0.12
W14 Main	Lower	26424	Max WS	1558.52	-6.80	4.40		4.49	0.000239	2.43	642.13	85.57	0.16

HEC-RAS Plan: 10 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Lower	26220	Max WS	1571.76	-7.37	4.37		4.44	0.000160	2.13	737.20	87.58	0.13
W14 Main	Lower	26169	Max WS	1574.95	-7.37	4.36	-3.00	4.44	0.000161	2.14	736.42	87.56	0.13
W14 Main	Lower	26152		Bridge									
W14 Main	Lower	26131	Max WS	1574.69	-7.37	4.35		4.42	0.000162	2.14	735.02	87.52	0.13
W14 Main	Lower	26038	Max WS	1580.61	-7.37	4.33		4.40	0.000164	2.15	733.57	87.47	0.13
W14 Main	Lower	25159	Max WS	1636.59	-7.26	4.16		4.24	0.000200	2.22	738.71	98.60	0.14
W14 Main	Lower	25107	Max WS	1639.68	-4.20	4.12	-1.72	4.23	0.000306	2.66	615.31	74.00	0.16
W14 Main	Lower	25086		Bridge									
W14 Main	Lower	25080	Max WS	1639.34	-4.20	4.09		4.20	0.000309	2.67	613.73	74.00	0.16
W14 Main	Lower	24990	Max WS	1645.26	-5.19	4.08		4.18	0.000272	2.50	664.28	101.72	0.17
W14 Main	Lower	22266	Max WS	1823.49	-6.89	3.26		3.37	0.000308	2.71	674.62	96.25	0.18
W14 Main	Lower	21014	Max WS	1907.81	-6.89	2.76		2.90	0.000426	3.04	627.26	94.08	0.21
W14 Main	Lower	19620	Max WS	14.94	-6.89	2.00	-6.40	2.00	0.000000	0.03	556.82	91.71	0.00
W-15 Main	Upper	41958	Max WS	10.00	23.20	26.10		26.10	0.000023	0.20	50.43	29.63	0.03
W-15 Main	Upper	41911	Max WS	10.00	23.10	26.10		26.10	0.000019	0.19	51.36	27.34	0.03
W-15 Main	Upper	41876		Culvert									
W-15 Main	Upper	41841	Max WS	10.00	21.40	26.10		26.10	0.000003	0.11	92.49	34.13	0.01
W-15 Main	Upper	40226	Max WS	68.82	20.70	26.00		26.01	0.000100	0.67	145.54	274.41	0.06
W-15 Main	Upper	39062	Max WS	110.58	21.10	25.88		25.88	0.000116	0.71	259.66	396.04	0.07
W-15 Main	Upper	38866	Max WS	117.58	20.60	25.85		25.86	0.000134	0.77	152.80	218.33	0.07
W-15 Main	Upper	38831		Culvert									
W-15 Main	Upper	38796	Max WS	117.46	19.90	25.70		25.71	0.000183	0.94	125.29	195.95	0.09
W-15 Main	Upper	36942	Max WS	173.70	19.70	25.23		25.25	0.000325	1.20	321.63	551.94	0.11
W-15 Main	Upper	36875		Culvert									
W-15 Main	Upper	36808	Max WS	171.31	19.60	25.10		25.13	0.000663	1.69	180.44	271.29	0.16
W-15 Main	Upper	36792	Max WS	170.20	19.60	25.02	22.21	25.06	0.000776	1.81	159.65	253.14	0.17
W-15 Main	Upper	36741		Bridge									
W-15 Main	Upper	36690	Max WS	169.74	19.90	25.01		25.02	0.000365	1.23	287.69	482.99	0.12
W-15 Main	Upper	36328	Max WS	175.71	19.50	24.92		24.92	0.000173	0.92	537.81	758.20	0.08
W-15 Main	Upper	35441	Max WS	196.58	18.60	24.82		24.82	0.000055	0.55	1064.17	1348.20	0.04
W-15 Main	Upper	34175	Max WS	229.70	18.40	23.75		23.86	0.001752	2.92	148.21	487.79	0.26
W-15 Main	Upper	34100		Lat Struct									
W-15 Main	Upper	33708	Max WS	241.98	17.90	23.18		23.22	0.001038	2.22	272.10	439.16	0.19
W-15 Main	Upper	33500		Lat Struct									
W-15 Main	Upper	33031	Max WS	107.48	17.40	22.70		22.73	0.000555	1.56	121.82	241.67	0.13
W-15 Main	Upper	33000		Lat Struct									
W-15 Main	Upper	32178	Max WS	77.88	16.80	22.43		22.44	0.000153	0.84	133.07	197.55	0.08
W-15 Main	Upper	32158	Max WS	78.46	16.80	22.43		22.44	0.000152	0.84	111.83	195.95	0.08
W-15 Main	Upper	32123		Culvert									
W-15 Main	Upper	32088	Max WS	77.63	17.00	22.33		22.34	0.000146	0.75	103.97	91.32	0.07
W-15 Main	Upper	31779	Max WS	87.07	16.80	22.27		22.29	0.000192	0.98	144.71	321.71	0.08
W-15 Main	Upper	30955	Max WS	112.83	16.20	22.04		22.06	0.000348	1.31	128.76	134.01	0.11
W-15 Main	Upper	29994	Max WS	145.38	15.60	21.55		21.60	0.000597	1.67	92.53	185.67	0.15
W-15 Main	Upper	28993	Max WS	181.70	15.40	21.19		21.25	0.000068	1.87	100.78	39.79	0.17
W-15 Main	Upper	28463	Max WS	201.07	15.20	21.16		21.20	0.000053	1.62	128.61	49.28	0.15

HEC-RAS Plan: 10 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W-15 Main	Upper	27930	Max WS	220.31	14.40	21.10	17.19	21.16	0.000077	2.00	110.13	27.71	0.18
W-15 Main	Upper	27864	Bridge										
W-15 Main	Upper	27797	Max WS	220.27	14.30	21.09		21.14	0.000072	1.92	114.71	29.83	0.17
W-15 Main	Upper	27008	Max WS	245.69	13.60	20.74		20.80	0.000808	2.17	240.34	331.63	0.17
W-15 Main	Upper	26388	Max WS	264.19	12.60	20.38		20.41	0.000437	1.67	417.81	646.31	0.12
W-15 Main	Upper	25748	Max WS	283.87	12.20	20.04		20.09	0.000598	2.04	215.14	290.26	0.15
W-15 Main	Upper	25098	Max WS	304.41	9.40	19.78		19.80	0.000276	1.39	650.12	1093.69	0.10
W-15 Main	Upper	24312	Max WS	326.72	11.10	19.55		19.58	0.000321	1.50	367.64	378.21	0.11
W-15 Main	Upper	23662	Max WS	342.69	9.20	19.32	12.79	19.37	0.000323	1.72	214.93	131.58	0.11
W-15 Main	Upper	23634	Bridge										
W-15 Main	Upper	23606	Max WS	340.51	9.60	19.26		19.29	0.000243	1.52	224.69	51.74	0.10
W-15 Main	Upper	23462	Max WS	337.46	10.80	19.18		19.24	0.000519	1.97	187.59	56.93	0.14
W-15 Main	Mid	22961	Max WS	247.28	10.60	19.18		19.21	0.000272	1.44	202.67	118.64	0.10
W-15 Main	Mid	22285	Max WS	244.84	10.40	19.01	13.25	19.04	0.000237	1.41	318.04	742.60	0.10
W-15 Main	Mid	22250	Bridge										
W-15 Main	Mid	22227	Max WS	244.41	10.50	19.00		19.02	0.000205	1.32	261.10	532.27	0.09
W-15 Main	Mid	21477	Max WS	286.93	11.21	18.88		18.89	0.000113	0.87	328.14	68.59	0.07
W-15 Main	Mid	21400	Culvert										
W-15 Main	Mid	21329	Max WS	284.63	11.10	18.79		18.81	0.000110	0.88	324.30	68.00	0.07
W-15 Main	Mid	21028	Max WS	302.59	10.00	18.71		18.74	0.000290	1.50	202.99	95.48	0.11
W-15 Main	Mid	21000	Culvert										
W-15 Main	Mid	20870	Max WS	300.71	10.65	18.61		18.65	0.000299	1.63	184.34	94.24	0.12
W-15 Main	Mid	20827	Max WS	303.24	10.54	18.58		18.65	0.000405	2.16	242.05	149.65	0.14
W-15 Main	Mid	20700	Culvert										
W-15 Main	Mid	20648	Max WS	302.45	10.48	18.53		18.60	0.000420	2.20	210.82	144.53	0.15
W-15 Main	Mid	19997	Max WS	345.37	8.70	18.18		18.24	0.000607	1.98	174.00	167.76	0.15
W-15 Main	Mid	19018	Max WS	412.96	8.40	17.36		17.46	0.000948	2.47	166.98	32.05	0.19
W-15 Main	Mid	18298	Max WS	465.42	7.50	16.30		16.46	0.001753	3.20	145.65	28.28	0.25
W-15 Main	Mid	17456	Max WS	525.39	6.40	15.37		15.43	0.000634	2.31	351.40	150.17	0.16
W-15 Main	Mid	17221	Max WS	541.39	6.53	15.22		15.27	0.000616	1.85	293.43	70.91	0.16
W-15 Main	Mid	17201	Max WS	542.71	6.53	15.21	10.32	15.26	0.000624	1.86	292.50	70.79	0.16
W-15 Main	Mid	17091	Bridge										
W-15 Main	Mid	16981	Max WS	539.82	6.53	14.88		14.95	0.000760	2.00	270.19	67.84	0.18
W-15 Main	Mid	16926	Max WS	543.58	5.70	14.89	9.11	14.92	0.000210	1.37	397.77	65.78	0.10
W-15 Main	Mid	16901	Bridge										
W-15 Main	Mid	16876	Max WS	539.21	6.60	14.63		14.76	0.001272	2.93	184.00	35.63	0.23
W-15 Main	Mid	16482	Max WS	532.85	4.39	14.37		14.40	0.000336	1.64	863.73	660.76	0.12
W-15 Main	Mid	16480	Lat Struct										
W-15 Main	Mid	16088	Max WS	530.28	4.39	14.23		14.26	0.000398	1.76	771.46	615.05	0.13
W-15 Main	Mid	15693	Max WS	528.29	4.39	14.05		14.09	0.000490	1.91	668.45	559.61	0.14
W-15 Main	Mid	15299	Max WS	527.59	4.31	13.91	8.63	13.94	0.000253	1.70	956.36	650.03	0.11
W-15 Main	Mid	15280	Bridge										
W-15 Main	Mid	15262	Max WS	527.24	4.15	13.76		13.82	0.000538	2.08	467.21	563.23	0.15
W-15 Main	Mid	15261	Max WS	527.24	3.81	13.76		13.82	0.000639	2.30	515.84	561.87	0.16
W-15 Main	South	14915	Max WS	560.50	3.01	13.76		13.79	0.000291	1.69	847.96	815.73	0.11



HEC-RAS Plan: 10 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W-15 Main	South	14570	Max WS	556.99	3.72	13.64		13.67	0.000425	1.86	945.77	956.78	0.13
W-15 Main	South	14224	Max WS	585.74	4.91	13.49		13.53	0.000478	1.81	1034.07	1650.30	0.14
W-15 Main	South	13878	Max WS	614.93	6.09	13.10	10.04	13.22	0.001583	2.74	224.69	1120.88	0.25
W-15 Main	South	13850	Bridge										
W-15 Main	South	13822	Max WS	615.58	6.09	12.53		12.69	0.002455	3.23	190.67	215.83	0.31
W-15 Main	South	13452	Max WS	646.75	5.08	11.82		11.94	0.001547	2.80	231.06	60.68	0.25
W-15 Main	South	13083	Max WS	673.36	4.06	11.41		11.49	0.000839	2.28	295.29	66.49	0.19
W-15 Main	South	12713	Max WS	699.45	3.05	11.20		11.25	0.000446	1.84	380.23	73.38	0.14
W-15 Main	South	12343	Max WS	724.42	2.03	11.09		11.12	0.000246	1.50	482.77	80.57	0.11
W-15 Main	South	11974	Max WS	750.25	1.02	11.02		11.05	0.000144	1.25	600.40	110.88	0.08
W-15 Main	South	11604	Max WS	776.58	0.00	10.98	2.21	11.00	0.000086	1.06	736.22	1065.47	0.07
W-15 Main	South	11579	Bridge										
W-15 Main	South	11554	Max WS	775.19	0.00	10.95		10.97	0.000087	1.07	728.50	988.56	0.07
W-15 Main	South	11440	Max WS	783.56	0.49	10.94		10.96	0.000122	1.13	717.23	1241.26	0.08
W-15 Main	South	11326	Max WS	791.76	0.97	10.92		10.94	0.000168	1.16	1094.25	1478.24	0.09
W-15 Main	South	11212	Max WS	799.80	1.46	10.90	5.34	10.92	0.000240	1.20	1360.68	1906.89	0.10
W-15 Main	South	11162	Bridge										
W-15 Main	South	11112	Max WS	797.88	-1.12	10.83		10.87	0.000202	1.45	548.48	1504.59	0.10
W-15 Main	South	10638	Max WS	829.19	-1.27	10.72		10.76	0.000250	1.46	589.96	1553.08	0.11
W-15 Main	South	10164	Max WS	859.24	-1.43	10.61		10.64	0.000246	1.49	728.46	1696.16	0.11
W-15 Main	South	9690	Max WS	889.99	-1.58	10.50		10.54	0.000236	1.50	918.97	1621.27	0.11
W-15 Main	South	9217	Max WS	920.76	-1.74	10.39		10.43	0.000233	1.52	1055.75	1515.51	0.11
W-15 Main	South	8743	Max WS	952.44	-1.89	10.29		10.32	0.000231	1.55	1140.61	1400.87	0.11
W-15 Main	South	8269	Max WS	984.35	-2.05	10.19		10.22	0.000223	1.56	1247.45	1102.88	0.11
W-15 Main	South	7795	Max WS	1016.24	-2.20	10.08		10.12	0.000220	1.58	1310.75	1010.31	0.10
W-15 Main	South	7321	Max WS	1048.18	-2.35	9.98		10.01	0.000222	1.61	1350.17	878.09	0.11
W-15 Main	South	6847	Max WS	1080.14	-2.51	9.87		9.91	0.000229	1.66	1368.49	735.25	0.11
W-15 Main	South	6373	Max WS	1112.11	-2.66	9.76		9.79	0.000242	1.72	1367.70	663.24	0.11
W-15 Main	South	5900	Max WS	1144.04	-2.82	9.64		9.67	0.000264	1.81	1335.65	599.98	0.12
W-15 Main	South	5426	Max WS	1176.12	-2.97	9.50		9.54	0.000299	1.94	1268.40	528.68	0.12
W-15 Main	South	4952	Max WS	1208.27	-3.13	9.34		9.39	0.000358	2.11	1164.08	453.04	0.13
W-15 Main	South	4478	Max WS	1240.50	-3.28	9.13		9.20	0.000462	2.37	1019.45	371.98	0.15
W-15 Main	South	4094	Max WS	1266.64	-2.04	8.98		9.04	0.000361	2.32	1280.67	521.80	0.14
W-15 Main	South	3696	Max WS	1293.70	-0.82	8.77		8.86	0.000601	2.83	987.76	398.04	0.18
W-15 Main	South	3499	Max WS	1307.08	-1.03	8.70	2.20	8.75	0.000292	1.72	760.29	119.97	0.12
W-15 Main	South	3477	Bridge										
W-15 Main	South	3454	Max WS	1307.05	-0.66	8.59		8.66	0.000415	2.07	632.77	97.73	0.14
W-15 Main	South	3159	Max WS	1326.84	-1.22	8.42		8.51	0.000576	2.35	564.63	91.78	0.17
W-15 Main	South	2865	Max WS	1346.36	-1.77	8.30		8.36	0.000421	2.14	1214.50	572.07	0.15
W-15 Main	South	2570	Max WS	1366.02	-2.33	8.25		8.26	0.000112	1.21	3103.36	977.15	0.08
W-15 Main	South	2335	Max WS	1381.69	-2.69	8.20		8.23	0.000209	1.67	2110.11	721.65	0.10
W-15 Main	South	2092	Max WS	1397.70	-2.22	8.11	1.97	8.17	0.000413	2.01	1059.29	1112.51	0.14
W-15 Main	South	2065	Bridge										
W-15 Main	South	2038	Max WS	1397.65	-1.14	8.09		8.13	0.000277	1.73	1322.05	1104.38	0.12
W-15 Main	South	1821	Max WS	1411.94	-3.39	7.98		8.07	0.000517	2.77	1054.95	396.55	0.16

HEC-RAS Plan: 10 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W-15 Main	South	1507	Max WS	1432.30	-2.96	7.81		7.90	0.000517	2.73	1104.60	449.13	0.16
W-15 Main	South	1193	Max WS	1452.36	-2.53	7.65		7.74	0.000528	2.69	1144.67	496.75	0.17
W-15 Main	South	812	Max WS	1476.07	-2.36	7.43		7.52	0.000618	2.84	1047.90	403.13	0.18
W-15 Main	South	431	Max WS	1498.43	-2.20	7.14		7.26	0.000815	3.14	847.90	276.52	0.20
W-15 Main	South	50	Max WS	1493.31	-2.03	6.66		6.86	0.001387	3.87	557.51	161.12	0.26
Reine Canal	Main	8003	Max WS	-289.03	3.00	11.92		12.03	0.000846	-2.56	112.70	24.46	0.21
Reine Canal	Main	6849	Max WS	-306.12	5.20	12.87		12.96	0.000742	-2.46	124.51	27.86	0.20
Reine Canal	Main	6446	Max WS	-243.47	6.90	13.16		13.23	0.000377	-2.13	114.06	28.73	0.16
Reine Canal	Main	6412		Culvert									
Reine Canal	Main	6386	Max WS	-243.76	6.80	13.32		13.40	0.000429	-2.28	106.69	27.21	0.17
Reine Canal	Main	5181	Max WS	-37.20	6.60	13.73		13.73	0.000019	-0.26	140.82	32.73	0.02
Reine Canal	Main	3598	Max WS	-46.32	5.70	13.76		13.76	0.000005	-0.25	186.40	33.17	0.02
Reine Canal	Main	2688	Max WS	-14.49	6.60	13.76		13.76	0.000001	-0.05	267.29	62.16	0.00
Reine Canal	Main	2642		Bridge									
Reine Canal	Main	2624	Max WS	-14.49	5.90	13.76		13.76	0.000001	-0.07	209.47	65.82	0.01
Reine Canal	Main	2598	Max WS	-13.54	6.70	13.76		13.76	0.000000	-0.05	261.91	64.61	0.00
Reine Canal	Main	2566		Bridge									
Reine Canal	Main	2534	Max WS	-13.54	6.60	13.76		13.76	0.000000	-0.05	258.18	65.53	0.00
Reine Canal	Main	2455	Max WS	-10.46	6.90	13.76		13.76	0.000000	-0.06	175.64	46.64	0.01
Reine Canal	Main	2437		Bridge									
Reine Canal	Main	2418	Max WS	-10.66	6.90	13.76		13.76	0.000000	-0.06	181.21	46.37	0.01
Reine Canal	Main	2087	Max WS	0.97	5.70	13.76		13.76	0.000000	0.01	134.16	814.93	0.00
Reine Canal	Main	1941	Max WS	5.88	5.70	13.76		13.76	0.000000	0.04	134.17	814.94	0.00
Reine Canal	Main	1611	Max WS	17.28	5.70	13.76		13.76	0.000002	0.13	134.16	814.93	0.01
Reine Canal	Main	1550	Max WS	19.48	5.60	13.76		13.76	0.000002	0.13	154.65	33.51	0.01
Reine Canal	Main	1099	Max WS	34.31	5.10	13.76		13.76	0.000005	0.22	157.09	33.49	0.02
Reine Canal	Main	220	Max WS	33.26	4.10	13.76		13.76	0.000002	0.15	367.14	199.94	0.01
Poor Boy Canal	Main	5808	Max WS	90.18	10.10	19.18		19.19	0.000057	0.73	122.79	19.99	0.05
Poor Boy Canal	Main	5563	Max WS	89.19	10.10	19.17		19.17	0.000056	0.73	122.51	19.97	0.05
Poor Boy Canal	Main	5318	Max WS	119.64	10.10	19.13		19.15	0.000102	0.98	121.84	19.93	0.07
Poor Boy Canal	Main	5074	Max WS	150.45	10.10	19.08		19.11	0.000165	1.25	120.83	19.86	0.09
Poor Boy Canal	Main	4829	Max WS	181.30	10.10	19.01		19.04	0.000247	1.52	119.36	19.76	0.11
Poor Boy Canal	Main	4584	Max WS	212.82	10.10	18.90		18.95	0.000356	1.81	117.33	19.63	0.13
Poor Boy Canal	Main	4339	Max WS	244.81	10.10	18.76		18.83	0.000502	2.14	114.56	19.44	0.16
Poor Boy Canal	Main	4094	Max WS	276.99	10.10	18.57		18.66	0.000703	2.50	110.81	19.19	0.18
Poor Boy Canal	Main	3850	Max WS	309.08	10.10	18.30		18.43	0.000991	2.92	105.74	18.83	0.22
Poor Boy Canal	Main	3605	Max WS	309.08	10.10	18.03		18.17	0.001130	3.07	100.65	18.47	0.23
Poor Boy Canal	Main	3360	Max WS	309.08	10.10	17.71		17.87	0.001325	3.26	94.83	18.06	0.25
Poor Boy Canal	Main	3115	Max WS	309.07	10.10	17.32		17.51	0.001621	3.51	87.95	17.55	0.28
Poor Boy Canal	Main	3062	Max WS	309.07	10.10	17.23		17.43	0.001706	3.58	86.29	17.42	0.28
Poor Boy Canal	Main	2983		Culvert									
Poor Boy Canal	Main	2904	Max WS	309.07	10.10	16.88		17.13	0.001686	4.02	76.92	16.96	0.30
Poor Boy Canal	Main	2851	Max WS	309.07	10.10	16.79		17.03	0.002178	3.92	78.78	16.84	0.32
Poor Boy Canal	Main	2671	Max WS	309.07	9.91	16.43		16.65	0.002012	3.79	81.46	18.06	0.31
Poor Boy Canal	Main	2490	Max WS	309.06	9.71	16.09		16.30	0.001881	3.68	84.01	19.25	0.31

HEC-RAS Plan: 10 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Poor Boy Canal	Main	2310	Max WS	309.06	9.52	15.77		15.97	0.001780	3.58	86.37	20.43	0.31
Poor Boy Canal	Main	2130	Max WS	309.05	9.32	15.47		15.66	0.001701	3.49	88.58	21.59	0.30
Poor Boy Canal	Main	1949	Max WS	309.05	9.13	15.18		15.36	0.001639	3.41	90.64	22.74	0.30
Poor Boy Canal	Main	1769	Max WS	309.04	8.94	14.90		15.07	0.001591	3.34	92.53	23.86	0.30
Poor Boy Canal	Main	1588	Max WS	309.04	8.74	14.62		14.79	0.001562	3.28	94.13	24.94	0.30
Poor Boy Canal	Main	1408	Max WS	309.03	8.55	14.35		14.51	0.001542	3.23	95.58	26.01	0.30
Poor Boy Canal	Main	1228	Max WS	309.03	8.35	14.08		14.24	0.001536	3.19	96.75	27.02	0.30
Poor Boy Canal	Main	1047	Max WS	309.03	8.16	13.80		13.96	0.001550	3.17	97.45	27.96	0.30
Poor Boy Canal	Main	867	Max WS	309.03	7.96	13.52		13.68	0.001579	3.16	97.80	28.83	0.30
Poor Boy Canal	Main	686	Max WS	309.03	7.77	13.23		13.39	0.001638	3.17	97.50	29.60	0.31
Poor Boy Canal	Main	634	Max WS	309.03	7.77	13.19		13.32	0.000824	2.90	106.43	30.46	0.23
Poor Boy Canal	Main	607		Culvert									
Poor Boy Canal	Main	581	Max WS	307.71	7.77	10.61		11.37	0.009643	7.00	43.99	22.14	0.74
Poor Boy Canal	Main	528	Max WS	307.41	6.90	10.57		10.95	0.005709	4.95	62.07	23.76	0.54
Poor Boy Canal	Main	441	Max WS	248.79	6.38	10.21		10.43	0.003175	3.80	65.54	23.93	0.40
Poor Boy Canal	Main	354	Max WS	223.11	5.87	10.05		10.19	0.001815	3.03	73.68	24.56	0.31
Poor Boy Canal	Main	267	Max WS	160.26	5.35	9.99		10.04	0.000625	1.89	84.73	25.40	0.18
Poor Boy Canal	Main	180	Max WS	154.93	4.83	9.96		10.00	0.000398	1.60	96.85	26.24	0.15
Poor Boy Canal	Main	92	Max WS	145.24	4.32	9.94		9.96	0.000247	1.33	109.32	27.04	0.12
Poor Boy Canal	Main	5	Max WS	145.77	3.80	9.92		9.94	0.000180	1.19	122.48	27.81	0.10
Gum Bayou	Upper	16105	Max WS	775.99	6.00	10.89		10.90	0.000050	0.54	2965.22	1165.71	0.05
Gum Bayou	Upper	15247	Max WS	774.36	5.60	10.86		10.86	0.000034	0.49	3509.74	993.27	0.04
Gum Bayou	Upper	15205	Max WS	777.90	3.30	10.85		10.86	0.000045	0.44	3022.08	990.74	0.04
Gum Bayou	Upper	15182		Culvert									
Gum Bayou	Upper	15159	Max WS	464.26	5.00	10.17		10.26	0.000831	2.29	202.92	876.16	0.19
Gum Bayou	Upper	15116	Max WS	504.97	5.60	10.20		10.22	0.000437	1.52	577.40	885.02	0.14
Gum Bayou	Upper	14919	Max WS	471.84	5.81	10.18		10.18	0.000089	0.49	1406.19	598.87	0.06
Gum Bayou	Upper	14533	Max WS	462.98	5.72	10.14		10.14	0.000112	0.59	1263.10	567.10	0.06
Gum Bayou	Upper	14148	Max WS	463.26	5.62	10.11		10.11	0.000015	0.23	3123.99	1114.99	0.02
Gum Bayou	Upper	13853	Max WS	468.12	4.40	10.11		10.11	0.000006	0.21	4069.75	1285.48	0.02
Gum Bayou	Upper	13197	Max WS	479.78	3.80	10.11		10.11	0.000008	0.25	4016.59	1285.13	0.02
Gum Bayou	Upper	12799	Max WS	487.26	5.29	10.10		10.10	0.000009	0.21	3285.20	1135.92	0.02
Gum Bayou	Upper	12413	Max WS	494.07	5.20	10.10		10.10	0.000009	0.21	3718.95	1942.86	0.02
Gum Bayou	Upper	12276	Max WS	496.78	5.20	10.10		10.10	0.000009	0.21	3716.74	1942.44	0.02
Gum Bayou	Upper	11780	Max WS	505.81	3.52	10.09		10.09	0.000007	0.21	5002.66	3579.48	0.02
Gum Bayou	Upper	11732	Max WS	506.91	3.62	10.09		10.09	0.000006	0.21	5130.24	3602.08	0.02
Gum Bayou	Upper	11648	Max WS	508.41	3.52	10.09		10.09	0.000007	0.22	4999.76	3578.47	0.02
Gum Bayou	Upper	11146	Max WS	518.16	3.91	10.09		10.09	0.000009	0.24	4966.32	3569.78	0.02
Gum Bayou	Upper	10808	Max WS	524.74	4.20	10.09		10.09	0.000062	0.70	936.72	4752.78	0.05
Gum Bayou	Upper	10740	Max WS	526.07	1.30	10.09	4.84	10.12	0.000205	1.47	357.90	4752.14	0.10
Gum Bayou	Upper	10711		Bridge									
Gum Bayou	Upper	10682	Max WS	526.06	2.40	9.94		10.00	0.000320	1.92	274.46	4583.52	0.13
Gum Bayou	Upper	10555	Max WS	528.50	4.10	9.94		9.94	0.000057	0.68	846.41	4574.90	0.05
Gum Bayou	Upper	10046	Max WS	528.18	3.70	9.92		9.92	0.000004	0.20	7313.85	4558.56	0.01
Gum Bayou	Lower	9910	Max WS	673.95	3.90	9.92		9.92	0.000007	0.22	7197.34	4558.56	0.02

HEC-RAS Plan: 10 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Gum Bayou	Lower	9149	Max WS	674.19	1.64	9.92		9.92	0.000003	0.17	8944.45	3702.43	0.01
Gum Bayou	Lower	8649	Max WS	789.03	0.76	9.92		9.92	0.000005	0.24	7775.19	3322.23	0.02
Gum Bayou	Lower	8532	Max WS	815.87	0.76	9.92		9.92	0.000006	0.24	7773.13	3322.22	0.02
Gum Bayou	Lower	7891	Max WS	963.24	0.70	9.91		9.91	0.000003	0.21	8781.59	2857.42	0.01
Gum Bayou	Lower	7813	Max WS	981.34	0.50	9.91		9.91	0.000003	0.18	8230.95	2920.99	0.01
Gum Bayou	Lower	7775		Culvert									
Gum Bayou	Lower	7737	Max WS	926.81	1.30	7.33		7.81	0.006675	5.58	166.11	1381.88	0.53
Gum Bayou	Lower	7656	Max WS	932.18	0.60	7.14		7.14	0.000021	0.41	3625.26	1591.36	0.03
Gum Bayou	Lower	2746	Max WS	15.35	-3.37	5.80	-2.79	5.80	0.000000	0.03	461.89	91.46	0.00
Doubloon	to Pearl	15291	Max WS	924.05	-3.39	6.66		6.67	0.000133	1.28	1299.71	533.49	0.08
Doubloon	to Pearl	14393	Max WS	923.14	-3.39	6.51		6.54	0.000189	1.51	1094.49	544.19	0.10
Doubloon	to Pearl	13496	Max WS	978.51	-3.39	6.33		6.34	0.000123	1.19	1480.49	576.51	0.08
Doubloon	to Pearl	12598	Max WS	992.89	-3.39	6.13		6.17	0.000296	1.82	758.93	244.17	0.12
Doubloon	to Pearl	11636	Max WS	1009.53	-3.94	5.96		5.97	0.000093	1.02	2011.22	932.22	0.07
Doubloon	to Pearl	10674	Max WS	1009.47	-4.49	5.90		5.90	0.000047	0.73	2293.74	1181.86	0.05
Doubloon	to Pearl	9711	Max WS	1119.69	-5.04	5.84		5.85	0.000065	0.87	2027.78	838.98	0.06
Doubloon	to Pearl	8749	Max WS	1151.49	-5.60	5.63		5.68	0.000323	1.92	698.73	218.82	0.13
Doubloon	to Pearl	7787	Max WS	1181.58	-6.15	5.30		5.36	0.000350	1.97	621.19	125.40	0.13
Doubloon	to Pearl	6824	Max WS	1215.34	-6.70	4.95		5.01	0.000364	1.96	624.78	651.99	0.13
Doubloon	to Pearl	5862	Max WS	1247.36	-7.25	4.59		4.65	0.000379	1.96	636.22	99.38	0.14
Doubloon	to Pearl	4900	Max WS	1277.65	-7.80	4.39		4.41	0.000120	1.38	1105.25	696.58	0.10
Doubloon	to Pearl	4420	Max WS	1294.17	-7.88	4.33		4.35	0.000130	1.44	1061.98	749.63	0.10
Doubloon	to Pearl	3940	Max WS	1310.66	-7.96	4.26		4.29	0.000140	1.51	1032.40	686.91	0.10
Doubloon	to Pearl	3460	Max WS	1327.16	-8.04	4.19		4.22	0.000151	1.57	1009.14	695.64	0.11
Doubloon	to Pearl	2980	Max WS	1343.96	-8.12	4.14		4.16	0.000089	1.21	1529.05	745.95	0.08
Doubloon	to Pearl	2500	Max WS	1360.80	-8.20	4.10		4.12	0.000090	1.23	1549.23	819.99	0.08
Doubloon	to Pearl	2020	Max WS	1377.77	-8.29	4.06		4.07	0.000094	1.27	1572.56	920.59	0.08
Doubloon	to Pearl	1540	Max WS	1394.80	-8.37	4.01		4.03	0.000090	1.24	1663.21	981.11	0.08
Doubloon	to Pearl	1060	Max WS	1411.92	-8.45	3.98		3.99	0.000077	1.15	1725.28	1046.66	0.08
Doubloon	to Pearl	580	Max WS	1429.26	-8.53	3.94		3.95	0.000073	1.13	1798.79	1095.60	0.07
Doubloon	to Pearl	100	Max WS	10.00	-8.61	3.91	-7.67	3.91	0.000000	0.01	1880.99	1140.95	0.00
Doubloon	to Marsh	19396	Max WS	569.12	-2.36	6.66		6.66	0.000056	0.80	1276.12	533.49	0.05
Doubloon	to Marsh	18926	Max WS	568.99	-1.55	6.42		6.55	0.000736	2.91	195.77	471.25	0.20
Doubloon	to Marsh	18916		Culvert									
Doubloon	to Marsh	18906	Max WS	567.68	-1.55	5.23		5.42	0.001383	3.51	161.82	335.38	0.26
Doubloon	to Marsh	18661	Max WS	567.33	-1.72	5.12		5.13	0.000044	0.63	1390.87	1071.89	0.05
Doubloon	to Marsh	18361	Max WS	726.82	-1.93	5.11		5.11	0.000047	0.66	1834.17	1066.32	0.05
Doubloon	to Marsh	18061	Max WS	727.67	-2.14	5.10		5.10	0.000036	0.58	2189.11	1063.46	0.04
Doubloon	to Marsh	17782	Max WS	728.59	-2.51	5.09		5.09	0.000025	0.50	3108.12	1472.29	0.04
Doubloon	to Marsh	17504	Max WS	728.09	-2.88	5.08		5.08	0.000044	0.68	2043.59	1883.04	0.05
Doubloon	to Marsh	17225	Max WS	828.34	-3.25	4.97	0.05	5.04	0.000460	2.20	394.36	2293.63	0.15
Doubloon	to Marsh	17207		Bridge									
Doubloon	to Marsh	17188	Max WS	812.93	-3.25	4.87		4.95	0.000492	2.26	369.18	2158.90	0.16
Doubloon	to Marsh	16717	Max WS	806.59	-2.92	4.78		4.79	0.000113	1.06	1302.08	2117.17	0.07
Doubloon	to Marsh	16246	Max WS	811.39	-2.59	4.74		4.74	0.000074	0.84	2016.32	2258.08	0.06

HEC-RAS Plan: 10 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Doubloon	to Marsh	15776	Max WS	818.40	-2.25	4.71		4.71	0.000067	0.78	1998.93	2177.72	0.06
Doubloon	to Marsh	15305	Max WS	826.21	-1.92	4.68		4.68	0.000065	0.75	2152.71	2006.00	0.06
Doubloon	to Marsh	14834	Max WS	834.28	-1.59	4.64		4.65	0.000071	0.76	2173.35	1914.81	0.06
Doubloon	to Marsh	14363	Max WS	842.72	-1.26	4.61		4.61	0.000074	0.74	2134.50	1894.97	0.06
Doubloon	to Marsh	13893	Max WS	851.47	-0.93	4.57		4.58	0.000079	0.74	2082.06	1893.38	0.06
Doubloon	to Marsh	13422	Max WS	860.69	-0.59	4.53		4.54	0.000087	0.75	2018.78	1954.19	0.06
Doubloon	to Marsh	12951	Max WS	870.07	-0.26	4.49		4.50	0.000098	0.76	1942.74	1964.34	0.07
Doubloon	to Marsh	12480	Max WS	879.49	0.07	4.44		4.45	0.000115	0.78	1854.29	2039.43	0.07
Doubloon	to Marsh	12009	Max WS	889.12	0.40	4.38		4.39	0.000141	0.81	1755.08	2143.13	0.08
Doubloon	to Marsh	11539	Max WS	898.62	0.74	4.30		4.31	0.000180	0.86	1639.05	2153.93	0.09
Doubloon	to Marsh	11068	Max WS	908.15	1.07	4.20		4.21	0.000261	0.95	1505.42	2308.93	0.10
Doubloon	to Marsh	10597	Max WS	917.65	1.40	4.04		4.06	0.000408	1.07	1328.88	2288.45	0.12
Doubloon	to Marsh	10500	Max WS	919.69	1.37	4.02		4.03	0.000160	0.68	1969.85	1288.05	0.08
Doubloon	to Marsh	10108	Max WS	928.18	1.27	3.95		3.96	0.000180	0.72	1893.30	1270.33	0.08
Doubloon	to Marsh	9619	Max WS	938.75	1.14	3.85		3.86	0.000225	0.83	1694.75	1208.45	0.09
Doubloon	to Marsh	9130	Max WS	949.31	1.02	3.74		3.75	0.000234	0.88	1577.67	1041.61	0.10
Doubloon	to Marsh	8641	Max WS	959.92	0.89	3.64		3.64	0.000196	0.93	1565.45	966.62	0.11
Doubloon	to Marsh	8152	Max WS	970.54	0.77	3.54		3.55	0.000194	0.93	1596.15	983.32	0.11
Doubloon	to Marsh	7663	Max WS	981.16	0.64	3.45		3.46	0.000190	0.92	1638.62	1018.66	0.10
Doubloon	to Marsh	7231	Max WS	990.53	0.54	3.36		3.37	0.000212	0.97	1538.30	937.61	0.11
Doubloon	to Marsh	6800	Max WS	999.90	0.44	3.26		3.27	0.000241	1.03	1452.67	894.23	0.12
Doubloon	to Marsh	6368	Max WS	1009.25	0.34	3.15		3.16	0.000279	1.09	1400.85	938.33	0.13
Doubloon	to Marsh	5937	Max WS	1018.58	0.24	3.02		3.04	0.000294	1.11	1358.00	864.21	0.13
Doubloon	to Marsh	5505	Max WS	1027.89	0.14	2.88		2.90	0.000346	1.18	1208.41	708.94	0.14
Doubloon	to Marsh	5083	Max WS	1040.27	0.01	2.73		2.74	0.000263	1.01	1580.70	1045.49	0.12
Doubloon	to Marsh	4661	Max WS	1052.59	-0.11	2.60		2.61	0.000227	0.93	1860.22	1344.90	0.11
Doubloon	to Marsh	4239	Max WS	1064.90	-0.24	2.49		2.50	0.000208	0.89	2069.10	1615.97	0.11
Doubloon	to Marsh	3745	Max WS	1075.21	-0.34	2.39		2.40	0.000208	0.88	2134.20	1731.87	0.11
Doubloon	to Marsh	3250	Max WS	1085.76	-0.44	2.29		2.30	0.000190	0.83	2230.57	1735.76	0.10
Doubloon	to Marsh	2756	Max WS	1096.28	-0.54	2.20		2.21	0.000170	0.79	2372.06	1817.15	0.10
Doubloon	to Marsh	2262	Max WS	1106.81	-0.64	2.13		2.13	0.000150	0.74	2535.32	1908.45	0.09
Doubloon	to Marsh	1767	Max WS	1117.36	-0.74	2.06		2.06	0.000129	0.70	2706.77	1963.79	0.08
Doubloon	to Marsh	1273	Max WS	5.00	-0.84	2.00	-0.54	2.00	0.000000	0.00	2886.29	2040.32	0.00
Bayou Vincent	Upper	6072	Max WS	2789.36	5.31	17.90		18.13	0.000938	4.05	925.97	190.00	0.23
Bayou Vincent	Upper	5509	Max WS	2787.73	3.64	17.54		17.69	0.000549	3.37	1175.38	190.00	0.18
Bayou Vincent	Upper	5227	Max WS	2822.70	2.81	17.42		17.55	0.000434	3.12	1309.82	190.00	0.16
Bayou Vincent	Upper	5174	Max WS	2829.36	3.00	17.43	9.49	17.51	0.000355	2.24	1307.43	170.00	0.14
Bayou Vincent	Upper	5166	Bridge										
Bayou Vincent	Upper	5158	Max WS	2828.45	3.00	17.22		17.30	0.000386	2.30	1271.38	170.00	0.14
Bayou Vincent	Upper	4963	Max WS	2834.49	3.00	17.20		17.28	0.000391	2.31	1267.89	170.00	0.14
Bayou Vincent	Upper	4083	Max WS	2943.87	3.52	16.52		16.67	0.001025	3.23	1063.95	555.81	0.23
Bayou Vincent	Upper	3643	Max WS	2998.74	3.78	15.23		15.62	0.003913	5.12	633.34	149.30	0.42
Bayou Vincent	Upper	3590	Max WS	3005.36	4.30	15.31	10.33	15.40	0.000600	2.49	1769.09	1000.00	0.17
Bayou Vincent	Upper	3582	Bridge										
Bayou Vincent	Upper	3574	Max WS	3005.32	4.30	15.28		15.37	0.000618	2.51	1730.99	1000.00	0.18

HEC-RAS Plan: 10 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Bayou Vincent	Upper	3379	Max WS	3011.94	2.78	15.06		15.34	0.002370	4.32	762.06	160.11	0.33
Bayou Vincent	Upper	2851	Max WS	3077.56	1.84	13.79		14.09	0.002350	4.58	804.21	177.65	0.34
Bayou Vincent	Upper	1795	Max WS	3207.82	-0.05	11.71		11.93	0.001759	4.85	1904.03	1051.86	0.30
Bayou Vincent	Upper	1267	Max WS	3207.71	-0.99	11.11		11.16	0.000815	3.41	3430.86	1290.86	0.19
Bayou Vincent	Lower	1214	Max WS	3505.68	-0.99	11.11		11.16	0.000973	3.73	3430.86	1290.86	0.21
Bayou Vincent	Lower	1126	Max WS	3505.62	-1.07	11.03		11.08	0.000979	3.74	3424.38	1290.52	0.21
Bayou Vincent	Lower	686	Max WS	3507.98	-1.49	10.60		10.65	0.000988	3.75	3414.31	1290.00	0.21
Bayou Vincent	Lower	86	Max WS	3511.27	-3.07	10.22		10.24	0.000327	2.33	5013.54	1350.00	0.12
Bayou Vincent	Lower	0	Max WS	15.06	-3.30	10.20	-2.56	10.20	0.000000	0.01	5290.82	1350.00	0.00

HEC-RAS Plan: 25ECM032012 Profile: Max WS

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
West Diversion	Main	4743	Max WS	158.17	5.80	13.07		13.08	0.000078	0.75	210.69	73.34	0.06
West Diversion	Main	4742	Max WS	158.17	5.80	13.07		13.08	0.000078	0.75	210.69	73.33	0.06
West Diversion	Main	4716		Culvert									
West Diversion	Main	4688	Max WS	153.35	2.20	12.99		13.00	0.000020	0.52	292.18	111.46	0.03
West Diversion	Main	4687	Max WS	153.43	2.20	12.99		13.00	0.000010	0.62	274.89	751.65	0.04
West Diversion	Main	4060	Max WS	205.46	3.70	12.99		12.99	0.000000	0.05	5402.11	835.80	0.00
West Diversion	Main	3692	Max WS	236.13	2.90	12.98		12.99	0.000020	0.93	281.40	812.76	0.05
West Diversion	Main	3691	Max WS	236.21	2.90	12.98		13.03	0.000018	0.53	267.13	162.00	0.03
West Diversion	Main	3626		Culvert									
West Diversion	Main	3560	Max WS	236.19	3.50	11.71		11.75	0.000264	1.68	140.55	74.08	0.11
West Diversion	Main	2777	Max WS	300.91	2.50	11.59		11.63	0.000056	0.68	277.97	92.35	0.05
West Diversion	Main	2226	Max WS	317.72	2.60	11.55	6.73	11.61	0.000065	0.72	277.05	69.00	0.05
West Diversion	Main	2168		Bridge									
West Diversion	Main	2110	Max WS	330.88	2.40	11.56		11.59	0.000024	0.49	518.01	104.00	0.03
West Diversion	Main	1760	Max WS	341.21	1.40	11.55		11.58	0.000021	0.48	495.17	104.00	0.03
West Diversion	Main	1733		Culvert									
West Diversion	Main	1706	Max WS	323.30	0.30	11.40		11.43	0.000028	0.56	461.07	106.00	0.03
West Diversion	Main	1269	Max WS	347.07	1.10	11.39		11.42	0.000023	0.56	432.84	73.00	0.03
West Diversion	Main	1226		Culvert									
West Diversion	Main	1182	Max WS	347.07	0.00	11.39		11.40	0.000072	1.02	648.11	117.00	0.06
West Diversion	Main	0	Max WS	344.92	-0.90	11.32		11.33	0.000043	0.82	819.29	147.00	0.05
W14 Main	Upper	54648	Max WS	10.00	12.65	16.27		16.27	0.000004	0.14	104.69	163.88	0.01
W14 Main	Upper	54337	Max WS	10.00	12.60	16.27		16.27	0.000004	0.13	104.97	163.71	0.01
W14 Main	Upper	54284	Max WS	17.26	12.30	16.27		16.27	0.000021	0.39	44.54	176.54	0.04
W14 Main	Upper	54280		Culvert									
W14 Main	Upper	54178	Max WS	16.88	12.00	16.23		16.23	0.000021	0.39	43.66	153.83	0.04
W14 Main	Upper	54157	Max WS	19.81	12.40	16.23		16.23	0.000029	0.37	78.75	146.58	0.04
W14 Main	Upper	53993	Max WS	42.61	12.05	16.21		16.22	0.000107	0.72	80.59	148.66	0.07
W14 Main	Upper	53830	Max WS	65.37	11.70	16.18		16.19	0.000198	1.00	82.25	150.07	0.10
W14 Main	Upper	53666	Max WS	88.24	11.35	16.12		16.15	0.000280	1.22	83.40	149.76	0.12
W14 Main	Upper	53502	Max WS	111.14	11.00	16.06		16.09	0.000334	1.37	86.99	139.42	0.14
W14 Main	Upper	53222	Max WS	150.37	10.80	15.83		15.91	0.000811	2.20	69.04	27.48	0.20
W14 Main	Upper	53154	Max WS	160.08	10.50	15.83		15.87	0.000190	1.43	112.18	46.16	0.12
W14 Main	Upper	53150		Culvert									
W14 Main	Upper	53112	Max WS	159.66	10.40	15.68		15.73	0.000464	1.77	90.02	31.92	0.16
W14 Main	Upper	53064	Max WS	166.58	10.30	15.67		15.71	0.000395	1.50	110.99	33.24	0.14
W14 Main	Upper	52895	Max WS	190.67	9.76	15.59		15.63	0.000413	1.60	119.20	34.34	0.15
W14 Main	Upper	52726	Max WS	214.82	9.22	15.51		15.55	0.000421	1.68	128.17	35.41	0.16
W14 Main	Upper	52557	Max WS	238.96	8.68	15.42		15.47	0.000422	1.74	137.67	36.42	0.16
W14 Main	Upper	52388	Max WS	263.03	8.14	15.34		15.39	0.000416	1.78	147.95	37.38	0.16
W14 Main	Upper	52219	Max WS	286.93	7.60	15.26		15.31	0.000402	1.80	159.09	38.24	0.16
W14 Main	Upper	51937	Max WS	326.67	7.10	15.13		15.18	0.000401	1.88	173.48	39.04	0.16
W14 Main	Upper	51654	Max WS	366.11	6.60	15.00		15.06	0.000394	1.95	187.83	39.56	0.16
W14 Main	Upper	51372	Max WS	404.38	6.10	14.88		14.94	0.000383	2.00	202.10	39.87	0.16
W14 Main	Upper	51089	Max WS	441.72	5.60	14.75		14.82	0.000371	2.04	216.05	40.00	0.16

HEC-RAS Plan: 25ECM032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Upper	50807	Max WS	478.38	5.10	14.64		14.71	0.000357	2.08	237.55	111.71	0.15
W14 Main	Upper	50524	Max WS	513.98	4.60	14.54		14.60	0.000333	2.08	307.72	244.33	0.15
W14 Main	Upper	50235	Max WS	552.42	4.52	14.41		14.49	0.000403	2.27	307.56	302.30	0.16
W14 Main	Upper	49946	Max WS	587.66	4.44	14.26		14.36	0.000486	2.46	296.38	285.84	0.18
W14 Main	Upper	49656	Max WS	619.82	4.36	14.09		14.20	0.000587	2.65	285.23	260.67	0.19
W14 Main	Upper	49367	Max WS	649.55	4.28	13.88		14.00	0.000718	2.87	265.34	231.20	0.21
W14 Main	Upper	49078	Max WS	664.81	4.20	13.61		13.75	0.000877	3.07	222.68	178.58	0.23
W14 Main	Upper	49062	Max WS	671.68	4.10	13.65	7.55	13.74	0.000387	2.43	275.85	37.24	0.16
W14 Main	Upper	49060		Bridge									
W14 Main	Upper	48993	Max WS	666.10	4.10	13.60		13.69	0.000388	2.43	273.98	37.18	0.16
W14 Main	Upper	48951	Max WS	643.11	4.20	13.44		13.65	0.001178	3.67	175.37	28.88	0.26
W14 Main	Upper	48591	Max WS	650.50	3.40	13.29		13.35	0.000227	2.24	512.34	82.42	0.13
W14 Main	Upper	48412	Max WS	599.85	4.60	13.15		13.26	0.000662	2.84	294.64	80.28	0.20
W14 Main	Upper	48301	Max WS	562.15	4.60	13.07		13.18	0.000607	2.71	288.27	79.57	0.19
W14 Main	Mid	48154	Max WS	403.97	3.50	13.07		13.14	0.000334	2.14	239.70	111.00	0.16
W14 Main	Mid	47747	Max WS	321.50	4.60	12.98		13.02	0.000163	1.60	280.69	78.83	0.11
W14 Main	Mid	47604	Max WS	308.35	4.10	12.96		12.99	0.000155	1.52	576.07	961.24	0.11
W14 Main	Mid	47278	Max WS	276.04	4.10	12.93		12.94	0.000072	1.03	1064.33	1365.24	0.08
W14 Main	Mid	47072	Max WS	265.45	2.90	12.91		12.93	0.000098	1.25	563.81	1352.56	0.09
W14 Main	Mid	46231	Max WS	259.26	3.10	12.79		12.82	0.000151	1.48	202.64	555.55	0.11
W14 Main	Mid	45970	Max WS	265.17	2.10	12.77		12.80	0.000134	1.40	213.84	516.65	0.10
W14 Main	Mid	45631	Max WS	270.35	2.90	12.72		12.75	0.000132	1.41	223.59	1240.78	0.10
W14 Main	Mid	45461	Max WS	274.35	1.10	12.70		12.73	0.000160	1.41	208.75	1210.53	0.11
W14 Main	Mid	45123	Max WS	282.65	1.20	12.62		12.66	0.000225	1.59	236.02	1331.75	0.12
W14 Main	Mid	44719	Max WS	294.62	1.30	12.50		12.56	0.000299	1.82	191.84	1360.83	0.14
W14 Main	Mid	44444	Max WS	304.17	1.60	12.49		12.50	0.000027	0.79	421.20	1210.46	0.05
W14 Main	Mid	44393	Max WS	305.92	1.60	12.49		12.50	0.000027	0.79	421.02	1210.36	0.05
W14 Main	Mid	44040	Max WS	318.10	1.60	12.48		12.49	0.000026	0.76	419.15	145.46	0.05
W14 Main	Mid	44008	Max WS	319.21	1.60	12.48		12.49	0.000010	0.60	531.13	212.01	0.03
W14 Main	Mid	44006		Culvert									
W14 Main	Mid	43938	Max WS	319.20	1.40	12.42		12.43	0.000014	0.72	443.90	144.58	0.04
W14 Main	Mid	43892	Max WS	320.79	1.60	12.41		12.43	0.000057	1.07	300.85	42.57	0.07
W14 Main	Mid	43729	Max WS	320.79	1.60	12.40		12.42	0.000057	1.07	302.43	54.26	0.07
W14 Main	Lower	43600	Max WS	624.26	1.60	12.40		12.47	0.000215	2.08	302.43	54.26	0.14
W14 Main	Lower	43256	Max WS	622.91	1.80	12.30		12.38	0.000295	2.19	285.01	75.19	0.16
W14 Main	Lower	43246	Max WS	623.47	-5.40	12.28	5.10	12.37	0.000386	2.40	259.97	48.56	0.16
W14 Main	Lower	43220		Bridge									
W14 Main	Lower	43216	Max WS	622.36	1.40	12.22		12.32	0.000385	2.61	238.28	35.90	0.18
W14 Main	Lower	43174	Max WS	625.84	0.70	12.22		12.31	0.000305	2.39	267.52	78.35	0.16
W14 Main	Lower	42773	Max WS	655.48	0.85	12.10		12.18	0.000282	2.32	282.66	73.46	0.16
W14 Main	Lower	42372	Max WS	684.61	1.00	11.98		12.06	0.000290	2.23	350.11	277.10	0.16
W14 Main	Lower	41911	Max WS	717.37	0.70	11.84		11.93	0.000302	2.47	427.40	591.24	0.16
W14 Main	Lower	41449	Max WS	750.51	0.40	11.66		11.78	0.000401	2.82	423.42	483.34	0.19
W14 Main	Lower	40987	Max WS	782.40	0.10	11.38		11.55	0.000602	3.36	281.33	320.55	0.22
W14 Main	Lower	40967	Max WS	784.92	-3.60	11.47		11.49	0.000023	1.14	690.62	275.29	0.05



HEC-RAS Plan: 25ECM032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Lower	40900		Culvert									
W14 Main	Lower	40862	Max WS	784.54	-5.10	11.44		11.46	0.000018	1.08	727.36	339.63	0.05
W14 Main	Lower	40798	Max WS	788.49	-1.20	11.36		11.46	0.000298	2.47	319.19	214.56	0.16
W14 Main	Lower	40311	Max WS	821.50	-0.80	11.14		11.27	0.000417	2.85	292.37	158.38	0.19
W14 Main	Lower	40149	Max WS	831.50	-0.40	11.02		11.18	0.000610	3.20	267.95	98.37	0.23
W14 Main	Lower	40114	Max WS	833.11	1.35	10.98	5.49	11.16	0.000593	3.35	248.92	62.99	0.21
W14 Main	Lower	40100		Bridge									
W14 Main	Lower	40082	Max WS	831.48	1.35	10.91		11.09	0.000608	3.37	246.70	43.61	0.21
W14 Main	Lower	40080	Max WS	833.90	-0.70	11.01		11.08	0.000191	2.15	387.91	74.37	0.13
W14 Main	Lower	40038	Max WS	834.53	-0.50	10.90		11.07	0.000837	3.31	252.09	48.03	0.25
W14 Main	Lower	39282	Max WS	870.42	-0.65	10.37		10.51	0.000581	2.96	294.35	400.26	0.22
W14 Main	Lower	39029	Max WS	885.99	-0.80	10.30		10.37	0.000347	2.26	610.35	2081.80	0.17
W14 Main	Lower	38269	Max WS	933.96	-1.10	9.61		9.73	0.001571	2.83	329.91	1829.36	0.33
W14 Main	Lower	38016	Max WS	950.30	-1.40	9.32		9.48	0.000689	3.36	394.74	1432.56	0.24
W14 Main	Lower	38000	Max WS	951.45	-0.30	9.34	4.24	9.46	0.000395	2.83	374.05	1490.42	0.19
W14 Main	Lower	37950		Bridge									
W14 Main	Lower	37931	Max WS	951.07	-0.90	9.16		9.27	0.000300	2.62	390.64	1251.97	0.17
W14 Main	Lower	37889	Max WS	953.58	-1.40	9.07		9.25	0.000893	3.41	292.95	1117.41	0.27
W14 Main	Lower	37118	Max WS	1003.28	-1.37	8.58		8.67	0.000532	2.77	1140.17	1230.49	0.21
W14 Main	Lower	36925	Max WS	1015.84	-1.33	8.46		8.53	0.000769	2.55	1092.88	1186.72	0.25
W14 Main	Lower	36733	Max WS	1028.33	-1.30	8.16		8.44	0.001196	4.24	244.42	1076.38	0.32
W14 Main	Lower	36713	Max WS	1029.63	-1.00	8.20	3.24	8.42	0.000613	3.75	274.89	1080.60	0.24
W14 Main	Lower	36710		Bridge									
W14 Main	Lower	36698	Max WS	1029.63	-0.60	8.19		8.40	0.000489	3.66	281.09	1080.82	0.23
W14 Main	Lower	36680	Max WS	1030.80	-1.20	8.21		8.39	0.000637	3.42	301.49	1086.56	0.24
W14 Main	Lower	35677	Max WS	1095.39	-1.60	7.21		7.49	0.001097	4.29	255.27	244.48	0.31
W14 Main	Lower	35426	Max WS	1111.83	-2.00	6.89		7.20	0.001205	4.47	248.90	364.92	0.32
W14 Main	Lower	35169	Max WS	1128.94	-3.20	6.82	0.86	6.87	0.000253	2.18	1337.07	1359.08	0.15
W14 Main	Lower	35150		Bridge									
W14 Main	Lower	35131	Max WS	1128.94	-3.20	6.81		6.84	0.000083	1.39	1635.37	1385.54	0.09
W14 Main	Lower	34899	Max WS	1144.45	-3.10	6.78		6.82	0.000106	1.58	1226.64	1366.08	0.10
W14 Main	Lower	34046	Max WS	1201.04	-3.20	6.69		6.73	0.000105	1.58	1381.41	1509.38	0.10
W14 Main	Lower	33199	Max WS	1256.30	-4.00	6.60		6.64	0.000096	1.61	978.94	468.53	0.10
W14 Main	Lower	32566	Max WS	1297.04	-3.60	6.52		6.57	0.000136	1.81	760.25	212.59	0.12
W14 Main	Lower	31941	Max WS	1339.01	-3.60	6.42		6.47	0.000157	1.91	701.51	100.08	0.13
W14 Main	Lower	31180	Max WS	1389.89	-3.20	6.25		6.33	0.000212	2.15	646.42	96.74	0.15
W14 Main	Lower	30479	Max WS	1437.63	-3.40	6.09		6.17	0.000224	2.21	649.99	96.95	0.15
W14 Main	Lower	29754	Max WS	1487.35	-3.90	5.93		6.01	0.000209	2.18	683.38	99.00	0.15
W14 Main	Lower	28922	Max WS	1546.83	-4.10	5.74		5.82	0.000225	2.26	684.06	99.03	0.15
W14 Main	Lower	28661	Max WS	1566.59	-5.00	5.59	0.04	5.72	0.000396	2.93	535.29	77.65	0.20
W14 Main	Lower	28567		Bridge									
W14 Main	Lower	28472	Max WS	1565.79	-4.60	5.12		5.26	0.000416	3.01	520.49	76.01	0.20
W14 Main	Lower	27798	Max WS	1614.75	-5.37	5.00		5.06	0.000156	1.92	843.14	2418.29	0.13
W14 Main	Lower	26970	Max WS	1673.56	-6.23	4.88		4.93	0.000138	1.87	897.07	120.59	0.12
W14 Main	Lower	26424	Max WS	1711.37	-6.80	4.72		4.82	0.000254	2.55	670.24	86.68	0.16

HEC-RAS Plan: 25ECM032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Lower	26220	Max WS	1726.57	-7.37	4.70		4.78	0.000173	2.25	765.78	88.47	0.14
W14 Main	Lower	26169	Max WS	1730.27	-7.37	4.69	-2.82	4.77	0.000174	2.26	764.92	88.44	0.14
W14 Main	Lower	26152	Bridge										
W14 Main	Lower	26131	Max WS	1730.13	-7.37	4.67		4.75	0.000175	2.27	763.37	88.39	0.14
W14 Main	Lower	26038	Max WS	1737.00	-7.37	4.65		4.73	0.000177	2.28	761.78	88.34	0.14
W14 Main	Lower	25159	Max WS	1802.12	-7.26	4.47		4.56	0.000215	2.34	769.14	99.47	0.15
W14 Main	Lower	25107	Max WS	1805.58	-4.20	4.42	-1.55	4.54	0.000333	2.83	637.58	74.00	0.17
W14 Main	Lower	25086	Bridge										
W14 Main	Lower	25080	Max WS	1805.33	-4.20	4.39		4.52	0.000336	2.84	635.82	74.00	0.17
W14 Main	Lower	24990	Max WS	1812.18	-5.19	4.38		4.49	0.000286	2.64	695.02	103.24	0.17
W14 Main	Lower	22266	Max WS	2018.58	-6.89	3.48		3.61	0.000341	2.90	696.26	97.39	0.19
W14 Main	Lower	21014	Max WS	2115.68	-6.89	2.91		3.08	0.000488	3.30	641.90	94.60	0.22
W14 Main	Lower	19620	Max WS	14.93	-6.89	2.00	-6.40	2.00	0.000000	0.03	556.82	91.71	0.00
W-15 Main	Upper	41958	Max WS	10.00	23.20	26.23		26.23	0.000018	0.18	54.36	31.43	0.02
W-15 Main	Upper	41911	Max WS	10.00	23.10	26.23		26.23	0.000016	0.18	54.94	28.20	0.02
W-15 Main	Upper	41876	Culvert										
W-15 Main	Upper	41841	Max WS	10.00	21.40	26.23		26.23	0.000003	0.10	96.70	36.23	0.01
W-15 Main	Upper	40226	Max WS	75.99	20.70	26.14		26.15	0.000095	0.67	189.02	353.22	0.06
W-15 Main	Upper	39062	Max WS	122.77	21.10	26.03		26.03	0.000104	0.70	324.35	466.04	0.06
W-15 Main	Upper	38866	Max WS	130.61	20.60	26.00		26.01	0.000147	0.82	159.35	299.13	0.08
W-15 Main	Upper	38831	Culvert										
W-15 Main	Upper	38796	Max WS	130.27	19.90	25.81		25.83	0.000204	1.01	129.08	255.14	0.09
W-15 Main	Upper	36942	Max WS	195.61	19.70	25.37		25.39	0.000283	1.14	408.45	666.01	0.10
W-15 Main	Upper	36875	Culvert										
W-15 Main	Upper	36808	Max WS	195.12	19.60	25.22		25.26	0.000654	1.72	216.23	299.98	0.16
W-15 Main	Upper	36792	Max WS	198.27	19.60	25.15	22.38	25.19	0.000800	1.88	193.81	282.35	0.17
W-15 Main	Upper	36741	Bridge										
W-15 Main	Upper	36690	Max WS	198.16	19.90	25.13		25.14	0.000363	1.25	349.52	545.50	0.12
W-15 Main	Upper	36328	Max WS	210.27	19.50	25.03		25.04	0.000176	0.95	631.02	830.27	0.08
W-15 Main	Upper	35441	Max WS	240.75	18.60	24.93		24.94	0.000060	0.59	1221.81	1456.29	0.05
W-15 Main	Upper	34175	Max WS	283.38	18.40	23.91		24.00	0.001712	2.96	244.48	755.43	0.25
W-15 Main	Upper	34100	Lat Struct										
W-15 Main	Upper	33708	Max WS	297.12	17.90	23.36		23.40	0.000934	2.17	361.50	522.76	0.18
W-15 Main	Upper	33500	Lat Struct										
W-15 Main	Upper	33031	Max WS	130.82	17.40	22.91		22.94	0.000503	1.53	186.22	352.46	0.13
W-15 Main	Upper	33000	Lat Struct										
W-15 Main	Upper	32178	Max WS	94.16	16.80	22.65		22.66	0.000163	0.90	185.92	294.22	0.08
W-15 Main	Upper	32158	Max WS	94.74	16.80	22.64		22.65	0.000178	0.94	123.58	291.98	0.08
W-15 Main	Upper	32123	Culvert										
W-15 Main	Upper	32088	Max WS	85.55	17.00	22.50		22.51	0.000151	0.78	109.74	130.14	0.08
W-15 Main	Upper	31779	Max WS	96.86	16.80	22.46		22.47	0.000161	0.92	212.68	414.41	0.08
W-15 Main	Upper	30955	Max WS	127.32	16.20	22.26		22.28	0.000319	1.30	160.24	153.65	0.11
W-15 Main	Upper	29994	Max WS	164.10	15.60	21.77		21.82	0.000626	1.77	101.40	239.32	0.15
W-15 Main	Upper	28993	Max WS	204.16	15.40	21.39		21.45	0.000073	2.00	109.14	45.82	0.17
W-15 Main	Upper	28463	Max WS	225.86	15.20	21.36		21.40	0.000057	1.73	142.09	156.17	0.16

HEC-RAS Plan: 25ECM032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W-15 Main	Upper	27930	Max WS	247.37	14.40	21.28	17.36	21.36	0.000085	2.14	115.34	28.35	0.19
W-15 Main	Upper	27864	Bridge										
W-15 Main	Upper	27797	Max WS	247.37	14.30	21.27		21.34	0.000081	2.06	120.28	30.61	0.18
W-15 Main	Upper	27008	Max WS	275.34	13.60	20.94		20.99	0.000760	2.16	314.77	410.97	0.17
W-15 Main	Upper	26388	Max WS	295.12	12.60	20.61		20.63	0.000356	1.54	581.85	783.83	0.11
W-15 Main	Upper	25748	Max WS	316.63	12.20	20.33		20.37	0.000494	1.91	310.05	332.98	0.13
W-15 Main	Upper	25098	Max WS	339.04	9.40	20.13		20.14	0.000177	1.14	1103.37	1499.47	0.08
W-15 Main	Upper	24312	Max WS	365.60	11.10	19.95		19.98	0.000264	1.42	552.58	540.43	0.10
W-15 Main	Upper	23662	Max WS	385.11	9.20	19.74	12.98	19.79	0.000334	1.82	231.02	367.87	0.12
W-15 Main	Upper	23634	Bridge										
W-15 Main	Upper	23606	Max WS	383.16	9.60	19.66		19.70	0.000253	1.61	238.18	76.80	0.11
W-15 Main	Upper	23462	Max WS	380.39	10.80	19.58		19.65	0.000513	2.05	214.40	93.93	0.15
W-15 Main	Mid	22961	Max WS	282.21	10.60	19.58		19.62	0.000258	1.46	270.28	214.92	0.10
W-15 Main	Mid	22285	Max WS	280.99	10.40	19.43	13.45	19.45	0.000214	1.40	390.15	1030.35	0.09
W-15 Main	Mid	22250	Bridge										
W-15 Main	Mid	22227	Max WS	280.40	10.50	19.41		19.43	0.000202	1.37	309.95	862.20	0.10
W-15 Main	Mid	21477	Max WS	322.93	11.21	19.30		19.31	0.000111	0.90	362.11	99.85	0.07
W-15 Main	Mid	21400	Culvert										
W-15 Main	Mid	21329	Max WS	319.45	11.10	19.18		19.20	0.000109	0.91	350.95	91.42	0.07
W-15 Main	Mid	21028	Max WS	337.48	10.00	19.10		19.14	0.000287	1.56	217.74	100.51	0.11
W-15 Main	Mid	21000	Culvert										
W-15 Main	Mid	20870	Max WS	335.33	10.65	18.97		19.02	0.000306	1.72	195.47	98.89	0.12
W-15 Main	Mid	20827	Max WS	337.78	10.54	18.95		19.01	0.000384	2.18	283.00	184.50	0.14
W-15 Main	Mid	20700	Culvert										
W-15 Main	Mid	20648	Max WS	336.03	10.48	18.86		18.93	0.000422	2.27	234.37	176.04	0.15
W-15 Main	Mid	19997	Max WS	376.84	8.70	18.51		18.57	0.000615	2.04	186.65	218.88	0.15
W-15 Main	Mid	19018	Max WS	448.16	8.40	17.68		17.78	0.000945	2.53	177.38	32.84	0.19
W-15 Main	Mid	18298	Max WS	509.39	7.50	16.60		16.77	0.001793	3.30	154.24	28.92	0.25
W-15 Main	Mid	17456	Max WS	581.16	6.40	15.65		15.71	0.000630	2.34	397.65	173.89	0.16
W-15 Main	Mid	17221	Max WS	599.77	6.53	15.50		15.55	0.000630	1.91	313.51	73.01	0.16
W-15 Main	Mid	17201	Max WS	601.45	6.53	15.48	10.56	15.54	0.000639	1.92	312.52	72.93	0.16
W-15 Main	Mid	17091	Bridge										
W-15 Main	Mid	16981	Max WS	597.89	6.53	15.15		15.21	0.000786	2.07	288.35	70.25	0.18
W-15 Main	Mid	16926	Max WS	602.19	5.70	15.15	9.26	15.18	0.000227	1.45	415.14	66.39	0.10
W-15 Main	Mid	16901	Bridge										
W-15 Main	Mid	16876	Max WS	597.70	6.60	14.86		15.01	0.001372	3.11	192.45	37.06	0.24
W-15 Main	Mid	16482	Max WS	592.63	4.39	14.60		14.62	0.000312	1.62	1021.09	724.36	0.11
W-15 Main	Mid	16480	Lat Struct										
W-15 Main	Mid	16088	Max WS	591.21	4.39	14.47		14.50	0.000368	1.74	927.20	690.46	0.12
W-15 Main	Mid	15693	Max WS	590.60	4.39	14.30		14.34	0.000448	1.88	819.86	639.43	0.14
W-15 Main	Mid	15299	Max WS	590.52	4.31	14.18	8.88	14.20	0.000239	1.70	1139.51	746.49	0.11
W-15 Main	Mid	15280	Bridge										
W-15 Main	Mid	15262	Max WS	590.52	4.15	14.01		14.07	0.000506	2.07	626.89	686.36	0.15
W-15 Main	Mid	15261	Max WS	590.52	3.81	14.01		14.07	0.000585	2.27	676.27	686.07	0.16
W-15 Main	South	14915	Max WS	679.59	3.01	14.01		14.05	0.000316	1.80	1069.16	925.38	0.12

HEC-RAS Plan: 25ECM032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W-15 Main	South	14570	Max WS	676.98	3.72	13.89		13.92	0.000429	1.93	1206.34	1118.91	0.14
W-15 Main	South	14224	Max WS	711.55	4.91	13.75		13.78	0.000404	1.72	1482.89	1814.47	0.13
W-15 Main	South	13878	Max WS	746.25	6.09	13.27	10.38	13.43	0.002044	3.17	235.89	1278.46	0.29
W-15 Main	South	13850	Bridge										
W-15 Main	South	13822	Max WS	745.86	6.09	13.01		13.19	0.002493	3.41	219.02	1054.63	0.32
W-15 Main	South	13452	Max WS	781.06	5.08	12.27		12.41	0.001664	3.02	259.02	95.40	0.26
W-15 Main	South	13083	Max WS	815.58	4.06	11.82		11.92	0.000969	2.53	322.78	69.41	0.21
W-15 Main	South	12713	Max WS	839.72	3.05	11.57		11.63	0.000533	2.06	407.67	75.81	0.16
W-15 Main	South	12343	Max WS	863.51	2.03	11.43		11.48	0.000299	1.69	511.03	87.23	0.12
W-15 Main	South	11974	Max WS	888.43	1.02	11.36		11.39	0.000171	1.41	666.68	496.26	0.09
W-15 Main	South	11604	Max WS	915.99	0.00	11.31	2.45	11.33	0.000105	1.20	770.83	1899.00	0.07
W-15 Main	South	11579	Bridge										
W-15 Main	South	11554	Max WS	911.38	0.00	11.27		11.29	0.000106	1.21	758.59	1862.03	0.07
W-15 Main	South	11440	Max WS	919.27	0.49	11.25		11.27	0.000143	1.25	786.03	1977.49	0.08
W-15 Main	South	11326	Max WS	927.70	0.97	11.24		11.26	0.000160	1.17	1705.39	2175.40	0.09
W-15 Main	South	11212	Max WS	936.62	1.46	11.22	5.59	11.24	0.000198	1.14	2049.95	2478.49	0.09
W-15 Main	South	11162	Bridge										
W-15 Main	South	11112	Max WS	930.61	-1.12	11.14		11.18	0.000237	1.62	573.71	2156.36	0.11
W-15 Main	South	10638	Max WS	961.84	-1.27	11.05		11.09	0.000272	1.58	725.43	2303.39	0.11
W-15 Main	South	10164	Max WS	991.25	-1.43	10.94		10.97	0.000249	1.55	992.05	2269.77	0.11
W-15 Main	South	9690	Max WS	1020.11	-1.58	10.83		10.86	0.000226	1.52	1267.75	2008.97	0.11
W-15 Main	South	9217	Max WS	1051.70	-1.74	10.73		10.76	0.000214	1.51	1490.26	1828.42	0.10
W-15 Main	South	8743	Max WS	1084.60	-1.89	10.63		10.66	0.000210	1.53	1591.42	1660.07	0.10
W-15 Main	South	8269	Max WS	1117.55	-2.05	10.54		10.57	0.000206	1.55	1703.30	1528.81	0.10
W-15 Main	South	7795	Max WS	1151.33	-2.20	10.44		10.47	0.000208	1.58	1749.09	1394.38	0.10
W-15 Main	South	7321	Max WS	1185.22	-2.35	10.35		10.38	0.000215	1.64	1743.74	1255.24	0.10
W-15 Main	South	6847	Max WS	1219.09	-2.51	10.24		10.28	0.000224	1.69	1719.71	1106.61	0.11
W-15 Main	South	6373	Max WS	1253.01	-2.66	10.14		10.17	0.000238	1.77	1673.05	967.86	0.11
W-15 Main	South	5900	Max WS	1286.85	-2.82	10.02		10.06	0.000261	1.86	1596.65	816.73	0.12
W-15 Main	South	5426	Max WS	1320.76	-2.97	9.89		9.93	0.000298	1.99	1492.14	646.27	0.12
W-15 Main	South	4952	Max WS	1354.73	-3.13	9.73		9.78	0.000348	2.15	1350.90	543.30	0.13
W-15 Main	South	4478	Max WS	1388.82	-3.28	9.53		9.59	0.000445	2.40	1171.49	401.03	0.15
W-15 Main	South	4094	Max WS	1416.55	-2.04	9.39		9.44	0.000345	2.33	1521.62	615.03	0.13
W-15 Main	South	3696	Max WS	1445.32	-0.82	9.19		9.27	0.000567	2.85	1172.13	560.81	0.17
W-15 Main	South	3499	Max WS	1459.59	-1.03	9.11	2.39	9.16	0.000305	1.80	810.02	122.86	0.12
W-15 Main	South	3477	Bridge										
W-15 Main	South	3454	Max WS	1459.59	-0.66	8.97		9.04	0.000442	2.18	670.05	100.11	0.15
W-15 Main	South	3159	Max WS	1480.92	-1.22	8.79		8.89	0.000612	2.47	599.55	121.68	0.17
W-15 Main	South	2865	Max WS	1502.05	-1.77	8.68		8.73	0.000391	2.14	1439.46	627.21	0.14
W-15 Main	South	2570	Max WS	1523.28	-2.33	8.63		8.64	0.000108	1.22	3488.69	1060.83	0.08
W-15 Main	South	2335	Max WS	1540.16	-2.69	8.58		8.61	0.000202	1.70	2399.46	803.32	0.10
W-15 Main	South	2092	Max WS	1557.58	-2.22	8.50	2.18	8.55	0.000354	1.94	1516.45	1192.86	0.13
W-15 Main	South	2065	Bridge										
W-15 Main	South	2038	Max WS	1557.57	-1.14	8.43		8.47	0.000256	1.72	1712.64	1180.88	0.11
W-15 Main	South	1821	Max WS	1573.10	-3.39	8.32		8.41	0.000525	2.86	1198.90	448.59	0.16

HEC-RAS Plan: 25ECM032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W-15 Main	South	1507	Max WS	1595.49	-2.96	8.16		8.25	0.000511	2.78	1266.14	487.31	0.16
W-15 Main	South	1193	Max WS	1617.67	-2.53	8.00		8.09	0.000510	2.72	1323.75	527.58	0.16
W-15 Main	South	812	Max WS	1644.18	-2.36	7.78		7.88	0.000606	2.89	1198.44	447.35	0.18
W-15 Main	South	431	Max WS	1669.53	-2.20	7.48		7.61	0.000844	3.30	955.28	355.99	0.21
W-15 Main	South	50	Max WS	1666.19	-2.03	6.99		7.21	0.001412	4.03	612.82	168.39	0.27
Reine Canal	Main	8003	Max WS	-303.47	3.00	12.40		12.49	0.000714	-2.43	124.63	25.75	0.20
Reine Canal	Main	6849	Max WS	-327.13	5.20	13.23		13.32	0.000687	-2.43	134.76	29.01	0.20
Reine Canal	Main	6446	Max WS	-254.22	6.90	13.51		13.57	0.000337	-2.10	120.98	29.69	0.15
Reine Canal	Main	6412		Culvert									
Reine Canal	Main	6386	Max WS	-255.08	6.80	13.71		13.79	0.000377	-2.24	114.01	28.16	0.16
Reine Canal	Main	5181	Max WS	-4.55	6.60	14.07		14.07	0.000000	-0.03	152.05	33.94	0.00
Reine Canal	Main	3598	Max WS	-5.47	5.70	14.07		14.07	0.000000	-0.03	196.93	33.80	0.00
Reine Canal	Main	2688	Max WS	38.69	6.60	14.07	7.24	14.07	0.000006	0.13	286.66	64.20	0.01
Reine Canal	Main	2642		Bridge									
Reine Canal	Main	2624	Max WS	38.69	5.90	14.07		14.07	0.000004	0.17	229.87	67.48	0.02
Reine Canal	Main	2598	Max WS	40.00	6.70	14.07	7.50	14.07	0.000002	0.14	281.97	66.50	0.01
Reine Canal	Main	2566		Bridge									
Reine Canal	Main	2534	Max WS	39.78	6.60	14.07		14.07	0.000002	0.14	278.46	67.08	0.01
Reine Canal	Main	2455	Max WS	43.97	6.90	14.07	7.79	14.07	0.000006	0.24	190.08	48.07	0.02
Reine Canal	Main	2437		Bridge									
Reine Canal	Main	2418	Max WS	42.59	6.90	14.07		14.07	0.000006	0.22	195.51	47.77	0.02
Reine Canal	Main	2087	Max WS	55.77	5.70	14.06		14.06	0.000018	0.39	143.53	861.12	0.03
Reine Canal	Main	1941	Max WS	61.13	5.70	14.06		14.06	0.000022	0.43	143.41	859.63	0.04
Reine Canal	Main	1611	Max WS	73.82	5.70	14.04		14.05	0.000033	0.52	143.04	855.21	0.04
Reine Canal	Main	1550	Max WS	76.50	5.60	14.04		14.05	0.000022	0.47	164.54	36.92	0.04
Reine Canal	Main	1099	Max WS	93.22	5.10	14.03		14.03	0.000032	0.56	166.47	36.73	0.04
Reine Canal	Main	220	Max WS	89.07	4.10	14.01		14.01	0.000010	0.36	419.14	209.39	0.03
Poor Boy Canal	Main	5808	Max WS	98.18	10.10	19.58		19.59	0.000057	0.75	131.00	20.53	0.05
Poor Boy Canal	Main	5563	Max WS	96.68	10.10	19.57		19.58	0.000055	0.74	130.72	20.51	0.05
Poor Boy Canal	Main	5318	Max WS	129.94	10.10	19.54		19.55	0.000101	1.00	130.02	20.46	0.07
Poor Boy Canal	Main	5074	Max WS	163.72	10.10	19.48		19.51	0.000164	1.27	128.96	20.39	0.09
Poor Boy Canal	Main	4829	Max WS	198.17	10.10	19.41		19.45	0.000248	1.56	127.42	20.29	0.11
Poor Boy Canal	Main	4584	Max WS	233.21	10.10	19.30		19.36	0.000360	1.86	125.27	20.15	0.13
Poor Boy Canal	Main	4339	Max WS	268.86	10.10	19.16		19.23	0.000509	2.20	122.34	19.96	0.16
Poor Boy Canal	Main	4094	Max WS	305.08	10.10	18.96		19.06	0.000715	2.58	118.37	19.70	0.19
Poor Boy Canal	Main	3850	Max WS	341.21	10.10	18.68		18.82	0.001013	3.02	112.99	19.33	0.22
Poor Boy Canal	Main	3605	Max WS	341.21	10.10	18.40		18.56	0.001152	3.17	107.64	18.97	0.23
Poor Boy Canal	Main	3360	Max WS	341.20	10.10	18.08		18.25	0.001345	3.36	101.56	18.54	0.25
Poor Boy Canal	Main	3115	Max WS	341.20	10.10	17.69		17.89	0.001635	3.61	94.41	18.02	0.28
Poor Boy Canal	Main	3062	Max WS	341.20	10.10	17.59		17.80	0.001684	3.68	92.66	17.90	0.28
Poor Boy Canal	Main	2983		Culvert									
Poor Boy Canal	Main	2904	Max WS	341.20	10.10	17.18		17.46	0.001716	4.20	81.19	17.36	0.31
Poor Boy Canal	Main	2851	Max WS	341.19	10.10	17.10		17.35	0.002232	4.06	84.03	17.25	0.32
Poor Boy Canal	Main	2671	Max WS	341.19	9.91	16.73		16.97	0.002056	3.92	86.95	18.50	0.32
Poor Boy Canal	Main	2490	Max WS	341.19	9.71	16.39		16.61	0.001915	3.80	89.77	19.74	0.31

HEC-RAS Plan: 25ECM032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Poor Boy Canal	Main	2310	Max WS	341.18	9.52	16.07		16.28	0.001804	3.69	92.43	20.97	0.31
Poor Boy Canal	Main	2130	Max WS	341.17	9.32	15.76		15.96	0.001715	3.59	94.94	22.17	0.31
Poor Boy Canal	Main	1949	Max WS	341.17	9.13	15.47		15.66	0.001645	3.51	97.31	23.37	0.30
Poor Boy Canal	Main	1769	Max WS	341.17	8.94	15.19		15.37	0.001589	3.43	99.50	24.55	0.30
Poor Boy Canal	Main	1588	Max WS	341.16	8.74	14.91		15.09	0.001550	3.36	101.45	25.69	0.30
Poor Boy Canal	Main	1408	Max WS	341.16	8.55	14.64		14.81	0.001518	3.30	103.33	26.84	0.30
Poor Boy Canal	Main	1228	Max WS	341.16	8.35	14.38		14.54	0.001495	3.25	105.03	27.95	0.30
Poor Boy Canal	Main	1047	Max WS	341.16	8.16	14.12		14.28	0.001486	3.21	106.41	29.02	0.30
Poor Boy Canal	Main	867	Max WS	341.16	7.96	13.86		14.01	0.001483	3.17	107.62	30.05	0.30
Poor Boy Canal	Main	686	Max WS	341.16	7.77	13.59		13.75	0.001497	3.15	108.40	31.02	0.30
Poor Boy Canal	Main	634	Max WS	341.16	7.77	13.55		13.69	0.000794	2.99	114.22	31.60	0.23
Poor Boy Canal	Main	607		Culvert									
Poor Boy Canal	Main	581	Max WS	312.77	7.77	10.85		11.51	0.007557	6.54	47.79	22.90	0.67
Poor Boy Canal	Main	528	Max WS	312.96	6.90	10.88		11.19	0.004306	4.51	69.38	24.57	0.47
Poor Boy Canal	Main	441	Max WS	308.73	6.38	10.59		10.85	0.003369	4.13	74.68	24.89	0.42
Poor Boy Canal	Main	354	Max WS	304.57	5.87	10.38		10.59	0.002511	3.72	81.83	25.37	0.37
Poor Boy Canal	Main	267	Max WS	299.32	5.35	10.23		10.40	0.001785	3.29	90.95	25.97	0.31
Poor Boy Canal	Main	180	Max WS	293.32	4.83	10.13		10.26	0.001251	2.89	101.47	26.64	0.26
Poor Boy Canal	Main	92	Max WS	286.64	4.32	10.06		10.16	0.000883	2.54	112.78	27.32	0.22
Poor Boy Canal	Main	5	Max WS	279.30	3.80	10.02		10.09	0.000623	2.23	125.10	28.01	0.19
Gum Bayou	Upper	16105	Max WS	936.50	6.00	11.14		11.14	0.000058	0.61	3258.33	1240.33	0.05
Gum Bayou	Upper	15247	Max WS	931.43	5.60	11.10		11.10	0.000041	0.56	3754.96	1037.98	0.04
Gum Bayou	Upper	15205	Max WS	935.57	3.30	11.09		11.10	0.000052	0.49	3266.34	1036.10	0.05
Gum Bayou	Upper	15182		Culvert									
Gum Bayou	Upper	15159	Max WS	672.98	5.00	10.52		10.52	0.000046	0.40	2673.85	935.59	0.04
Gum Bayou	Upper	15116	Max WS	679.01	5.60	10.54		10.54	0.000036	0.46	3171.92	941.60	0.04
Gum Bayou	Upper	14919	Max WS	681.99	5.81	10.52		10.52	0.000128	0.64	1641.58	778.63	0.07
Gum Bayou	Upper	14533	Max WS	680.20	5.72	10.46		10.46	0.000181	0.79	1477.08	766.50	0.08
Gum Bayou	Upper	14148	Max WS	684.12	5.62	10.43		10.43	0.000025	0.31	3490.09	1559.50	0.03
Gum Bayou	Upper	13853	Max WS	694.08	4.40	10.42		10.42	0.000010	0.29	4475.15	1628.36	0.02
Gum Bayou	Upper	13197	Max WS	716.85	3.80	10.41		10.41	0.000013	0.34	4417.69	1570.45	0.02
Gum Bayou	Upper	12799	Max WS	730.43	5.29	10.41		10.41	0.000016	0.28	3640.07	1356.50	0.03
Gum Bayou	Upper	12413	Max WS	743.83	5.20	10.40		10.40	0.000014	0.27	4340.91	2248.76	0.02
Gum Bayou	Upper	12276	Max WS	748.61	5.20	10.40		10.40	0.000014	0.28	4336.58	2245.04	0.02
Gum Bayou	Upper	11780	Max WS	766.32	3.52	10.39		10.40	0.000012	0.30	6148.19	4042.02	0.02
Gum Bayou	Upper	11732	Max WS	767.92	3.62	10.39		10.39	0.000011	0.29	6282.04	4065.09	0.02
Gum Bayou	Upper	11648	Max WS	771.00	3.52	10.39		10.39	0.000010	0.27	6143.34	4040.70	0.02
Gum Bayou	Upper	11146	Max WS	789.28	3.91	10.39		10.39	0.000014	0.30	6097.25	4029.95	0.02
Gum Bayou	Upper	10808	Max WS	801.62	4.20	10.38		10.39	0.000120	1.01	993.30	4971.78	0.08
Gum Bayou	Upper	10740	Max WS	804.12	1.30	10.38	5.46	10.45	0.000412	2.15	374.20	4971.29	0.15
Gum Bayou	Upper	10711		Bridge									
Gum Bayou	Upper	10682	Max WS	799.37	2.40	10.06		10.19	0.000698	2.86	279.33	4735.38	0.19
Gum Bayou	Upper	10555	Max WS	803.24	4.10	10.04		10.06	0.000124	1.01	864.59	4692.81	0.08
Gum Bayou	Upper	10046	Max WS	799.77	3.70	10.02		10.02	0.000008	0.28	7746.11	4663.62	0.02
Gum Bayou	Lower	9910	Max WS	1079.08	3.90	10.02		10.02	0.000015	0.33	7629.60	4663.62	0.03

HEC-RAS Plan: 25ECM032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Gum Bayou	Lower	9149	Max WS	1078.49	1.64	10.01		10.01	0.000006	0.27	9275.35	3702.69	0.02
Gum Bayou	Lower	8649	Max WS	1250.90	0.76	10.00		10.00	0.000012	0.35	8063.68	3323.57	0.02
Gum Bayou	Lower	8532	Max WS	1291.14	0.76	10.00		10.00	0.000012	0.37	8059.02	3323.55	0.02
Gum Bayou	Lower	7891	Max WS	1512.52	0.70	10.00		10.00	0.000007	0.32	9018.38	2875.28	0.02
Gum Bayou	Lower	7813	Max WS	1539.38	0.50	9.99		10.00	0.000007	0.28	8469.94	2938.72	0.02
Gum Bayou	Lower	7775		Culvert									
Gum Bayou	Lower	7737	Max WS	1283.32	1.30	8.35		8.91	0.005439	5.98	214.72	1893.22	0.50
Gum Bayou	Lower	7656	Max WS	1267.08	0.60	8.22		8.22	0.000014	0.38	5542.86	2083.90	0.03
Gum Bayou	Lower	2746	Max WS	15.46	-3.37	5.80	-2.79	5.80	0.000000	0.03	461.89	91.46	0.00
Doubloon	to Pearl	15291	Max WS	1065.22	-3.39	6.99		7.01	0.000128	1.29	1478.80	533.49	0.08
Doubloon	to Pearl	14393	Max WS	1064.34	-3.39	6.84		6.87	0.000195	1.57	1297.32	676.12	0.10
Doubloon	to Pearl	13496	Max WS	1126.90	-3.39	6.66		6.67	0.000119	1.21	1672.82	586.34	0.08
Doubloon	to Pearl	12598	Max WS	1142.63	-3.39	6.45		6.50	0.000310	1.92	842.22	269.19	0.12
Doubloon	to Pearl	11636	Max WS	1160.58	-3.94	6.28		6.29	0.000087	1.02	2321.57	982.26	0.07
Doubloon	to Pearl	10674	Max WS	1160.53	-4.49	6.23		6.23	0.000046	0.75	2725.89	1574.76	0.05
Doubloon	to Pearl	9711	Max WS	1282.62	-5.04	6.17		6.18	0.000065	0.90	2317.39	917.34	0.06
Doubloon	to Pearl	8749	Max WS	1317.68	-5.60	5.94		6.00	0.000352	2.06	770.43	239.61	0.13
Doubloon	to Pearl	7787	Max WS	1350.91	-6.15	5.57		5.64	0.000400	2.15	657.10	146.89	0.14
Doubloon	to Pearl	6824	Max WS	1388.40	-6.70	5.17		5.24	0.000427	2.17	651.21	695.95	0.15
Doubloon	to Pearl	5862	Max WS	1424.11	-7.25	4.74		4.81	0.000459	2.19	651.28	108.76	0.15
Doubloon	to Pearl	4900	Max WS	1457.95	-7.80	4.49		4.52	0.000146	1.53	1149.49	791.98	0.11
Doubloon	to Pearl	4420	Max WS	1476.60	-7.88	4.42		4.45	0.000160	1.61	1105.10	860.85	0.11
Doubloon	to Pearl	3940	Max WS	1495.22	-7.96	4.34		4.38	0.000173	1.69	1065.34	800.41	0.11
Doubloon	to Pearl	3460	Max WS	1513.91	-8.04	4.26		4.30	0.000188	1.76	1038.75	797.38	0.12
Doubloon	to Pearl	2980	Max WS	1532.92	-8.12	4.21		4.23	0.000109	1.35	1579.16	847.73	0.09
Doubloon	to Pearl	2500	Max WS	1551.97	-8.20	4.15		4.17	0.000112	1.38	1595.14	915.68	0.09
Doubloon	to Pearl	2020	Max WS	1571.20	-8.29	4.10		4.12	0.000118	1.43	1611.91	967.26	0.09
Doubloon	to Pearl	1540	Max WS	1590.50	-8.37	4.04		4.06	0.000114	1.40	1693.14	1008.22	0.09
Doubloon	to Pearl	1060	Max WS	1610.09	-8.45	4.00		4.01	0.000098	1.31	1746.05	1060.31	0.09
Doubloon	to Pearl	580	Max WS	1629.85	-8.53	3.95		3.97	0.000094	1.28	1809.49	1100.30	0.08
Doubloon	to Pearl	100	Max WS	10.00	-8.61	3.91	-7.67	3.91	0.000000	0.01	1880.99	1140.95	0.00
Doubloon	to Marsh	19396	Max WS	601.08	-2.36	6.99		7.00	0.000044	0.74	1454.88	533.49	0.05
Doubloon	to Marsh	18926	Max WS	601.07	-1.55	6.76		6.90	0.000696	2.92	205.76	488.72	0.19
Doubloon	to Marsh	18916		Culvert									
Doubloon	to Marsh	18906	Max WS	600.54	-1.55	5.43		5.63	0.001380	3.59	167.48	342.64	0.26
Doubloon	to Marsh	18661	Max WS	600.39	-1.72	5.32		5.33	0.000041	0.62	1482.52	1154.07	0.04
Doubloon	to Marsh	18361	Max WS	800.65	-1.93	5.31		5.31	0.000049	0.68	1969.31	1147.52	0.05
Doubloon	to Marsh	18061	Max WS	802.49	-2.14	5.30		5.30	0.000036	0.60	2353.97	1141.93	0.04
Doubloon	to Marsh	17782	Max WS	804.28	-2.51	5.29		5.29	0.000024	0.50	3409.03	1535.78	0.03
Doubloon	to Marsh	17504	Max WS	803.80	-2.88	5.28		5.28	0.000043	0.68	2208.52	1917.01	0.05
Doubloon	to Marsh	17225	Max WS	928.64	-3.25	5.15	0.25	5.24	0.000524	2.40	406.53	2332.83	0.16
Doubloon	to Marsh	17207		Bridge									
Doubloon	to Marsh	17188	Max WS	902.08	-3.25	5.02		5.11	0.000561	2.45	378.14	2305.56	0.17
Doubloon	to Marsh	16717	Max WS	893.20	-2.92	4.92		4.93	0.000120	1.11	1375.94	2291.37	0.08
Doubloon	to Marsh	16246	Max WS	898.99	-2.59	4.87		4.88	0.000074	0.86	2209.33	2295.04	0.06

HEC-RAS Plan: 25ECM032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Doubloon	to Marsh	15776	Max WS	907.47	-2.25	4.84		4.85	0.000070	0.81	2142.87	2255.11	0.06
Doubloon	to Marsh	15305	Max WS	916.99	-1.92	4.81		4.82	0.000067	0.77	2324.72	2192.56	0.06
Doubloon	to Marsh	14834	Max WS	926.80	-1.59	4.78		4.79	0.000072	0.77	2374.08	2002.85	0.06
Doubloon	to Marsh	14363	Max WS	937.34	-1.26	4.75		4.75	0.000075	0.76	2327.34	1971.04	0.06
Doubloon	to Marsh	13893	Max WS	948.00	-0.93	4.71		4.72	0.000080	0.76	2267.76	2043.16	0.06
Doubloon	to Marsh	13422	Max WS	959.17	-0.59	4.67		4.68	0.000088	0.77	2196.62	2109.62	0.06
Doubloon	to Marsh	12951	Max WS	970.34	-0.26	4.63		4.63	0.000101	0.78	2113.88	2174.85	0.07
Doubloon	to Marsh	12480	Max WS	981.68	0.07	4.57		4.58	0.000118	0.81	2021.49	2266.80	0.07
Doubloon	to Marsh	12009	Max WS	993.09	0.40	4.51		4.52	0.000144	0.84	1919.08	2266.10	0.08
Doubloon	to Marsh	11539	Max WS	1004.52	0.74	4.43		4.44	0.000186	0.90	1802.77	2336.99	0.09
Doubloon	to Marsh	11068	Max WS	1015.92	1.07	4.33		4.34	0.000259	0.98	1684.78	2486.12	0.10
Doubloon	to Marsh	10597	Max WS	1027.40	1.40	4.18		4.19	0.000379	1.07	1512.39	2408.34	0.12
Doubloon	to Marsh	10500	Max WS	1029.89	1.37	4.16		4.16	0.000158	0.70	2144.83	1322.88	0.08
Doubloon	to Marsh	10108	Max WS	1040.15	1.27	4.09		4.09	0.000177	0.74	2067.29	1305.84	0.08
Doubloon	to Marsh	9619	Max WS	1052.85	1.14	3.99		4.00	0.000223	0.86	1864.27	1274.43	0.10
Doubloon	to Marsh	9130	Max WS	1065.54	1.02	3.88		3.89	0.000236	0.92	1723.84	1101.61	0.10
Doubloon	to Marsh	8641	Max WS	1078.27	0.89	3.77		3.78	0.000200	0.97	1698.22	1002.19	0.11
Doubloon	to Marsh	8152	Max WS	1090.98	0.77	3.67		3.68	0.000197	0.97	1728.78	1011.36	0.11
Doubloon	to Marsh	7663	Max WS	1103.68	0.64	3.58		3.59	0.000194	0.96	1774.70	1051.02	0.11
Doubloon	to Marsh	7231	Max WS	1114.90	0.54	3.49		3.50	0.000218	1.02	1661.46	963.12	0.11
Doubloon	to Marsh	6800	Max WS	1126.08	0.44	3.39		3.40	0.000251	1.08	1567.71	931.30	0.12
Doubloon	to Marsh	6368	Max WS	1137.26	0.34	3.27		3.28	0.000287	1.15	1517.54	966.77	0.13
Doubloon	to Marsh	5937	Max WS	1148.41	0.24	3.14		3.16	0.000304	1.16	1461.07	878.86	0.13
Doubloon	to Marsh	5505	Max WS	1159.55	0.14	2.99		3.01	0.000367	1.25	1286.92	720.69	0.14
Doubloon	to Marsh	5083	Max WS	1174.37	0.01	2.83		2.84	0.000280	1.08	1685.33	1066.34	0.13
Doubloon	to Marsh	4661	Max WS	1189.14	-0.11	2.69		2.70	0.000242	0.99	1982.09	1369.83	0.12
Doubloon	to Marsh	4239	Max WS	1203.87	-0.24	2.57		2.58	0.000224	0.94	2200.09	1640.18	0.11
Doubloon	to Marsh	3745	Max WS	1216.21	-0.34	2.46		2.47	0.000229	0.94	2258.58	1765.56	0.11
Doubloon	to Marsh	3250	Max WS	1228.83	-0.44	2.35		2.36	0.000216	0.90	2334.82	1772.52	0.11
Doubloon	to Marsh	2756	Max WS	1241.42	-0.54	2.25		2.26	0.000199	0.86	2455.46	1841.37	0.10
Doubloon	to Marsh	2262	Max WS	1254.01	-0.64	2.16		2.16	0.000180	0.82	2594.30	1919.77	0.10
Doubloon	to Marsh	1767	Max WS	1266.64	-0.74	2.07		2.08	0.000160	0.78	2737.23	1969.38	0.09
Doubloon	to Marsh	1273	Max WS	5.00	-0.84	2.00	-0.54	2.00	0.000000	0.00	2886.29	2040.32	0.00
Bayou Vincent	Upper	6072	Max WS	3288.39	5.31	18.50		18.76	0.001013	4.38	1039.82	190.00	0.24
Bayou Vincent	Upper	5509	Max WS	3286.33	3.64	18.10		18.28	0.000620	3.70	1281.93	190.00	0.19
Bayou Vincent	Upper	5227	Max WS	3327.73	2.81	17.96		18.11	0.000500	3.46	1412.87	190.00	0.17
Bayou Vincent	Upper	5174	Max WS	3335.60	3.00	17.98	10.06	18.07	0.000399	2.47	1400.09	170.00	0.15
Bayou Vincent	Upper	5166	Bridge										
Bayou Vincent	Upper	5158	Max WS	3334.59	3.00	17.76		17.86	0.000432	2.54	1363.94	170.00	0.15
Bayou Vincent	Upper	4963	Max WS	3342.00	3.00	17.74		17.84	0.000438	2.55	1360.01	170.00	0.15
Bayou Vincent	Upper	4083	Max WS	3471.20	3.52	17.04		17.21	0.001012	3.39	1427.43	723.33	0.23
Bayou Vincent	Upper	3643	Max WS	3536.20	3.78	15.75		16.18	0.003932	5.41	712.35	156.03	0.42
Bayou Vincent	Upper	3590	Max WS	3544.03	4.30	15.84	10.73	15.93	0.000558	2.53	2299.63	1000.00	0.17
Bayou Vincent	Upper	3582	Bridge										
Bayou Vincent	Upper	3574	Max WS	3544.00	4.30	15.81		15.90	0.000571	2.55	2268.82	1000.00	0.17



HEC-RAS Plan: 25ECM032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Bayou Vincent	Upper	3379	Max WS	3551.84	2.78	15.58		15.89	0.002469	4.61	846.95	166.86	0.34
Bayou Vincent	Upper	2851	Max WS	3629.72	1.84	14.23		14.58	0.002527	4.99	884.26	188.59	0.35
Bayou Vincent	Upper	1795	Max WS	3783.64	-0.05	11.99		12.22	0.001903	5.16	2211.61	1148.73	0.31
Bayou Vincent	Upper	1267	Max WS	3783.59	-0.99	11.32		11.37	0.000916	3.67	3705.02	1304.94	0.20
Bayou Vincent	Lower	1214	Max WS	4128.51	-0.99	11.32		11.38	0.001091	4.00	3705.02	1304.94	0.22
Bayou Vincent	Lower	1126	Max WS	4128.44	-1.07	11.23		11.28	0.001109	4.03	3682.75	1303.80	0.22
Bayou Vincent	Lower	686	Max WS	4131.50	-1.49	10.71		10.78	0.001219	4.20	3562.00	1297.61	0.23
Bayou Vincent	Lower	86	Max WS	4135.71	-3.07	10.23		10.26	0.000450	2.73	5026.33	1350.00	0.14
Bayou Vincent	Lower	0	Max WS	15.19	-3.30	10.20	-2.56	10.20	0.000000	0.01	5290.82	1350.00	0.00

HEC-RAS Plan: 50 Yr ECM 032012 Profile: Max WS

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
West Diversion	Main	4743	Max WS	164.45	5.80	13.34		13.35	0.000072	0.74	221.57	105.79	0.06
West Diversion	Main	4742	Max WS	164.45	5.80	13.34		13.35	0.000072	0.74	221.57	105.79	0.06
West Diversion	Main	4716		Culvert									
West Diversion	Main	4688	Max WS	161.50	2.20	13.25		13.25	0.000020	0.54	301.04	116.00	0.03
West Diversion	Main	4687	Max WS	161.63	2.20	13.25		13.25	0.000010	0.63	284.27	753.14	0.04
West Diversion	Main	4060	Max WS	217.31	3.70	13.25		13.25	0.000000	0.05	5617.14	837.38	0.00
West Diversion	Main	3692	Max WS	250.09	2.90	13.24		13.25	0.000020	0.95	290.06	814.34	0.05
West Diversion	Main	3691	Max WS	250.18	2.90	13.23		13.29	0.000018	0.54	275.26	162.00	0.03
West Diversion	Main	3626		Culvert									
West Diversion	Main	3560	Max WS	248.40	3.50	11.82		11.86	0.000278	1.74	142.66	74.86	0.12
West Diversion	Main	2777	Max WS	304.36	2.50	11.70		11.74	0.000051	0.66	287.88	93.04	0.04
West Diversion	Main	2226	Max WS	343.11	2.60	11.66	6.88	11.73	0.000069	0.75	284.52	69.00	0.05
West Diversion	Main	2168		Bridge									
West Diversion	Main	2110	Max WS	343.81	2.40	11.67		11.70	0.000024	0.50	529.42	104.00	0.03
West Diversion	Main	1760	Max WS	368.34	1.40	11.66		11.69	0.000022	0.50	506.50	104.00	0.03
West Diversion	Main	1733		Culvert									
West Diversion	Main	1706	Max WS	346.95	0.30	11.55		11.58	0.000028	0.58	476.68	106.00	0.03
West Diversion	Main	1269	Max WS	373.34	1.10	11.53		11.57	0.000024	0.59	443.51	73.00	0.03
West Diversion	Main	1226		Culvert									
West Diversion	Main	1182	Max WS	373.34	0.00	11.54		11.55	0.000077	1.06	665.24	117.00	0.06
West Diversion	Main	0	Max WS	370.86	-0.90	11.47		11.47	0.000047	0.86	840.06	147.00	0.05
W14 Main	Upper	54648	Max WS	10.00	12.65	16.47		16.47	0.000003	0.12	140.28	193.16	0.01
W14 Main	Upper	54337	Max WS	9.94	12.60	16.47		16.47	0.000003	0.12	140.57	193.02	0.01
W14 Main	Upper	54284	Max WS	17.73	12.30	16.47		16.47	0.000019	0.38	46.94	220.27	0.03
W14 Main	Upper	54280		Culvert									
W14 Main	Upper	54178	Max WS	16.95	12.00	16.43		16.43	0.000018	0.37	46.04	185.66	0.03
W14 Main	Upper	54157	Max WS	20.11	12.40	16.43		16.43	0.000022	0.33	110.38	172.36	0.03
W14 Main	Upper	53993	Max WS	44.69	12.05	16.41		16.42	0.000089	0.68	113.92	181.73	0.07
W14 Main	Upper	53830	Max WS	69.18	11.70	16.38		16.40	0.000170	0.96	117.88	189.82	0.10
W14 Main	Upper	53666	Max WS	93.84	11.35	16.34		16.36	0.000245	1.17	121.40	194.56	0.12
W14 Main	Upper	53502	Max WS	118.54	11.00	16.29		16.31	0.000299	1.33	124.83	193.63	0.13
W14 Main	Upper	53222	Max WS	160.83	10.80	16.08		16.15	0.000770	2.20	79.43	72.12	0.19
W14 Main	Upper	53154	Max WS	171.27	10.50	16.08		16.11	0.000184	1.45	118.06	49.17	0.12
W14 Main	Upper	53150		Culvert									
W14 Main	Upper	53112	Max WS	170.82	10.40	15.90		15.95	0.000439	1.79	95.35	32.47	0.16
W14 Main	Upper	53064	Max WS	178.25	10.30	15.90		15.93	0.000374	1.50	118.51	33.92	0.14
W14 Main	Upper	52895	Max WS	204.36	9.76	15.82		15.86	0.000395	1.61	127.05	35.10	0.15
W14 Main	Upper	52726	Max WS	230.56	9.22	15.73		15.78	0.000407	1.69	136.34	36.26	0.15
W14 Main	Upper	52557	Max WS	256.76	8.68	15.65		15.70	0.000413	1.76	146.13	37.36	0.16
W14 Main	Upper	52388	Max WS	282.86	8.14	15.57		15.62	0.000412	1.81	156.66	38.42	0.16
W14 Main	Upper	52219	Max WS	308.76	7.60	15.49		15.54	0.000404	1.84	167.99	39.39	0.16
W14 Main	Upper	51937	Max WS	351.38	7.10	15.36		15.41	0.000406	1.93	182.45	40.08	0.16
W14 Main	Upper	51654	Max WS	393.89	6.60	15.22		15.29	0.000403	2.00	196.78	40.50	0.16
W14 Main	Upper	51372	Max WS	435.41	6.10	15.09		15.16	0.000396	2.06	210.93	40.72	0.16
W14 Main	Upper	51089	Max WS	475.11	5.60	14.97		15.04	0.000386	2.11	225.80	61.78	0.16

HEC-RAS Plan: 50 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Upper	50807	Max WS	513.22	5.10	14.85		14.92	0.000366	2.14	271.27	210.65	0.16
W14 Main	Upper	50524	Max WS	550.70	4.60	14.75		14.82	0.000335	2.13	362.06	266.07	0.15
W14 Main	Upper	50235	Max WS	587.71	4.52	14.63		14.71	0.000396	2.29	386.82	417.33	0.16
W14 Main	Upper	49946	Max WS	622.64	4.44	14.49		14.59	0.000467	2.46	377.10	416.10	0.18
W14 Main	Upper	49656	Max WS	656.01	4.36	14.33		14.44	0.000555	2.65	362.01	379.63	0.19
W14 Main	Upper	49367	Max WS	682.11	4.28	14.13		14.25	0.000662	2.83	339.08	347.13	0.21
W14 Main	Upper	49078	Max WS	695.18	4.20	13.88		14.02	0.000809	3.04	239.91	303.31	0.23
W14 Main	Upper	49062	Max WS	702.79	4.10	13.92	7.65	14.01	0.000383	2.46	285.88	37.54	0.16
W14 Main	Upper	49060		Bridge									
W14 Main	Upper	48993	Max WS	694.56	4.10	13.87		13.96	0.000381	2.45	284.01	37.49	0.16
W14 Main	Upper	48951	Max WS	685.36	4.20	13.71		13.93	0.001190	3.74	183.25	29.46	0.26
W14 Main	Upper	48591	Max WS	692.30	3.40	13.56		13.62	0.000230	2.30	535.27	86.33	0.13
W14 Main	Upper	48412	Max WS	670.58	4.60	13.41		13.54	0.000716	3.02	316.96	89.46	0.20
W14 Main	Upper	48301	Max WS	605.24	4.60	13.34		13.45	0.000616	2.77	309.66	81.63	0.19
W14 Main	Mid	48154	Max WS	440.79	3.50	13.34		13.41	0.000330	2.20	269.16	111.00	0.16
W14 Main	Mid	47747	Max WS	333.83	4.60	13.27		13.30	0.000152	1.57	303.80	81.07	0.11
W14 Main	Mid	47604	Max WS	340.03	4.10	13.25		13.28	0.000136	1.46	804.34	1173.65	0.10
W14 Main	Mid	47278	Max WS	341.07	4.10	13.23		13.23	0.000047	0.85	1926.47	1477.81	0.06
W14 Main	Mid	47072	Max WS	322.71	2.90	13.21		13.23	0.000105	1.32	809.80	1471.46	0.09
W14 Main	Mid	46231	Max WS	292.54	3.10	13.11		13.12	0.000067	1.02	732.23	765.65	0.07
W14 Main	Mid	45970	Max WS	298.22	2.10	13.10		13.11	0.000064	0.99	750.61	780.10	0.07
W14 Main	Mid	45631	Max WS	301.51	2.90	13.05		13.08	0.000136	1.47	329.88	1519.79	0.10
W14 Main	Mid	45461	Max WS	304.93	1.10	13.02		13.06	0.000160	1.46	285.15	1473.54	0.11
W14 Main	Mid	45123	Max WS	313.48	1.20	12.95		12.99	0.000229	1.65	278.96	1388.12	0.13
W14 Main	Mid	44719	Max WS	325.83	1.30	12.84		12.89	0.000296	1.85	243.98	1421.86	0.14
W14 Main	Mid	44444	Max WS	336.09	1.60	12.82		12.83	0.000029	0.83	465.33	1257.77	0.05
W14 Main	Mid	44393	Max WS	338.08	1.60	12.82		12.83	0.000029	0.84	465.06	1257.49	0.05
W14 Main	Mid	44040	Max WS	351.49	1.60	12.81		12.82	0.000028	0.80	438.51	166.67	0.05
W14 Main	Mid	44008	Max WS	352.70	1.60	12.81		12.82	0.000011	0.64	548.98	284.46	0.04
W14 Main	Mid	44006		Culvert									
W14 Main	Mid	43938	Max WS	352.58	1.40	12.73		12.74	0.000015	0.77	457.85	159.75	0.04
W14 Main	Mid	43892	Max WS	354.29	1.60	12.72		12.74	0.000061	1.13	314.28	43.38	0.07
W14 Main	Mid	43729	Max WS	354.29	1.60	12.71		12.73	0.000061	1.13	326.79	110.01	0.07
W14 Main	Lower	43600	Max WS	657.33	1.60	12.71		12.78	0.000212	2.09	320.72	110.01	0.14
W14 Main	Lower	43256	Max WS	655.01	1.80	12.62		12.69	0.000281	2.18	301.03	204.39	0.16
W14 Main	Lower	43246	Max WS	655.58	-5.40	12.60	5.25	12.69	0.000379	2.42	271.44	155.07	0.16
W14 Main	Lower	43220		Bridge									
W14 Main	Lower	43216	Max WS	653.99	1.40	12.53		12.64	0.000376	2.62	249.76	145.13	0.18
W14 Main	Lower	43174	Max WS	657.65	0.70	12.54		12.63	0.000298	2.40	283.78	203.07	0.16
W14 Main	Lower	42773	Max WS	689.24	0.85	12.42		12.50	0.000275	2.33	296.07	310.92	0.16
W14 Main	Lower	42372	Max WS	720.76	1.00	12.30		12.37	0.000335	2.20	409.66	475.73	0.17
W14 Main	Lower	41911	Max WS	754.72	0.70	12.17		12.24	0.000240	2.27	815.67	719.65	0.15
W14 Main	Lower	41449	Max WS	790.75	0.40	12.01		12.12	0.000347	2.71	637.66	709.16	0.17
W14 Main	Lower	40987	Max WS	824.31	0.10	11.76		11.93	0.000544	3.30	339.44	550.52	0.21
W14 Main	Lower	40967	Max WS	828.45	-3.60	11.84		11.86	0.000023	1.17	709.40	793.99	0.06

HEC-RAS Plan: 50 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Lower	40900		Culvert									
W14 Main	Lower	40862	Max WS	826.91	-5.10	11.80		11.82	0.000019	1.11	745.13	582.41	0.05
W14 Main	Lower	40798	Max WS	830.56	-1.20	11.72		11.82	0.000389	2.47	336.74	501.14	0.18
W14 Main	Lower	40311	Max WS	868.16	-0.80	11.49		11.61	0.000401	2.86	315.91	318.87	0.19
W14 Main	Lower	40149	Max WS	880.57	-0.40	11.38		11.53	0.000577	3.20	292.72	251.42	0.22
W14 Main	Lower	40114	Max WS	883.17	1.35	11.33	5.61	11.51	0.000582	3.40	259.71	205.94	0.21
W14 Main	Lower	40100		Bridge									
W14 Main	Lower	40082	Max WS	882.10	1.35	11.23		11.41	0.000604	3.44	256.50	173.56	0.21
W14 Main	Lower	40080	Max WS	883.12	-0.70	11.33		11.41	0.000193	2.19	402.44	206.84	0.13
W14 Main	Lower	40038	Max WS	885.63	-0.50	11.22		11.39	0.000899	3.30	268.76	181.04	0.26
W14 Main	Lower	39282	Max WS	940.76	-0.65	10.65		10.80	0.000634	3.04	309.82	684.68	0.23
W14 Main	Lower	39029	Max WS	958.54	-0.80	10.58		10.65	0.000349	2.28	670.48	2119.13	0.17
W14 Main	Lower	38269	Max WS	1000.25	-1.10	9.86		9.98	0.001486	2.71	369.73	1929.74	0.32
W14 Main	Lower	38016	Max WS	1016.61	-1.40	9.55		9.72	0.000684	3.43	422.63	1866.96	0.24
W14 Main	Lower	38000	Max WS	1017.91	-0.30	9.57	4.36	9.70	0.000405	2.93	394.30	1895.46	0.19
W14 Main	Lower	37950		Bridge									
W14 Main	Lower	37931	Max WS	1016.44	-0.90	9.36		9.48	0.000313	2.73	407.70	1550.82	0.17
W14 Main	Lower	37889	Max WS	1018.61	-1.40	9.27		9.46	0.000887	3.49	315.02	1339.57	0.27
W14 Main	Lower	37118	Max WS	1069.80	-1.37	8.81		8.89	0.000461	2.64	1324.98	1349.21	0.20
W14 Main	Lower	36925	Max WS	1082.88	-1.33	8.72		8.78	0.000591	2.34	1318.79	1293.98	0.22
W14 Main	Lower	36733	Max WS	1095.89	-1.30	8.44		8.72	0.001196	4.30	259.25	1176.02	0.32
W14 Main	Lower	36713	Max WS	1097.27	-1.00	8.47	3.38	8.70	0.000620	3.86	284.58	1183.35	0.24
W14 Main	Lower	36710		Bridge									
W14 Main	Lower	36698	Max WS	1097.25	-0.60	8.45		8.67	0.000499	3.78	290.12	1173.98	0.23
W14 Main	Lower	36680	Max WS	1098.52	-1.20	8.47		8.66	0.000638	3.49	314.35	1182.34	0.24
W14 Main	Lower	35677	Max WS	1166.78	-1.60	7.46		7.76	0.001110	4.39	266.07	485.65	0.31
W14 Main	Lower	35426	Max WS	1183.49	-2.00	7.13		7.45	0.001222	4.56	259.26	522.26	0.33
W14 Main	Lower	35169	Max WS	1201.42	-3.20	7.06	0.99	7.11	0.000212	2.02	1682.01	1458.38	0.14
W14 Main	Lower	35150		Bridge									
W14 Main	Lower	35131	Max WS	1201.42	-3.20	7.05		7.07	0.000077	1.35	1976.95	1478.88	0.09
W14 Main	Lower	34899	Max WS	1217.69	-3.10	7.02		7.06	0.000099	1.55	1571.06	1489.27	0.10
W14 Main	Lower	34046	Max WS	1277.47	-3.20	6.95		6.98	0.000093	1.53	1833.39	1968.41	0.10
W14 Main	Lower	33199	Max WS	1335.80	-4.00	6.86		6.90	0.000093	1.63	1099.97	472.76	0.10
W14 Main	Lower	32566	Max WS	1378.84	-3.60	6.77		6.83	0.000136	1.85	823.66	294.61	0.12
W14 Main	Lower	31941	Max WS	1423.25	-3.60	6.67		6.73	0.000161	1.96	735.04	244.38	0.13
W14 Main	Lower	31180	Max WS	1476.25	-3.20	6.51		6.58	0.000216	2.20	670.87	98.25	0.15
W14 Main	Lower	30479	Max WS	1526.03	-3.40	6.34		6.42	0.000228	2.26	674.13	98.44	0.15
W14 Main	Lower	29754	Max WS	1578.39	-3.90	6.18		6.25	0.000213	2.23	707.65	100.46	0.15
W14 Main	Lower	28922	Max WS	1641.12	-4.10	5.98		6.06	0.000230	2.32	707.87	100.46	0.15
W14 Main	Lower	28661	Max WS	1661.79	-5.00	5.82	0.16	5.96	0.000405	3.00	553.53	78.56	0.20
W14 Main	Lower	28567		Bridge									
W14 Main	Lower	28472	Max WS	1660.18	-4.60	5.34		5.49	0.000426	3.09	537.60	76.73	0.21
W14 Main	Lower	27798	Max WS	1712.11	-5.37	5.22		5.28	0.000161	1.97	870.11	2446.37	0.13
W14 Main	Lower	26970	Max WS	1774.63	-6.23	5.10		5.15	0.000142	1.92	923.54	121.33	0.12
W14 Main	Lower	26424	Max WS	1814.49	-6.80	4.93		5.04	0.000264	2.63	688.65	87.41	0.17

HEC-RAS Plan: 50 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Lower	26220	Max WS	1830.73	-7.37	4.91		4.99	0.000181	2.33	784.45	89.04	0.14
W14 Main	Lower	26169	Max WS	1834.87	-7.37	4.90	-2.73	4.98	0.000182	2.34	783.54	89.01	0.14
W14 Main	Lower	26152		Bridge									
W14 Main	Lower	26131	Max WS	1834.72	-7.37	4.88		4.97	0.000183	2.35	781.88	88.96	0.14
W14 Main	Lower	26038	Max WS	1842.12	-7.37	4.86		4.95	0.000186	2.36	780.19	88.91	0.14
W14 Main	Lower	25159	Max WS	1912.05	-7.26	4.67		4.76	0.000224	2.42	789.01	100.04	0.15
W14 Main	Lower	25107	Max WS	1915.37	-4.20	4.61	-1.45	4.75	0.000350	2.94	652.00	74.00	0.17
W14 Main	Lower	25086		Bridge									
W14 Main	Lower	25080	Max WS	1915.10	-4.20	4.59		4.72	0.000353	2.95	650.13	74.00	0.18
W14 Main	Lower	24990	Max WS	1922.50	-5.19	4.58		4.69	0.000295	2.72	715.19	104.23	0.18
W14 Main	Lower	22266	Max WS	2145.09	-6.89	3.63		3.77	0.000360	3.02	710.87	98.15	0.19
W14 Main	Lower	21014	Max WS	2250.90	-6.89	3.02		3.21	0.000525	3.45	652.07	95.06	0.23
W14 Main	Lower	19620	Max WS	14.94	-6.89	2.00	-6.40	2.00	0.000000	0.03	556.82	91.71	0.00
W-15 Main	Upper	41958	Max WS	10.00	23.20	26.33		26.33	0.000015	0.17	57.56	32.82	0.02
W-15 Main	Upper	41911	Max WS	10.00	23.10	26.33		26.33	0.000014	0.17	57.78	28.87	0.02
W-15 Main	Upper	41876		Culvert									
W-15 Main	Upper	41841	Max WS	10.00	21.40	26.33		26.33	0.000003	0.10	99.96	37.84	0.01
W-15 Main	Upper	40226	Max WS	80.88	20.70	26.25		26.25	0.000087	0.66	230.15	437.38	0.06
W-15 Main	Upper	39062	Max WS	130.94	21.10	26.14		26.15	0.000093	0.67	382.08	520.62	0.06
W-15 Main	Upper	38866	Max WS	139.34	20.60	26.11		26.12	0.000153	0.85	164.70	362.65	0.08
W-15 Main	Upper	38831		Culvert									
W-15 Main	Upper	38796	Max WS	139.08	19.90	25.90		25.92	0.000215	1.05	132.11	302.34	0.09
W-15 Main	Upper	36942	Max WS	216.17	19.70	25.46		25.47	0.000277	1.15	464.90	730.70	0.10
W-15 Main	Upper	36875		Culvert									
W-15 Main	Upper	36808	Max WS	216.15	19.60	25.28		25.32	0.000706	1.81	234.05	313.29	0.16
W-15 Main	Upper	36792	Max WS	220.36	19.60	25.20	22.51	25.24	0.000885	1.99	208.29	293.86	0.18
W-15 Main	Upper	36741		Bridge									
W-15 Main	Upper	36690	Max WS	220.35	19.90	25.17		25.19	0.000398	1.32	374.71	569.00	0.12
W-15 Main	Upper	36328	Max WS	235.26	19.50	25.07		25.07	0.000200	1.01	659.40	851.00	0.09
W-15 Main	Upper	35441	Max WS	271.67	18.60	24.95		24.95	0.000073	0.65	1246.62	1472.58	0.05
W-15 Main	Upper	34175	Max WS	323.09	18.40	23.99		24.08	0.001674	2.97	312.78	898.98	0.25
W-15 Main	Upper	34100		Lat Struct									
W-15 Main	Upper	33708	Max WS	338.82	17.90	23.49		23.52	0.000866	2.12	429.75	578.51	0.17
W-15 Main	Upper	33500		Lat Struct									
W-15 Main	Upper	33031	Max WS	150.69	17.40	23.10		23.12	0.000412	1.42	260.38	447.23	0.12
W-15 Main	Upper	33000		Lat Struct									
W-15 Main	Upper	32178	Max WS	107.81	16.80	22.88		22.89	0.000143	0.88	268.30	400.86	0.07
W-15 Main	Upper	32158	Max WS	108.50	16.80	22.88		22.89	0.000184	0.99	136.53	397.83	0.09
W-15 Main	Upper	32123		Culvert									
W-15 Main	Upper	32088	Max WS	108.38	17.00	22.68		22.69	0.000206	0.94	115.60	164.56	0.09
W-15 Main	Upper	31779	Max WS	119.07	16.80	22.62		22.63	0.000162	0.94	289.35	498.70	0.08
W-15 Main	Upper	30955	Max WS	147.47	16.20	22.41		22.43	0.000338	1.37	185.03	167.51	0.11
W-15 Main	Upper	29994	Max WS	176.98	15.60	21.89		21.94	0.000652	1.84	107.46	270.62	0.16
W-15 Main	Upper	28993	Max WS	220.66	15.40	21.49		21.56	0.000078	2.11	115.81	85.47	0.18
W-15 Main	Upper	28463	Max WS	244.21	15.20	21.46		21.51	0.000061	1.82	166.17	308.20	0.16

HEC-RAS Plan: 50 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W-15 Main	Upper	27930	Max WS	267.58	14.40	21.38	17.48	21.46	0.000094	2.26	118.15	28.69	0.20
W-15 Main	Upper	27864	Bridge										
W-15 Main	Upper	27797	Max WS	267.58	14.30	21.37		21.44	0.000089	2.17	123.27	31.02	0.19
W-15 Main	Upper	27008	Max WS	297.41	13.60	21.06		21.11	0.000732	2.16	366.21	452.80	0.16
W-15 Main	Upper	26388	Max WS	317.76	12.60	20.75		20.77	0.000309	1.46	704.64	872.71	0.11
W-15 Main	Upper	25748	Max WS	340.23	12.20	20.51		20.55	0.000431	1.82	371.67	339.22	0.13
W-15 Main	Upper	25098	Max WS	363.55	9.40	20.35		20.36	0.000129	0.99	1459.64	1699.96	0.07
W-15 Main	Upper	24312	Max WS	391.24	11.10	20.21		20.23	0.000225	1.34	706.75	671.23	0.10
W-15 Main	Upper	23662	Max WS	410.81	9.20	20.00	13.09	20.05	0.000336	1.86	241.58	519.12	0.12
W-15 Main	Upper	23634	Bridge										
W-15 Main	Upper	23606	Max WS	406.94	9.60	19.91		19.95	0.000254	1.65	246.51	258.49	0.11
W-15 Main	Upper	23462	Max WS	403.53	10.80	19.84		19.90	0.000489	2.06	242.32	127.77	0.14
W-15 Main	Mid	22961	Max WS	303.85	10.60	19.84		19.87	0.000239	1.44	333.25	310.19	0.10
W-15 Main	Mid	22285	Max WS	302.33	10.40	19.70	13.57	19.72	0.000197	1.37	435.62	1211.77	0.09
W-15 Main	Mid	22250	Bridge										
W-15 Main	Mid	22227	Max WS	301.63	10.50	19.67		19.70	0.000193	1.37	343.43	1058.78	0.09
W-15 Main	Mid	21477	Max WS	345.66	11.21	19.56		19.57	0.000107	0.92	389.84	108.71	0.07
W-15 Main	Mid	21400	Culvert										
W-15 Main	Mid	21329	Max WS	342.17	11.10	19.43		19.44	0.000107	0.93	368.54	104.36	0.07
W-15 Main	Mid	21028	Max WS	360.71	10.00	19.34		19.38	0.000285	1.60	227.13	103.71	0.11
W-15 Main	Mid	21000	Culvert										
W-15 Main	Mid	20870	Max WS	356.96	10.65	19.20		19.25	0.000308	1.76	202.50	101.83	0.12
W-15 Main	Mid	20827	Max WS	359.71	10.54	19.18		19.24	0.000370	2.18	309.53	206.48	0.14
W-15 Main	Mid	20700	Culvert										
W-15 Main	Mid	20648	Max WS	356.10	10.48	19.07		19.14	0.000417	2.30	249.78	195.89	0.15
W-15 Main	Mid	19997	Max WS	399.04	8.70	18.72		18.78	0.000618	2.07	198.92	252.58	0.15
W-15 Main	Mid	19018	Max WS	472.30	8.40	17.89		17.99	0.000947	2.56	184.23	33.35	0.19
W-15 Main	Mid	18298	Max WS	538.71	7.50	16.79		16.96	0.001822	3.37	159.73	40.45	0.25
W-15 Main	Mid	17456	Max WS	617.49	6.40	15.83		15.89	0.000621	2.35	429.04	187.17	0.16
W-15 Main	Mid	17221	Max WS	639.05	6.53	15.67		15.73	0.000639	1.96	325.98	74.00	0.16
W-15 Main	Mid	17201	Max WS	640.90	6.53	15.65	10.74	15.71	0.000649	1.97	324.95	73.92	0.17
W-15 Main	Mid	17091	Bridge										
W-15 Main	Mid	16981	Max WS	639.42	6.53	15.30		15.37	0.000814	2.14	299.44	71.68	0.18
W-15 Main	Mid	16926	Max WS	644.42	5.70	15.31	9.35	15.34	0.000242	1.51	425.54	66.75	0.11
W-15 Main	Mid	16901	Bridge										
W-15 Main	Mid	16876	Max WS	642.17	6.60	14.99		15.16	0.001471	3.26	197.32	37.98	0.25
W-15 Main	Mid	16482	Max WS	638.75	4.39	14.71		14.74	0.000310	1.64	1106.51	745.33	0.11
W-15 Main	Mid	16480	Lat Struct										
W-15 Main	Mid	16088	Max WS	637.41	4.39	14.58		14.61	0.000368	1.76	1010.16	721.63	0.12
W-15 Main	Mid	15693	Max WS	636.92	4.39	14.42		14.46	0.000452	1.92	896.44	676.23	0.14
W-15 Main	Mid	15299	Max WS	636.86	4.31	14.29	9.04	14.32	0.000246	1.74	1226.59	788.22	0.11
W-15 Main	Mid	15280	Bridge										
W-15 Main	Mid	15262	Max WS	636.82	4.15	14.11		14.17	0.000522	2.13	696.80	722.85	0.15
W-15 Main	Mid	15261	Max WS	636.82	3.81	14.11		14.17	0.000597	2.31	746.45	722.71	0.16
W-15 Main	South	14915	Max WS	783.77	3.01	14.11		14.15	0.000372	1.97	1163.49	968.38	0.13

HEC-RAS Plan: 50 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W-15 Main	South	14570	Max WS	780.61	3.72	13.97		14.01	0.000506	2.11	1295.73	1169.36	0.15
W-15 Main	South	14224	Max WS	818.15	4.91	13.80		13.83	0.000483	1.89	1577.09	1881.21	0.15
W-15 Main	South	13878	Max WS	854.98	6.09	13.57	10.63	13.61	0.000795	2.07	1289.00	2164.61	0.18
W-15 Main	South	13850	Bridge										
W-15 Main	South	13822	Max WS	854.22	6.09	13.33		13.53	0.002559	3.57	240.35	1327.21	0.32
W-15 Main	South	13452	Max WS	893.13	5.08	12.57		12.73	0.001786	3.20	278.84	650.28	0.28
W-15 Main	South	13083	Max WS	928.36	4.06	12.08		12.19	0.001085	2.72	340.92	71.27	0.22
W-15 Main	South	12713	Max WS	958.37	3.05	11.79		11.87	0.000621	2.26	424.80	77.29	0.17
W-15 Main	South	12343	Max WS	976.75	2.03	11.63		11.69	0.000344	1.85	536.00	167.80	0.13
W-15 Main	South	11974	Max WS	1001.56	1.02	11.55		11.58	0.000197	1.54	740.00	772.09	0.10
W-15 Main	South	11604	Max WS	1029.39	0.00	11.49	2.65	11.52	0.000123	1.32	790.07	2202.00	0.08
W-15 Main	South	11579	Bridge										
W-15 Main	South	11554	Max WS	1022.87	0.00	11.43		11.46	0.000124	1.33	774.84	2112.16	0.08
W-15 Main	South	11440	Max WS	1032.00	0.49	11.42		11.45	0.000164	1.37	823.62	2113.90	0.09
W-15 Main	South	11326	Max WS	1041.57	0.97	11.41		11.43	0.000164	1.21	2097.11	2563.42	0.09
W-15 Main	South	11212	Max WS	1050.25	1.46	11.39	5.78	11.40	0.000186	1.13	2493.86	2749.16	0.09
W-15 Main	South	11162	Bridge										
W-15 Main	South	11112	Max WS	1037.30	-1.12	11.33		11.35	0.000173	1.25	2267.10	2615.39	0.09
W-15 Main	South	10638	Max WS	1065.83	-1.27	11.25		11.27	0.000177	1.30	2258.84	2625.22	0.09
W-15 Main	South	10164	Max WS	1091.20	-1.43	11.14		11.17	0.000254	1.60	1162.02	2496.06	0.11
W-15 Main	South	9690	Max WS	1118.02	-1.58	11.04		11.07	0.000220	1.53	1502.08	2357.28	0.10
W-15 Main	South	9217	Max WS	1148.18	-1.74	10.95		10.98	0.000201	1.50	1786.10	2249.90	0.10
W-15 Main	South	8743	Max WS	1179.74	-1.89	10.86		10.89	0.000196	1.51	1921.22	2034.19	0.10
W-15 Main	South	8269	Max WS	1213.95	-2.05	10.77		10.80	0.000190	1.52	2058.66	1832.14	0.10
W-15 Main	South	7795	Max WS	1249.07	-2.20	10.68		10.71	0.000191	1.55	2108.91	1642.20	0.10
W-15 Main	South	7321	Max WS	1284.69	-2.35	10.59		10.62	0.000199	1.61	2073.11	1464.24	0.10
W-15 Main	South	6847	Max WS	1320.71	-2.51	10.49		10.53	0.000211	1.68	2021.22	1288.89	0.10
W-15 Main	South	6373	Max WS	1356.88	-2.66	10.39		10.42	0.000229	1.77	1941.17	1158.67	0.11
W-15 Main	South	5900	Max WS	1392.92	-2.82	10.27		10.31	0.000254	1.88	1828.89	1001.20	0.11
W-15 Main	South	5426	Max WS	1429.05	-2.97	10.14		10.19	0.000293	2.02	1680.46	832.12	0.12
W-15 Main	South	4952	Max WS	1465.18	-3.13	9.98		10.04	0.000355	2.22	1498.46	620.35	0.13
W-15 Main	South	4478	Max WS	1501.33	-3.28	9.79		9.86	0.000461	2.50	1285.75	474.11	0.15
W-15 Main	South	4094	Max WS	1530.64	-2.04	9.64		9.70	0.000334	2.34	1681.81	624.59	0.13
W-15 Main	South	3696	Max WS	1561.10	-0.82	9.45		9.54	0.000545	2.85	1296.81	570.52	0.17
W-15 Main	South	3499	Max WS	1576.18	-1.03	9.38	2.53	9.43	0.000319	1.87	842.35	124.70	0.13
W-15 Main	South	3477	Bridge										
W-15 Main	South	3454	Max WS	1576.18	-0.66	9.20		9.28	0.000469	2.27	693.67	101.68	0.15
W-15 Main	South	3159	Max WS	1598.79	-1.22	9.02		9.12	0.000639	2.57	644.50	265.36	0.18
W-15 Main	South	2865	Max WS	1621.23	-1.77	8.91		8.96	0.000385	2.16	1585.49	665.87	0.14
W-15 Main	South	2570	Max WS	1643.72	-2.33	8.85		8.86	0.000109	1.25	3735.20	1120.91	0.08
W-15 Main	South	2335	Max WS	1661.62	-2.69	8.81		8.83	0.000204	1.74	2587.10	862.39	0.10
W-15 Main	South	2092	Max WS	1680.11	-2.22	8.73	2.34	8.78	0.000331	1.92	1794.89	1229.42	0.13
W-15 Main	South	2065	Bridge										
W-15 Main	South	2038	Max WS	1680.10	-1.14	8.67		8.71	0.000239	1.70	2007.17	1220.09	0.11
W-15 Main	South	1821	Max WS	1696.55	-3.39	8.57		8.66	0.000520	2.90	1311.96	468.21	0.16

HEC-RAS Plan: 50 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W-15 Main	South	1507	Max WS	1720.29	-2.96	8.41		8.49	0.000504	2.81	1389.41	509.93	0.16
W-15 Main	South	1193	Max WS	1743.86	-2.53	8.25		8.33	0.000498	2.74	1458.76	551.74	0.16
W-15 Main	South	812	Max WS	1772.13	-2.36	8.04		8.13	0.000595	2.92	1316.26	478.54	0.18
W-15 Main	South	431	Max WS	1799.47	-2.20	7.74		7.87	0.000836	3.36	1053.59	400.92	0.21
W-15 Main	South	50	Max WS	1797.03	-2.03	7.24		7.47	0.001447	4.18	655.73	213.26	0.27
Reine Canal	Main	8003	Max WS	-303.04	3.00	12.71		12.79	0.000601	-2.28	132.79	26.59	0.18
Reine Canal	Main	6849	Max WS	-335.07	5.20	13.43		13.52	0.000643	-2.38	140.68	29.65	0.19
Reine Canal	Main	6446	Max WS	-262.89	6.90	13.72		13.79	0.000321	-2.10	125.27	30.29	0.15
Reine Canal	Main	6412		Culvert									
Reine Canal	Main	6386	Max WS	-264.79	6.80	13.95		14.00	0.000394	-1.91	138.96	28.75	0.15
Reine Canal	Main	5181	Max WS	26.10	6.60	14.29		14.29	0.000007	0.16	159.59	34.72	0.01
Reine Canal	Main	3598	Max WS	26.00	5.70	14.28		14.28	0.000001	0.13	204.14	34.22	0.01
Reine Canal	Main	2688	Max WS	81.26	6.60	14.27	7.57	14.27	0.000023	0.27	299.73	65.53	0.02
Reine Canal	Main	2642		Bridge									
Reine Canal	Main	2624	Max WS	81.09	5.90	14.27		14.27	0.000016	0.33	243.47	68.57	0.03
Reine Canal	Main	2598	Max WS	82.68	6.70	14.27	7.79	14.27	0.000008	0.28	295.39	67.57	0.02
Reine Canal	Main	2566		Bridge									
Reine Canal	Main	2534	Max WS	82.50	6.60	14.27		14.27	0.000009	0.28	291.95	68.09	0.02
Reine Canal	Main	2455	Max WS	86.76	6.90	14.26	8.16	14.27	0.000020	0.45	199.66	49.00	0.04
Reine Canal	Main	2437		Bridge									
Reine Canal	Main	2418	Max WS	86.76	6.90	14.26		14.26	0.000021	0.42	204.92	48.66	0.04
Reine Canal	Main	2087	Max WS	105.57	5.70	14.24		14.25	0.000059	0.71	149.40	930.88	0.06
Reine Canal	Main	1941	Max WS	112.85	5.70	14.23		14.24	0.000068	0.76	149.02	926.42	0.06
Reine Canal	Main	1611	Max WS	132.41	5.70	14.20		14.21	0.000096	0.90	147.94	913.65	0.07
Reine Canal	Main	1550	Max WS	136.00	5.60	14.19		14.20	0.000065	0.80	170.21	38.74	0.06
Reine Canal	Main	1099	Max WS	154.95	5.10	14.15		14.16	0.000083	0.91	171.10	38.23	0.07
Reine Canal	Main	220	Max WS	146.95	4.10	14.11		14.12	0.000024	0.58	440.18	213.09	0.04
Poor Boy Canal	Main	5808	Max WS	99.68	10.10	19.84		19.85	0.000053	0.73	136.22	20.86	0.05
Poor Boy Canal	Main	5563	Max WS	98.11	10.10	19.82		19.83	0.000051	0.72	135.95	20.84	0.05
Poor Boy Canal	Main	5318	Max WS	133.92	10.10	19.79		19.81	0.000097	0.99	135.25	20.80	0.07
Poor Boy Canal	Main	5074	Max WS	170.15	10.10	19.74		19.76	0.000160	1.27	134.18	20.73	0.09
Poor Boy Canal	Main	4829	Max WS	207.44	10.10	19.66		19.70	0.000245	1.56	132.61	20.63	0.11
Poor Boy Canal	Main	4584	Max WS	245.38	10.10	19.56		19.61	0.000358	1.88	130.41	20.49	0.13
Poor Boy Canal	Main	4339	Max WS	284.08	10.10	19.41		19.49	0.000510	2.23	127.40	20.29	0.16
Poor Boy Canal	Main	4094	Max WS	323.25	10.10	19.20		19.31	0.000721	2.62	123.28	20.02	0.19
Poor Boy Canal	Main	3850	Max WS	362.44	10.10	18.92		19.07	0.001025	3.08	117.70	19.65	0.22
Poor Boy Canal	Main	3605	Max WS	362.44	10.10	18.64		18.80	0.001164	3.23	112.20	19.28	0.24
Poor Boy Canal	Main	3360	Max WS	362.44	10.10	18.31		18.49	0.001356	3.42	105.96	18.85	0.25
Poor Boy Canal	Main	3115	Max WS	362.44	10.10	17.92		18.13	0.001641	3.67	98.63	18.33	0.28
Poor Boy Canal	Main	3062	Max WS	362.44	10.10	17.82		18.04	0.001668	3.75	96.78	18.20	0.28
Poor Boy Canal	Main	2983		Culvert									
Poor Boy Canal	Main	2904	Max WS	362.43	10.10	17.38		17.67	0.001736	4.32	83.89	17.62	0.31
Poor Boy Canal	Main	2851	Max WS	362.43	10.10	17.30		17.56	0.002263	4.14	87.46	17.51	0.33
Poor Boy Canal	Main	2671	Max WS	362.43	9.91	16.92		17.17	0.002080	4.00	90.54	18.79	0.32
Poor Boy Canal	Main	2490	Max WS	362.43	9.71	16.58		16.81	0.001934	3.88	93.52	20.06	0.32



HEC-RAS Plan: 50 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Poor Boy Canal	Main	2310	Max WS	362.42	9.52	16.25		16.47	0.001818	3.76	96.37	21.31	0.31
Poor Boy Canal	Main	2130	Max WS	362.42	9.32	15.95		16.16	0.001723	3.66	99.09	22.55	0.31
Poor Boy Canal	Main	1949	Max WS	362.41	9.13	15.66		15.85	0.001644	3.56	101.72	23.78	0.30
Poor Boy Canal	Main	1769	Max WS	362.41	8.94	15.38		15.56	0.001581	3.48	104.19	25.00	0.30
Poor Boy Canal	Main	1588	Max WS	362.41	8.74	15.10		15.28	0.001534	3.40	106.44	26.19	0.30
Poor Boy Canal	Main	1408	Max WS	362.40	8.55	14.84		15.01	0.001493	3.34	108.63	27.39	0.30
Poor Boy Canal	Main	1228	Max WS	362.40	8.35	14.58		14.75	0.001461	3.27	110.69	28.57	0.29
Poor Boy Canal	Main	1047	Max WS	362.40	8.16	14.32		14.49	0.001439	3.22	112.50	29.70	0.29
Poor Boy Canal	Main	867	Max WS	362.40	7.96	14.07		14.23	0.001421	3.17	114.24	30.81	0.29
Poor Boy Canal	Main	686	Max WS	362.40	7.77	13.82		13.98	0.001413	3.13	115.69	31.88	0.29
Poor Boy Canal	Main	634	Max WS	362.40	7.77	13.78		13.92	0.000776	3.04	119.24	32.32	0.23
Poor Boy Canal	Main	607		Culvert									
Poor Boy Canal	Main	581	Max WS	349.19	7.77	10.99		11.75	0.008016	6.96	50.16	23.38	0.69
Poor Boy Canal	Main	528	Max WS	349.87	6.90	11.06		11.41	0.004495	4.73	73.91	25.06	0.49
Poor Boy Canal	Main	441	Max WS	346.99	6.38	10.75		11.05	0.003663	4.41	78.74	25.30	0.44
Poor Boy Canal	Main	354	Max WS	344.15	5.87	10.51		10.76	0.002854	4.04	85.27	25.70	0.39
Poor Boy Canal	Main	267	Max WS	340.91	5.35	10.34		10.54	0.002125	3.64	93.78	26.23	0.34
Poor Boy Canal	Main	180	Max WS	337.67	4.83	10.22		10.38	0.001558	3.25	103.74	26.83	0.29
Poor Boy Canal	Main	92	Max WS	334.36	4.32	10.13		10.26	0.001150	2.92	114.56	27.47	0.25
Poor Boy Canal	Main	5	Max WS	329.36	3.80	10.07		10.17	0.000841	2.60	126.48	28.11	0.22
Gum Bayou	Upper	16105	Max WS	1052.23	6.00	11.26		11.26	0.000066	0.66	3408.53	1264.17	0.05
Gum Bayou	Upper	15247	Max WS	1048.46	5.60	11.21		11.21	0.000048	0.61	3874.21	1059.87	0.05
Gum Bayou	Upper	15205	Max WS	1053.35	3.30	11.21		11.21	0.000060	0.54	3384.97	1058.30	0.05
Gum Bayou	Upper	15182		Culvert									
Gum Bayou	Upper	15159	Max WS	803.09	5.00	10.76		10.76	0.000052	0.44	2899.03	974.66	0.04
Gum Bayou	Upper	15116	Max WS	805.51	5.60	10.76		10.76	0.000041	0.51	3383.70	977.36	0.04
Gum Bayou	Upper	14919	Max WS	812.45	5.81	10.74		10.74	0.000146	0.72	1820.18	837.98	0.07
Gum Bayou	Upper	14533	Max WS	805.92	5.72	10.67		10.68	0.000202	0.88	1649.07	824.56	0.09
Gum Bayou	Upper	14148	Max WS	810.92	5.62	10.64		10.64	0.000028	0.34	3772.73	1841.59	0.03
Gum Bayou	Upper	13853	Max WS	822.64	4.40	10.63		10.63	0.000012	0.32	4766.54	1862.32	0.02
Gum Bayou	Upper	13197	Max WS	851.39	3.80	10.62		10.62	0.000015	0.37	4706.67	1856.40	0.03
Gum Bayou	Upper	12799	Max WS	868.92	5.29	10.62		10.62	0.000019	0.32	3906.31	1777.85	0.03
Gum Bayou	Upper	12413	Max WS	885.89	5.20	10.61		10.61	0.000017	0.31	4844.96	2919.06	0.03
Gum Bayou	Upper	12276	Max WS	892.08	5.20	10.61		10.61	0.000017	0.31	4839.15	2915.96	0.03
Gum Bayou	Upper	11780	Max WS	914.74	3.52	10.60		10.60	0.000013	0.31	6993.72	4127.64	0.02
Gum Bayou	Upper	11732	Max WS	916.82	3.62	10.60		10.60	0.000012	0.31	7132.25	4151.34	0.02
Gum Bayou	Upper	11648	Max WS	920.95	3.52	10.60		10.60	0.000013	0.31	6988.26	4127.24	0.02
Gum Bayou	Upper	11146	Max WS	944.40	3.91	10.59		10.59	0.000017	0.35	6940.51	4123.72	0.03
Gum Bayou	Upper	10808	Max WS	960.23	4.20	10.59		10.60	0.000151	1.17	1032.73	5072.81	0.09
Gum Bayou	Upper	10740	Max WS	963.40	1.30	10.59	5.70	10.69	0.000535	2.50	385.56	5072.63	0.17
Gum Bayou	Upper	10711		Bridge									
Gum Bayou	Upper	10682	Max WS	957.39	2.40	10.13		10.31	0.000970	3.40	281.95	4781.97	0.23
Gum Bayou	Upper	10555	Max WS	964.11	4.10	10.10		10.13	0.000171	1.20	874.59	4765.79	0.09
Gum Bayou	Upper	10046	Max WS	958.90	3.70	10.07		10.07	0.000011	0.33	7976.33	4736.15	0.02
Gum Bayou	Lower	9910	Max WS	1288.26	3.90	10.07		10.07	0.000019	0.38	7859.82	4736.15	0.03

HEC-RAS Plan: 50 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Gum Bayou	Lower	9149	Max WS	1286.99	1.64	10.06		10.06	0.000008	0.31	9447.20	3702.82	0.02
Gum Bayou	Lower	8649	Max WS	1492.84	0.76	10.05		10.05	0.000016	0.41	8212.62	3324.27	0.03
Gum Bayou	Lower	8532	Max WS	1541.00	0.76	10.05		10.05	0.000017	0.43	8206.34	3324.24	0.03
Gum Bayou	Lower	7891	Max WS	1805.53	0.70	10.04		10.04	0.000010	0.38	9139.56	2884.37	0.02
Gum Bayou	Lower	7813	Max WS	1837.68	0.50	10.04		10.04	0.000010	0.32	8592.27	2947.75	0.02
Gum Bayou	Lower	7775		Culvert									
Gum Bayou	Lower	7737	Max WS	1470.80	1.30	9.07		9.61	0.004386	5.92	248.58	2052.69	0.46
Gum Bayou	Lower	7656	Max WS	1455.68	0.60	8.96		8.96	0.000010	0.35	7188.24	2305.10	0.02
Gum Bayou	Lower	2746	Max WS	15.35	-3.37	5.80	-2.79	5.80	0.000000	0.03	461.89	91.46	0.00
Doubloon	to Pearl	15291	Max WS	1171.58	-3.39	7.24		7.25	0.000124	1.30	1608.91	533.49	0.08
Doubloon	to Pearl	14393	Max WS	1170.97	-3.39	7.09		7.11	0.000193	1.60	1475.07	782.07	0.10
Doubloon	to Pearl	13496	Max WS	1238.86	-3.39	6.90		6.92	0.000116	1.22	1817.83	593.10	0.08
Doubloon	to Pearl	12598	Max WS	1255.99	-3.39	6.70		6.74	0.000316	1.98	910.15	291.11	0.13
Doubloon	to Pearl	11636	Max WS	1275.68	-3.94	6.53		6.53	0.000083	1.01	2564.30	1029.56	0.06
Doubloon	to Pearl	10674	Max WS	1275.59	-4.49	6.47		6.48	0.000044	0.75	3170.45	1960.70	0.05
Doubloon	to Pearl	9711	Max WS	1408.12	-5.04	6.42		6.42	0.000064	0.91	2547.59	967.34	0.06
Doubloon	to Pearl	8749	Max WS	1445.93	-5.60	6.17		6.24	0.000369	2.16	827.77	249.52	0.14
Doubloon	to Pearl	7787	Max WS	1481.71	-6.15	5.78		5.86	0.000434	2.29	689.34	163.67	0.15
Doubloon	to Pearl	6824	Max WS	1522.00	-6.70	5.33		5.42	0.000472	2.32	673.45	728.73	0.15
Doubloon	to Pearl	5862	Max WS	1560.35	-7.25	4.85		4.94	0.000522	2.36	663.87	117.13	0.16
Doubloon	to Pearl	4900	Max WS	1596.82	-7.80	4.57		4.61	0.000166	1.65	1187.37	839.87	0.11
Doubloon	to Pearl	4420	Max WS	1616.75	-7.88	4.49		4.53	0.000184	1.74	1142.11	909.90	0.12
Doubloon	to Pearl	3940	Max WS	1636.86	-7.96	4.41		4.45	0.000199	1.82	1095.97	865.04	0.12
Doubloon	to Pearl	3460	Max WS	1656.94	-8.04	4.32		4.37	0.000216	1.90	1067.39	881.06	0.13
Doubloon	to Pearl	2980	Max WS	1677.25	-8.12	4.26		4.28	0.000126	1.46	1625.01	924.78	0.10
Doubloon	to Pearl	2500	Max WS	1697.76	-8.20	4.20		4.22	0.000130	1.49	1635.79	961.57	0.10
Doubloon	to Pearl	2020	Max WS	1718.42	-8.29	4.13		4.16	0.000138	1.54	1645.76	1002.46	0.10
Doubloon	to Pearl	1540	Max WS	1739.18	-8.37	4.07		4.09	0.000133	1.52	1718.70	1042.95	0.10
Doubloon	to Pearl	1060	Max WS	1760.15	-8.45	4.01		4.03	0.000116	1.42	1763.69	1087.15	0.09
Doubloon	to Pearl	580	Max WS	1781.36	-8.53	3.96		3.98	0.000111	1.40	1818.52	1119.21	0.09
Doubloon	to Pearl	100	Max WS	10.00	-8.61	3.91	-7.67	3.91	0.000000	0.01	1880.99	1140.95	0.00
Doubloon	to Marsh	19396	Max WS	625.45	-2.36	7.24		7.24	0.000038	0.70	1584.74	533.49	0.04
Doubloon	to Marsh	18926	Max WS	625.42	-1.55	7.02		7.15	0.000672	2.94	212.97	501.32	0.19
Doubloon	to Marsh	18916		Culvert									
Doubloon	to Marsh	18906	Max WS	623.07	-1.55	5.56		5.76	0.001377	3.64	171.31	347.55	0.26
Doubloon	to Marsh	18661	Max WS	622.59	-1.72	5.46		5.46	0.000039	0.61	1544.57	1239.73	0.04
Doubloon	to Marsh	18361	Max WS	848.80	-1.93	5.44		5.45	0.000050	0.70	2067.86	1236.83	0.05
Doubloon	to Marsh	18061	Max WS	851.19	-2.14	5.43		5.43	0.000037	0.61	2472.14	1235.45	0.04
Doubloon	to Marsh	17782	Max WS	853.74	-2.51	5.42		5.43	0.000024	0.50	3625.16	1652.24	0.03
Doubloon	to Marsh	17504	Max WS	853.60	-2.88	5.41		5.42	0.000042	0.68	2320.30	1940.13	0.05
Doubloon	to Marsh	17225	Max WS	1000.85	-3.25	5.28	0.39	5.37	0.000571	2.53	414.80	2352.58	0.17
Doubloon	to Marsh	17207		Bridge									
Doubloon	to Marsh	17188	Max WS	967.31	-3.25	5.13		5.23	0.000611	2.58	384.35	2327.92	0.18
Doubloon	to Marsh	16717	Max WS	954.83	-2.92	5.01		5.02	0.000124	1.14	1427.10	2314.46	0.08
Doubloon	to Marsh	16246	Max WS	961.64	-2.59	4.97		4.98	0.000074	0.86	2345.51	2314.16	0.06

HEC-RAS Plan: 50 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Doubloon	to Marsh	15776	Max WS	971.46	-2.25	4.94		4.94	0.000065	0.79	2641.18	2318.60	0.06
Doubloon	to Marsh	15305	Max WS	983.24	-1.92	4.91		4.91	0.000068	0.79	2448.40	2246.74	0.06
Doubloon	to Marsh	14834	Max WS	994.98	-1.59	4.88		4.88	0.000072	0.78	2517.46	2200.81	0.06
Doubloon	to Marsh	14363	Max WS	1007.06	-1.26	4.84		4.85	0.000075	0.78	2464.52	2020.62	0.06
Doubloon	to Marsh	13893	Max WS	1019.23	-0.93	4.80		4.81	0.000081	0.78	2399.43	2178.94	0.06
Doubloon	to Marsh	13422	Max WS	1031.72	-0.59	4.76		4.77	0.000090	0.79	2323.22	2228.03	0.06
Doubloon	to Marsh	12951	Max WS	1044.40	-0.26	4.72		4.73	0.000103	0.80	2237.47	2353.50	0.07
Doubloon	to Marsh	12480	Max WS	1057.37	0.07	4.67		4.67	0.000120	0.83	2142.50	2352.26	0.07
Doubloon	to Marsh	12009	Max WS	1070.38	0.40	4.60		4.61	0.000146	0.86	2037.89	2352.37	0.08
Doubloon	to Marsh	11539	Max WS	1083.25	0.74	4.52		4.53	0.000194	0.93	1930.41	2522.55	0.09
Doubloon	to Marsh	11068	Max WS	1096.31	1.07	4.42		4.43	0.000254	0.99	1820.83	2580.56	0.10
Doubloon	to Marsh	10597	Max WS	1109.53	1.40	4.27		4.28	0.000361	1.07	1649.58	2496.45	0.12
Doubloon	to Marsh	10500	Max WS	1112.35	1.37	4.25		4.26	0.000156	0.71	2273.16	1347.68	0.08
Doubloon	to Marsh	10108	Max WS	1123.93	1.27	4.19		4.19	0.000175	0.75	2194.79	1330.82	0.08
Doubloon	to Marsh	9619	Max WS	1138.27	1.14	4.09		4.10	0.000220	0.88	1990.93	1316.75	0.10
Doubloon	to Marsh	9130	Max WS	1152.63	1.02	3.98		3.98	0.000237	0.95	1833.64	1145.06	0.10
Doubloon	to Marsh	8641	Max WS	1167.00	0.89	3.87		3.88	0.000202	1.00	1796.47	1032.25	0.11
Doubloon	to Marsh	8152	Max WS	1181.36	0.77	3.77		3.78	0.000199	1.00	1826.63	1035.85	0.11
Doubloon	to Marsh	7663	Max WS	1195.73	0.64	3.67		3.68	0.000196	0.99	1875.22	1074.65	0.11
Doubloon	to Marsh	7231	Max WS	1208.42	0.54	3.58		3.59	0.000221	1.05	1751.99	981.51	0.11
Doubloon	to Marsh	6800	Max WS	1221.06	0.44	3.48		3.49	0.000257	1.12	1653.45	957.38	0.12
Doubloon	to Marsh	6368	Max WS	1233.71	0.34	3.36		3.37	0.000291	1.18	1603.82	986.74	0.13
Doubloon	to Marsh	5937	Max WS	1246.32	0.24	3.23		3.24	0.000310	1.20	1537.04	889.50	0.13
Doubloon	to Marsh	5505	Max WS	1258.92	0.14	3.07		3.09	0.000383	1.31	1344.61	732.22	0.15
Doubloon	to Marsh	5083	Max WS	1275.67	0.01	2.90		2.91	0.000292	1.12	1761.75	1081.07	0.13
Doubloon	to Marsh	4661	Max WS	1292.37	-0.11	2.76		2.77	0.000253	1.03	2072.09	1388.05	0.12
Doubloon	to Marsh	4239	Max WS	1309.02	-0.24	2.63		2.64	0.000235	0.98	2297.99	1658.96	0.12
Doubloon	to Marsh	3745	Max WS	1322.96	-0.34	2.51		2.52	0.000243	0.98	2352.87	1788.98	0.12
Doubloon	to Marsh	3250	Max WS	1337.22	-0.44	2.40		2.40	0.000234	0.96	2414.93	1800.03	0.11
Doubloon	to Marsh	2756	Max WS	1351.45	-0.54	2.28		2.29	0.000220	0.92	2520.88	1860.16	0.11
Doubloon	to Marsh	2262	Max WS	1365.68	-0.64	2.18		2.19	0.000203	0.88	2641.83	1928.83	0.11
Doubloon	to Marsh	1767	Max WS	1379.94	-0.74	2.09		2.09	0.000186	0.85	2762.36	1977.47	0.10
Doubloon	to Marsh	1273	Max WS	5.00	-0.84	2.00	-0.54	2.00	0.000000	0.00	2886.29	2040.32	0.00
Bayou Vincent	Upper	6072	Max WS	3645.25	5.31	18.88		19.17	0.001068	4.61	1112.40	190.00	0.25
Bayou Vincent	Upper	5509	Max WS	3642.88	3.64	18.45		18.66	0.000672	3.93	1349.08	190.00	0.20
Bayou Vincent	Upper	5227	Max WS	3689.18	2.81	18.30		18.47	0.000548	3.69	1477.43	190.00	0.18
Bayou Vincent	Upper	5174	Max WS	3697.92	3.00	18.32	10.42	18.42	0.000433	2.64	1458.20	170.00	0.15
Bayou Vincent	Upper	5166	Bridge										
Bayou Vincent	Upper	5158	Max WS	3696.92	3.00	18.10		18.21	0.000468	2.70	1421.24	170.00	0.16
Bayou Vincent	Upper	4963	Max WS	3705.16	3.00	18.08		18.19	0.000475	2.72	1416.97	170.00	0.16
Bayou Vincent	Upper	4083	Max WS	3848.82	3.52	17.40		17.56	0.000980	3.45	1682.99	723.33	0.23
Bayou Vincent	Upper	3643	Max WS	3920.57	3.78	16.08		16.55	0.003973	5.60	765.05	160.36	0.43
Bayou Vincent	Upper	3590	Max WS	3929.37	4.30	16.19	10.93	16.27	0.000534	2.55	2644.17	1000.00	0.17
Bayou Vincent	Upper	3582	Bridge										
Bayou Vincent	Upper	3574	Max WS	3929.28	4.30	16.15		16.24	0.000549	2.58	2603.66	1000.00	0.17

HEC-RAS Plan: 50 Yr ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Bayou Vincent	Upper	3379	Max WS	3937.88	2.78	15.90		16.24	0.002563	4.82	901.21	171.04	0.35
Bayou Vincent	Upper	2851	Max WS	4023.06	1.84	14.49		14.88	0.002676	5.27	980.61	561.25	0.36
Bayou Vincent	Upper	1795	Max WS	4193.69	-0.05	12.16		12.40	0.002005	5.37	2413.13	1199.52	0.32
Bayou Vincent	Upper	1267	Max WS	4193.64	-0.99	11.47		11.52	0.000981	3.83	3890.08	1314.36	0.21
Bayou Vincent	Lower	1214	Max WS	4564.51	-0.99	11.47		11.53	0.001163	4.17	3890.08	1314.36	0.23
Bayou Vincent	Lower	1126	Max WS	4564.49	-1.07	11.36		11.42	0.001189	4.21	3859.64	1312.81	0.23
Bayou Vincent	Lower	686	Max WS	4568.11	-1.49	10.80		10.87	0.001372	4.48	3669.38	1303.12	0.25
Bayou Vincent	Lower	86	Max WS	4573.19	-3.07	10.24		10.27	0.000546	3.01	5036.48	1350.00	0.16
Bayou Vincent	Lower	0	Max WS	15.06	-3.30	10.20	-2.56	10.20	0.000000	0.01	5290.82	1350.00	0.00

HEC-RAS Plan: 100 ECM 032012 Profile: Max WS

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
West Diversion	Main	4743	Max WS	171.07	5.80	13.66		13.67	0.000064	0.73	234.75	112.22	0.05
West Diversion	Main	4742	Max WS	171.07	5.80	13.66		13.67	0.000064	0.73	234.74	112.22	0.05
West Diversion	Main	4716		Culvert									
West Diversion	Main	4688	Max WS	170.24	2.20	13.56		13.56	0.000019	0.55	311.78	116.00	0.03
West Diversion	Main	4687	Max WS	170.33	2.20	13.56		13.56	0.000010	0.63	295.63	754.94	0.04
West Diversion	Main	4060	Max WS	230.04	3.70	13.56		13.56	0.000000	0.05	5878.00	839.28	0.00
West Diversion	Main	3692	Max WS	265.18	2.90	13.55		13.56	0.000020	0.97	300.55	816.25	0.06
West Diversion	Main	3691	Max WS	265.26	2.90	13.54		13.60	0.000018	0.55	285.12	162.00	0.03
West Diversion	Main	3626		Culvert									
West Diversion	Main	3560	Max WS	260.74	3.50	11.95		12.00	0.000287	1.79	145.47	75.91	0.12
West Diversion	Main	2777	Max WS	318.72	2.50	11.84		11.88	0.000048	0.65	300.80	93.94	0.04
West Diversion	Main	2226	Max WS	353.22	2.60	11.79	6.95	11.87	0.000065	0.74	294.15	69.00	0.05
West Diversion	Main	2168		Bridge									
West Diversion	Main	2110	Max WS	358.53	2.40	11.81		11.84	0.000023	0.50	543.93	104.00	0.03
West Diversion	Main	1760	Max WS	378.21	1.40	11.80		11.83	0.000021	0.49	521.05	104.00	0.03
West Diversion	Main	1733		Culvert									
West Diversion	Main	1706	Max WS	375.48	0.30	11.73		11.76	0.000029	0.59	495.67	106.00	0.03
West Diversion	Main	1269	Max WS	404.99	1.10	11.71		11.76	0.000026	0.62	456.51	73.00	0.04
West Diversion	Main	1226		Culvert									
West Diversion	Main	1182	Max WS	404.99	0.00	11.71		11.73	0.000083	1.12	686.09	117.00	0.06
West Diversion	Main	0	Max WS	402.23	-0.90	11.64		11.64	0.000051	0.90	865.39	147.00	0.05
W14 Main	Upper	54648	Max WS	10.00	12.65	16.68		16.68	0.000002	0.11	184.35	224.18	0.01
W14 Main	Upper	54337	Max WS	9.95	12.60	16.68		16.68	0.000002	0.11	184.67	224.08	0.01
W14 Main	Upper	54284	Max WS	18.29	12.30	16.68		16.68	0.000017	0.37	49.48	266.60	0.03
W14 Main	Upper	54280		Culvert									
W14 Main	Upper	54178	Max WS	17.22	12.00	16.64		16.64	0.000015	0.35	48.55	219.22	0.03
W14 Main	Upper	54157	Max WS	20.62	12.40	16.64		16.64	0.000017	0.30	149.27	199.54	0.03
W14 Main	Upper	53993	Max WS	47.07	12.05	16.62		16.63	0.000073	0.63	155.81	211.59	0.06
W14 Main	Upper	53830	Max WS	73.44	11.70	16.60		16.61	0.000141	0.90	163.02	223.01	0.09
W14 Main	Upper	53666	Max WS	99.97	11.35	16.57		16.58	0.000207	1.11	169.79	234.89	0.11
W14 Main	Upper	53502	Max WS	126.62	11.00	16.52		16.54	0.000260	1.27	176.27	249.09	0.12
W14 Main	Upper	53222	Max WS	171.96	10.80	16.34		16.42	0.000705	2.16	107.77	147.56	0.19
W14 Main	Upper	53154	Max WS	183.25	10.50	16.34		16.37	0.000177	1.47	124.25	56.33	0.11
W14 Main	Upper	53150		Culvert									
W14 Main	Upper	53112	Max WS	182.28	10.40	16.14		16.19	0.000413	1.81	100.91	33.05	0.16
W14 Main	Upper	53064	Max WS	190.36	10.30	16.13		16.17	0.000353	1.50	126.51	34.63	0.14
W14 Main	Upper	52895	Max WS	218.71	9.76	16.05		16.09	0.000377	1.61	135.45	35.89	0.15
W14 Main	Upper	52726	Max WS	247.17	9.22	15.97		16.02	0.000393	1.70	145.10	37.14	0.15
W14 Main	Upper	52557	Max WS	275.63	8.68	15.89		15.94	0.000403	1.78	155.21	38.34	0.16
W14 Main	Upper	52388	Max WS	304.03	8.14	15.81		15.86	0.000407	1.83	166.02	39.51	0.16
W14 Main	Upper	52219	Max WS	332.30	7.60	15.73		15.78	0.000404	1.87	177.57	40.59	0.16
W14 Main	Upper	51937	Max WS	378.68	7.10	15.59		15.65	0.000411	1.97	192.09	41.17	0.16
W14 Main	Upper	51654	Max WS	423.93	6.60	15.46		15.52	0.000412	2.05	206.36	41.48	0.16
W14 Main	Upper	51372	Max WS	466.76	6.10	15.32		15.39	0.000405	2.12	220.63	50.09	0.16
W14 Main	Upper	51089	Max WS	507.29	5.60	15.20		15.27	0.000388	2.16	249.30	154.88	0.16

HEC-RAS Plan: 100 ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Upper	50807	Max WS	546.73	5.10	15.09		15.16	0.000361	2.17	322.15	226.13	0.15
W14 Main	Upper	50524	Max WS	585.67	4.60	14.99		15.05	0.000324	2.14	427.73	288.61	0.15
W14 Main	Upper	50235	Max WS	623.23	4.52	14.88		14.95	0.000367	2.26	494.93	454.60	0.16
W14 Main	Upper	49946	Max WS	659.35	4.44	14.75		14.84	0.000427	2.42	501.16	506.55	0.17
W14 Main	Upper	49656	Max WS	693.79	4.36	14.61		14.71	0.000496	2.58	492.23	497.95	0.18
W14 Main	Upper	49367	Max WS	722.56	4.28	14.44		14.55	0.000579	2.74	469.56	456.56	0.19
W14 Main	Upper	49078	Max WS	738.46	4.20	14.21		14.35	0.000752	3.05	261.28	375.73	0.22
W14 Main	Upper	49062	Max WS	745.88	4.10	14.24	7.75	14.34	0.000383	2.50	298.05	38.45	0.16
W14 Main	Upper	49060		Bridge									
W14 Main	Upper	48993	Max WS	729.76	4.10	14.16		14.25	0.000378	2.47	294.89	38.04	0.16
W14 Main	Upper	48951	Max WS	687.34	4.20	14.00		14.20	0.001051	3.58	192.55	40.43	0.25
W14 Main	Upper	48591	Max WS	719.46	3.40	13.87		13.93	0.000220	2.30	562.82	90.80	0.13
W14 Main	Upper	48412	Max WS	704.43	4.60	13.73		13.86	0.000659	2.99	346.71	96.30	0.20
W14 Main	Upper	48301	Max WS	653.23	4.60	13.66		13.77	0.000600	2.82	338.49	94.38	0.19
W14 Main	Mid	48154	Max WS	482.16	3.50	13.66		13.73	0.000319	2.24	304.82	111.00	0.16
W14 Main	Mid	47747	Max WS	358.76	4.60	13.58		13.61	0.000149	1.59	330.66	92.57	0.11
W14 Main	Mid	47604	Max WS	349.77	4.10	13.57		13.59	0.000098	1.28	1127.63	1421.46	0.09
W14 Main	Mid	47278	Max WS	338.36	4.10	13.55		13.55	0.000028	0.68	2439.27	1684.50	0.05
W14 Main	Mid	47072	Max WS	332.32	2.90	13.54		13.55	0.000075	1.15	1116.88	1640.84	0.08
W14 Main	Mid	46231	Max WS	342.81	3.10	13.49		13.49	0.000055	0.96	1109.28	1221.31	0.07
W14 Main	Mid	45970	Max WS	350.35	2.10	13.47		13.48	0.000053	0.94	1124.96	1216.91	0.06
W14 Main	Mid	45631	Max WS	355.53	2.90	13.43		13.46	0.000142	1.54	559.68	1938.06	0.10
W14 Main	Mid	45461	Max WS	359.45	1.10	13.40		13.44	0.000166	1.54	473.36	1758.40	0.11
W14 Main	Mid	45123	Max WS	369.51	1.20	13.33		13.37	0.000250	1.77	357.56	1544.92	0.13
W14 Main	Mid	44719	Max WS	383.18	1.30	13.20		13.25	0.000341	1.96	336.08	1546.25	0.15
W14 Main	Mid	44444	Max WS	394.53	1.60	13.17		13.18	0.000034	0.93	532.04	1322.82	0.06
W14 Main	Mid	44393	Max WS	396.66	1.60	13.17		13.18	0.000035	0.93	531.60	1322.45	0.06
W14 Main	Mid	44040	Max WS	411.45	1.60	13.16		13.17	0.000034	0.90	460.49	386.84	0.06
W14 Main	Mid	44008	Max WS	412.81	1.60	13.16		13.17	0.000013	0.73	568.08	526.28	0.04
W14 Main	Mid	44006		Culvert									
W14 Main	Mid	43938	Max WS	412.75	1.40	13.05		13.07	0.000018	0.87	472.16	239.52	0.05
W14 Main	Mid	43892	Max WS	414.66	1.60	13.04		13.06	0.000075	1.26	328.24	55.91	0.08
W14 Main	Mid	43729	Max WS	414.63	1.60	13.03		13.05	0.000074	1.26	382.75	255.84	0.08
W14 Main	Lower	43600	Max WS	722.61	1.60	13.03		13.10	0.000227	2.20	344.53	255.84	0.14
W14 Main	Lower	43256	Max WS	720.22	1.80	12.93		13.01	0.000292	2.27	319.06	323.38	0.16
W14 Main	Lower	43246	Max WS	720.54	-5.40	12.91	5.53	13.01	0.000409	2.55	282.94	264.08	0.16
W14 Main	Lower	43220		Bridge									
W14 Main	Lower	43216	Max WS	718.66	1.40	12.84		12.96	0.000403	2.75	261.01	243.61	0.18
W14 Main	Lower	43174	Max WS	722.79	0.70	12.84		12.94	0.000319	2.52	300.45	299.98	0.17
W14 Main	Lower	42773	Max WS	759.12	0.85	12.72		12.81	0.000292	2.44	369.38	740.98	0.16
W14 Main	Lower	42372	Max WS	795.56	1.00	12.59		12.67	0.000390	2.25	524.73	730.64	0.18
W14 Main	Lower	41911	Max WS	837.39	0.70	12.45		12.52	0.000234	2.30	1034.56	818.37	0.15
W14 Main	Lower	41449	Max WS	879.97	0.40	12.31		12.42	0.000344	2.76	894.43	1040.22	0.17
W14 Main	Lower	40987	Max WS	922.07	0.10	12.10		12.24	0.000499	3.26	717.52	746.65	0.20
W14 Main	Lower	40967	Max WS	924.28	-3.60	12.14		12.15	0.000021	0.82	1556.23	983.97	0.05

HEC-RAS Plan: 100 ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Lower	40900		Culvert									
W14 Main	Lower	40862	Max WS	923.96	-5.10	12.10		12.11	0.000016	0.82	1530.38	751.85	0.04
W14 Main	Lower	40798	Max WS	929.71	-1.20	12.04		12.13	0.000491	2.44	677.45	719.60	0.20
W14 Main	Lower	40311	Max WS	974.46	-0.80	11.76		11.91	0.000448	3.09	339.20	569.32	0.20
W14 Main	Lower	40149	Max WS	988.90	-0.40	11.64		11.82	0.000643	3.44	311.88	482.32	0.23
W14 Main	Lower	40114	Max WS	991.90	1.35	11.58	5.86	11.80	0.000665	3.71	267.51	402.43	0.22
W14 Main	Lower	40100		Bridge									
W14 Main	Lower	40082	Max WS	990.82	1.35	11.43		11.65	0.000702	3.77	262.80	247.33	0.23
W14 Main	Lower	40080	Max WS	991.46	-0.70	11.56		11.65	0.000226	2.40	412.85	355.05	0.14
W14 Main	Lower	40038	Max WS	994.86	-0.50	11.43		11.62	0.001066	3.54	281.12	264.29	0.29
W14 Main	Lower	39282	Max WS	1045.42	-0.65	10.79		10.96	0.000762	3.29	317.69	813.35	0.25
W14 Main	Lower	39029	Max WS	1063.91	-0.80	10.73		10.81	0.000389	2.44	702.39	2153.45	0.18
W14 Main	Lower	38269	Max WS	1115.68	-1.10	10.17		10.26	0.001122	2.42	582.07	2059.15	0.28
W14 Main	Lower	38016	Max WS	1134.33	-1.40	9.86		10.05	0.000707	3.60	460.80	1977.55	0.25
W14 Main	Lower	38000	Max WS	1135.70	-0.30	9.88	4.56	10.03	0.000435	3.12	422.09	1981.61	0.20
W14 Main	Lower	37950		Bridge									
W14 Main	Lower	37931	Max WS	1133.52	-0.90	9.62		9.76	0.000348	2.94	429.80	1911.86	0.18
W14 Main	Lower	37889	Max WS	1135.76	-1.40	9.53		9.74	0.000927	3.69	347.04	1802.86	0.28
W14 Main	Lower	37118	Max WS	1190.68	-1.37	9.08		9.14	0.000429	2.61	1532.02	1428.58	0.19
W14 Main	Lower	36925	Max WS	1204.67	-1.33	8.99		9.04	0.000503	2.27	1554.99	1413.08	0.20
W14 Main	Lower	36733	Max WS	1218.35	-1.30	8.87		9.18	0.001165	4.42	284.34	1383.56	0.32
W14 Main	Lower	36713	Max WS	1219.61	-1.00	8.84	3.64	9.10	0.000657	4.09	297.96	1356.85	0.25
W14 Main	Lower	36710		Bridge									
W14 Main	Lower	36698	Max WS	1218.52	-0.60	8.71		8.97	0.000555	4.07	299.32	1279.96	0.25
W14 Main	Lower	36680	Max WS	1220.60	-1.20	8.79		9.00	0.000671	3.70	330.78	1334.73	0.25
W14 Main	Lower	35677	Max WS	1288.71	-1.60	7.83		8.16	0.001146	4.56	282.61	705.23	0.32
W14 Main	Lower	35426	Max WS	1300.43	-2.00	7.50		7.84	0.001255	4.73	275.05	662.00	0.33
W14 Main	Lower	35169	Max WS	1316.67	-3.20	7.43	1.21	7.46	0.000163	1.81	2235.68	1577.94	0.12
W14 Main	Lower	35150		Bridge									
W14 Main	Lower	35131	Max WS	1316.22	-3.20	7.42		7.44	0.000066	1.29	2538.22	1596.91	0.08
W14 Main	Lower	34899	Max WS	1331.89	-3.10	7.39		7.42	0.000086	1.48	2150.77	1634.73	0.09
W14 Main	Lower	34046	Max WS	1390.47	-3.20	7.33		7.35	0.000071	1.38	2674.74	2423.81	0.09
W14 Main	Lower	33199	Max WS	1449.17	-4.00	7.26		7.29	0.000088	1.63	1287.81	479.25	0.10
W14 Main	Lower	32566	Max WS	1492.43	-3.60	7.17		7.22	0.000133	1.88	979.42	500.28	0.12
W14 Main	Lower	31941	Max WS	1536.61	-3.60	7.07		7.13	0.000158	1.99	897.22	527.70	0.13
W14 Main	Lower	31180	Max WS	1589.61	-3.20	6.91		6.99	0.000213	2.24	711.16	100.68	0.15
W14 Main	Lower	30479	Max WS	1637.85	-3.40	6.75		6.83	0.000223	2.29	714.96	100.89	0.15
W14 Main	Lower	29754	Max WS	1686.61	-3.90	6.59		6.67	0.000208	2.25	749.91	102.96	0.15
W14 Main	Lower	28922	Max WS	1742.97	-4.10	6.40		6.49	0.000221	2.32	751.04	103.01	0.15
W14 Main	Lower	28661	Max WS	1760.93	-5.00	6.25	0.29	6.39	0.000384	3.00	587.71	80.33	0.20
W14 Main	Lower	28567		Bridge									
W14 Main	Lower	28472	Max WS	1759.36	-4.60	5.78		5.92	0.000402	3.08	571.05	78.20	0.20
W14 Main	Lower	27798	Max WS	1804.56	-5.37	5.67		5.73	0.000150	1.95	924.84	2492.89	0.13
W14 Main	Lower	26970	Max WS	1860.01	-6.23	5.55		5.61	0.000131	1.90	979.31	123.52	0.12
W14 Main	Lower	26424	Max WS	1896.41	-6.80	5.40		5.50	0.000244	2.60	729.82	89.00	0.16

HEC-RAS Plan: 100 ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Lower	26220	Max WS	1910.14	-7.37	5.38		5.46	0.000169	2.31	826.52	90.32	0.13
W14 Main	Lower	26169	Max WS	1913.57	-7.37	5.37	-2.64	5.45	0.000170	2.32	825.67	90.29	0.14
W14 Main	Lower	26152		Bridge									
W14 Main	Lower	26131	Max WS	1912.78	-7.37	5.11		5.20	0.000185	2.38	802.25	89.58	0.14
W14 Main	Lower	26038	Max WS	1921.75	-7.37	5.09		5.18	0.000188	2.40	800.51	89.53	0.14
W14 Main	Lower	25159	Max WS	2008.46	-7.26	4.89		4.99	0.000228	2.48	811.42	100.68	0.15
W14 Main	Lower	25107	Max WS	2013.59	-4.20	4.83	-1.36	4.97	0.000358	3.01	668.29	74.00	0.18
W14 Main	Lower	25086		Bridge									
W14 Main	Lower	25080	Max WS	2013.59	-4.20	4.80		4.95	0.000362	3.02	666.34	74.00	0.18
W14 Main	Lower	24990	Max WS	2022.46	-5.19	4.80		4.92	0.000296	2.78	738.30	105.34	0.18
W14 Main	Lower	22266	Max WS	2290.51	-6.89	3.81		3.97	0.000379	3.15	728.87	99.07	0.20
W14 Main	Lower	21014	Max WS	2413.42	-6.89	3.16		3.36	0.000566	3.63	664.98	95.75	0.24
W14 Main	Lower	19620	Max WS	14.94	-6.89	2.00	-6.40	2.00	0.000000	0.03	556.82	91.71	0.00
W-15 Main	Upper	41958	Max WS	10.00	23.20	26.44		26.45	0.000013	0.16	61.41	34.43	0.02
W-15 Main	Upper	41911	Max WS	10.00	23.10	26.44		26.44	0.000012	0.16	61.14	29.63	0.02
W-15 Main	Upper	41876		Culvert									
W-15 Main	Upper	41841	Max WS	10.00	21.40	26.44		26.44	0.000002	0.10	103.70	39.70	0.01
W-15 Main	Upper	40226	Max WS	86.95	20.70	26.37		26.38	0.000077	0.63	293.62	573.09	0.05
W-15 Main	Upper	39062	Max WS	142.06	21.10	26.28		26.29	0.000081	0.64	458.92	585.42	0.06
W-15 Main	Upper	38866	Max WS	151.32	20.60	26.25		26.26	0.000162	0.89	171.35	437.53	0.08
W-15 Main	Upper	38831		Culvert									
W-15 Main	Upper	38796	Max WS	151.30	19.90	26.00		26.02	0.000235	1.12	135.43	354.13	0.10
W-15 Main	Upper	36942	Max WS	238.64	19.70	25.54		25.55	0.000266	1.14	529.83	780.77	0.10
W-15 Main	Upper	36875		Culvert									
W-15 Main	Upper	36808	Max WS	238.50	19.60	25.34		25.38	0.000756	1.89	252.82	326.71	0.17
W-15 Main	Upper	36792	Max WS	243.34	19.60	25.25	22.64	25.30	0.000966	2.10	223.42	305.42	0.19
W-15 Main	Upper	36741		Bridge									
W-15 Main	Upper	36690	Max WS	243.28	19.90	25.22		25.23	0.000431	1.39	401.11	592.63	0.13
W-15 Main	Upper	36328	Max WS	260.57	19.50	25.10		25.11	0.000221	1.07	691.04	873.53	0.09
W-15 Main	Upper	35441	Max WS	302.89	18.60	24.97		24.97	0.000085	0.71	1278.14	1493.02	0.06
W-15 Main	Upper	34175	Max WS	361.83	18.40	24.08		24.15	0.001510	2.85	403.12	1168.43	0.24
W-15 Main	Upper	34100		Lat Struct									
W-15 Main	Upper	33708	Max WS	378.37	17.90	23.61		23.64	0.000768	2.04	507.04	635.77	0.16
W-15 Main	Upper	33500		Lat Struct									
W-15 Main	Upper	33031	Max WS	167.06	17.40	23.27		23.29	0.000315	1.28	346.03	536.25	0.10
W-15 Main	Upper	33000		Lat Struct									
W-15 Main	Upper	32178	Max WS	119.93	16.80	23.10		23.11	0.000120	0.83	366.81	523.02	0.07
W-15 Main	Upper	32158	Max WS	120.72	16.80	23.09		23.10	0.000185	1.03	148.24	518.48	0.09
W-15 Main	Upper	32123		Culvert									
W-15 Main	Upper	32088	Max WS	120.68	17.00	22.84		22.86	0.000219	1.00	121.19	186.81	0.09
W-15 Main	Upper	31779	Max WS	132.90	16.80	22.79		22.80	0.000131	0.87	380.96	583.66	0.07
W-15 Main	Upper	30955	Max WS	165.41	16.20	22.61		22.63	0.000315	1.36	219.26	184.94	0.11
W-15 Main	Upper	29994	Max WS	203.89	15.60	22.07		22.13	0.000744	2.02	124.03	392.73	0.17
W-15 Main	Upper	28993	Max WS	245.37	15.40	21.63		21.71	0.000086	2.27	135.44	212.60	0.19
W-15 Main	Upper	28463	Max WS	269.36	15.20	21.59		21.65	0.000065	1.93	213.98	369.34	0.17



HEC-RAS Plan: 100 ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W-15 Main	Upper	27930	Max WS	292.99	14.40	21.51	17.63	21.60	0.000103	2.40	121.90	29.22	0.21
W-15 Main	Upper	27864	Bridge										
W-15 Main	Upper	27797	Max WS	292.94	14.30	21.49		21.58	0.000097	2.30	127.34	32.63	0.20
W-15 Main	Upper	27008	Max WS	323.74	13.60	21.22		21.26	0.000665	2.10	443.73	509.40	0.16
W-15 Main	Upper	26388	Max WS	346.52	12.60	20.95		20.97	0.000250	1.34	888.20	990.81	0.10
W-15 Main	Upper	25748	Max WS	370.91	12.20	20.75		20.78	0.000353	1.69	454.93	347.46	0.12
W-15 Main	Upper	25098	Max WS	395.73	9.40	20.62		20.63	0.000080	0.80	1974.36	1893.99	0.05
W-15 Main	Upper	24312	Max WS	424.77	11.10	20.52		20.54	0.000182	1.25	933.65	780.90	0.09
W-15 Main	Upper	23662	Max WS	444.35	9.20	20.33	13.23	20.38	0.000341	1.93	255.61	713.97	0.12
W-15 Main	Upper	23634	Bridge										
W-15 Main	Upper	23606	Max WS	438.03	9.60	20.20		20.24	0.000259	1.71	256.23	465.71	0.11
W-15 Main	Upper	23462	Max WS	434.03	10.80	20.14		20.20	0.000455	2.05	286.66	168.33	0.14
W-15 Main	Mid	22961	Max WS	329.85	10.60	20.14		20.16	0.000202	1.36	442.14	416.83	0.09
W-15 Main	Mid	22285	Max WS	328.28	10.40	20.01	13.71	20.03	0.000180	1.35	489.60	1427.14	0.09
W-15 Main	Mid	22250	Bridge										
W-15 Main	Mid	22227	Max WS	327.25	10.50	19.98		20.00	0.000182	1.37	382.81	1290.08	0.09
W-15 Main	Mid	21477	Max WS	371.83	11.21	19.87		19.89	0.000101	0.93	424.73	119.15	0.07
W-15 Main	Mid	21400	Culvert										
W-15 Main	Mid	21329	Max WS	366.21	11.10	19.72		19.74	0.000103	0.95	389.20	114.07	0.07
W-15 Main	Mid	21028	Max WS	385.39	10.00	19.64		19.68	0.000279	1.63	238.20	107.49	0.11
W-15 Main	Mid	21000	Culvert										
W-15 Main	Mid	20870	Max WS	378.85	10.65	19.47		19.52	0.000303	1.80	210.81	105.30	0.12
W-15 Main	Mid	20827	Max WS	381.77	10.54	19.45		19.51	0.000344	2.16	341.61	232.48	0.13
W-15 Main	Mid	20700	Culvert										
W-15 Main	Mid	20648	Max WS	375.65	10.48	19.32		19.39	0.000400	2.30	268.73	219.55	0.14
W-15 Main	Mid	19997	Max WS	419.67	8.70	18.98		19.04	0.000595	2.06	216.48	352.23	0.15
W-15 Main	Mid	19018	Max WS	506.67	8.40	18.14		18.25	0.000962	2.63	192.91	38.32	0.19
W-15 Main	Mid	18298	Max WS	576.27	7.50	17.01		17.20	0.001865	3.46	166.33	54.33	0.26
W-15 Main	Mid	17456	Max WS	663.26	6.40	16.02		16.08	0.000623	2.38	467.50	208.44	0.16
W-15 Main	Mid	17221	Max WS	687.25	6.53	15.86		15.92	0.000655	2.02	340.18	75.12	0.17
W-15 Main	Mid	17201	Max WS	689.30	6.53	15.84	10.92	15.91	0.000664	2.03	339.10	75.04	0.17
W-15 Main	Mid	17091	Bridge										
W-15 Main	Mid	16981	Max WS	688.41	6.53	15.48		15.56	0.000840	2.20	312.23	72.91	0.19
W-15 Main	Mid	16926	Max WS	693.98	5.70	15.48	9.47	15.52	0.000258	1.59	437.38	67.16	0.11
W-15 Main	Mid	16901	Bridge										
W-15 Main	Mid	16876	Max WS	692.04	6.60	15.14		15.32	0.001564	3.42	202.98	39.33	0.25
W-15 Main	Mid	16482	Max WS	690.22	4.39	14.85		14.87	0.000305	1.65	1206.35	769.11	0.11
W-15 Main	Mid	16480	Lat Struct										
W-15 Main	Mid	16088	Max WS	689.94	4.39	14.72		14.74	0.000361	1.77	1107.66	745.61	0.12
W-15 Main	Mid	15693	Max WS	689.91	4.39	14.56		14.59	0.000447	1.93	992.05	717.09	0.14
W-15 Main	Mid	15299	Max WS	689.62	4.31	14.43	9.23	14.45	0.000248	1.76	1339.38	839.20	0.11
W-15 Main	Mid	15280	Bridge										
W-15 Main	Mid	15262	Max WS	687.79	4.15	14.24		14.29	0.000521	2.16	789.70	768.66	0.15
W-15 Main	Mid	15261	Max WS	687.67	3.81	14.24		14.29	0.000590	2.33	839.65	768.68	0.16
W-15 Main	South	14915	Max WS	894.45	3.01	14.24		14.28	0.000416	2.11	1287.90	1022.32	0.14

HEC-RAS Plan: 100 ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W-15 Main	South	14570	Max WS	894.25	3.72	14.08		14.12	0.000564	2.25	1425.08	1238.74	0.16
W-15 Main	South	14224	Max WS	943.36	4.91	13.89		13.93	0.000537	2.02	1748.61	1997.00	0.15
W-15 Main	South	13878	Max WS	935.31	6.09	13.64	10.80	13.68	0.000812	2.11	1450.62	2533.32	0.19
W-15 Main	South	13850	Bridge										
W-15 Main	South	13822	Max WS	981.37	6.09	13.53		13.59	0.001152	2.47	1201.09	2010.28	0.22
W-15 Main	South	13452	Max WS	1019.10	5.08	12.87		13.05	0.001915	3.41	299.85	1095.05	0.29
W-15 Main	South	13083	Max WS	1055.64	4.06	12.33		12.47	0.001215	2.94	359.52	521.24	0.23
W-15 Main	South	12713	Max WS	1087.15	3.05	12.01		12.11	0.000708	2.46	445.20	223.63	0.18
W-15 Main	South	12343	Max WS	1112.39	2.03	11.84		11.90	0.000399	2.04	580.33	418.61	0.14
W-15 Main	South	11974	Max WS	1136.60	1.02	11.73		11.78	0.000229	1.69	842.17	1532.75	0.11
W-15 Main	South	11604	Max WS	1163.58	0.00	11.67	2.86	11.70	0.000146	1.46	808.95	3192.97	0.09
W-15 Main	South	11579	Bridge										
W-15 Main	South	11554	Max WS	1143.86	0.00	11.60		11.63	0.000146	1.45	790.41	2433.69	0.09
W-15 Main	South	11440	Max WS	1151.80	0.49	11.58		11.62	0.000188	1.49	860.99	2401.06	0.10
W-15 Main	South	11326	Max WS	1160.30	0.97	11.57		11.59	0.000161	1.22	2532.88	2721.49	0.09
W-15 Main	South	11212	Max WS	1167.13	1.46	11.56	5.96	11.57	0.000177	1.13	2966.23	2929.37	0.09
W-15 Main	South	11162	Bridge										
W-15 Main	South	11112	Max WS	1156.51	-1.12	11.51		11.53	0.000166	1.25	2766.59	2861.00	0.09
W-15 Main	South	10638	Max WS	1178.22	-1.27	11.43		11.45	0.000165	1.29	2773.12	2825.20	0.09
W-15 Main	South	10164	Max WS	1196.71	-1.43	11.34		11.36	0.000166	1.32	2737.97	2737.52	0.09
W-15 Main	South	9690	Max WS	1226.20	-1.58	11.26		11.28	0.000168	1.36	2725.41	2665.27	0.09
W-15 Main	South	9217	Max WS	1259.28	-1.74	11.18		11.20	0.000189	1.48	2103.72	2579.52	0.10
W-15 Main	South	8743	Max WS	1292.70	-1.89	11.09		11.12	0.000184	1.50	2304.80	2488.37	0.10
W-15 Main	South	8269	Max WS	1327.15	-2.05	11.01		11.04	0.000181	1.52	2495.93	2379.21	0.10
W-15 Main	South	7795	Max WS	1362.70	-2.20	10.93		10.96	0.000190	1.58	2599.07	2244.15	0.10
W-15 Main	South	7321	Max WS	1399.09	-2.35	10.85		10.87	0.000185	1.59	2527.41	2049.29	0.10
W-15 Main	South	6847	Max WS	1435.94	-2.51	10.75		10.78	0.000196	1.65	2442.84	1863.13	0.10
W-15 Main	South	6373	Max WS	1473.46	-2.66	10.65		10.69	0.000214	1.75	2331.64	1715.58	0.11
W-15 Main	South	5900	Max WS	1511.03	-2.82	10.54		10.58	0.000245	1.88	2184.19	1580.68	0.11
W-15 Main	South	5426	Max WS	1548.71	-2.97	10.41		10.46	0.000298	2.08	1991.33	1443.46	0.12
W-15 Main	South	4952	Max WS	1586.36	-3.13	10.26		10.31	0.000362	2.29	1745.81	1208.52	0.14
W-15 Main	South	4478	Max WS	1624.05	-3.28	10.05		10.13	0.000473	2.58	1450.19	823.52	0.15
W-15 Main	South	4094	Max WS	1654.79	-2.04	9.92		9.96	0.000323	2.34	1852.73	635.17	0.13
W-15 Main	South	3696	Max WS	1686.72	-0.82	9.73		9.81	0.000522	2.85	1429.92	581.01	0.17
W-15 Main	South	3499	Max WS	1702.66	-1.03	9.65	2.68	9.71	0.000332	1.94	876.70	126.63	0.13
W-15 Main	South	3477	Bridge										
W-15 Main	South	3454	Max WS	1702.52	-0.66	9.45		9.53	0.000498	2.37	718.40	103.30	0.16
W-15 Main	South	3159	Max WS	1726.50	-1.22	9.25		9.36	0.000655	2.67	711.86	306.25	0.18
W-15 Main	South	2865	Max WS	1750.37	-1.77	9.14		9.20	0.000376	2.18	1748.01	705.30	0.14
W-15 Main	South	2570	Max WS	1774.31	-2.33	9.09		9.10	0.000113	1.30	4012.11	1228.30	0.08
W-15 Main	South	2335	Max WS	1793.37	-2.69	9.05		9.07	0.000211	1.80	2800.85	953.61	0.11
W-15 Main	South	2092	Max WS	1813.08	-2.22	8.97	2.50	9.02	0.000305	1.89	2098.32	1267.41	0.12
W-15 Main	South	2065	Bridge										
W-15 Main	South	2038	Max WS	1813.08	-1.14	8.92		8.96	0.000223	1.68	2319.87	1259.68	0.11
W-15 Main	South	1821	Max WS	1830.67	-3.39	8.82		8.91	0.000514	2.93	1433.23	484.66	0.16

HEC-RAS Plan: 100 ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W-15 Main	South	1507	Max WS	1856.10	-2.96	8.66		8.75	0.000494	2.84	1523.55	531.89	0.16
W-15 Main	South	1193	Max WS	1881.42	-2.53	8.51		8.59	0.000487	2.76	1606.27	581.29	0.16
W-15 Main	South	812	Max WS	1911.87	-2.36	8.30		8.39	0.000584	2.96	1447.75	517.01	0.18
W-15 Main	South	431	Max WS	1941.52	-2.20	8.01		8.14	0.000825	3.41	1167.42	451.60	0.21
W-15 Main	South	50	Max WS	1939.52	-2.03	7.48		7.75	0.001608	4.50	723.53	341.65	0.29
Reine Canal	Main	8003	Max WS	-307.95	3.00	13.03		13.10	0.000526	-2.18	141.36	27.45	0.17
Reine Canal	Main	6849	Max WS	-374.02	5.20	13.73		13.82	0.000681	-2.50	149.58	30.60	0.20
Reine Canal	Main	6446	Max WS	-277.83	6.90	14.03		14.08	0.000336	-1.79	155.50	31.14	0.14
Reine Canal	Main	6412		Culvert									
Reine Canal	Main	6386	Max WS	-284.03	6.80	14.24		14.30	0.000386	-1.93	147.46	29.47	0.15
Reine Canal	Main	5181	Max WS	62.02	6.60	14.56		14.56	0.000031	0.37	170.05	42.56	0.03
Reine Canal	Main	3598	Max WS	58.58	5.70	14.53		14.53	0.000006	0.28	212.78	34.72	0.02
Reine Canal	Main	2688	Max WS	123.03	6.60	14.51	7.84	14.51	0.000045	0.39	315.40	67.10	0.03
Reine Canal	Main	2642		Bridge									
Reine Canal	Main	2624	Max WS	122.59	5.90	14.50		14.51	0.000030	0.47	259.70	69.84	0.04
Reine Canal	Main	2598	Max WS	124.72	6.70	14.50	8.02	14.50	0.000017	0.40	311.39	68.78	0.03
Reine Canal	Main	2566		Bridge									
Reine Canal	Main	2534	Max WS	124.50	6.60	14.50		14.50	0.000017	0.40	308.02	69.27	0.03
Reine Canal	Main	2455	Max WS	129.87	6.90	14.49	8.47	14.50	0.000039	0.64	211.10	50.09	0.05
Reine Canal	Main	2437		Bridge									
Reine Canal	Main	2418	Max WS	129.44	6.90	14.49		14.49	0.000040	0.60	216.12	49.71	0.05
Reine Canal	Main	2087	Max WS	148.28	5.70	14.45		14.47	0.000104	0.95	156.40	1012.49	0.08
Reine Canal	Main	1941	Max WS	157.59	5.70	14.43		14.45	0.000118	1.01	155.74	1004.87	0.08
Reine Canal	Main	1611	Max WS	179.46	5.70	14.38		14.40	0.000158	1.17	153.91	983.70	0.10
Reine Canal	Main	1550	Max WS	183.59	5.60	14.37		14.39	0.000106	1.05	177.41	40.94	0.08
Reine Canal	Main	1099	Max WS	211.90	5.10	14.31		14.33	0.000141	1.21	177.17	40.12	0.09
Reine Canal	Main	220	Max WS	206.78	4.10	14.24		14.25	0.000043	0.78	467.11	217.74	0.05
Poor Boy Canal	Main	5808	Max WS	104.18	10.10	20.14		20.14	0.000051	0.73	142.53	21.25	0.05
Poor Boy Canal	Main	5563	Max WS	101.61	10.10	20.12		20.13	0.000049	0.71	142.26	21.24	0.05
Poor Boy Canal	Main	5318	Max WS	139.83	10.10	20.09		20.11	0.000094	0.99	141.55	21.19	0.07
Poor Boy Canal	Main	5074	Max WS	178.58	10.10	20.04		20.06	0.000156	1.27	140.46	21.12	0.09
Poor Boy Canal	Main	4829	Max WS	218.68	10.10	19.96		20.00	0.000241	1.57	138.86	21.02	0.11
Poor Boy Canal	Main	4584	Max WS	259.72	10.10	19.85		19.91	0.000355	1.90	136.59	20.88	0.13
Poor Boy Canal	Main	4339	Max WS	302.01	10.10	19.70		19.78	0.000510	2.26	133.47	20.68	0.16
Poor Boy Canal	Main	4094	Max WS	345.31	10.10	19.50		19.61	0.000727	2.67	129.20	20.41	0.19
Poor Boy Canal	Main	3850	Max WS	388.46	10.10	19.21		19.36	0.001040	3.15	123.35	20.03	0.22
Poor Boy Canal	Main	3605	Max WS	388.45	10.10	18.92		19.09	0.001178	3.30	117.68	19.65	0.24
Poor Boy Canal	Main	3360	Max WS	388.45	10.10	18.59		18.78	0.001368	3.49	111.23	19.21	0.26
Poor Boy Canal	Main	3115	Max WS	388.45	10.10	18.19		18.41	0.001648	3.75	103.72	18.69	0.28
Poor Boy Canal	Main	3062	Max WS	388.45	10.10	18.10		18.32	0.001652	3.82	101.70	18.57	0.28
Poor Boy Canal	Main	2983		Culvert									
Poor Boy Canal	Main	2904	Max WS	388.44	10.10	17.60		17.91	0.001763	4.46	87.06	17.92	0.32
Poor Boy Canal	Main	2851	Max WS	388.44	10.10	17.53		17.81	0.002301	4.24	91.54	17.81	0.33
Poor Boy Canal	Main	2671	Max WS	388.44	9.91	17.15		17.41	0.002108	4.10	94.85	19.12	0.32
Poor Boy Canal	Main	2490	Max WS	388.43	9.71	16.80		17.04	0.001954	3.96	98.06	20.42	0.32

HEC-RAS Plan: 100 ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Poor Boy Canal	Main	2310	Max WS	388.43	9.52	16.47		16.70	0.001832	3.84	101.12	21.71	0.31
Poor Boy Canal	Main	2130	Max WS	388.42	9.32	16.17		16.38	0.001731	3.73	104.08	22.98	0.31
Poor Boy Canal	Main	1949	Max WS	388.42	9.13	15.88		16.08	0.001646	3.63	106.98	24.26	0.30
Poor Boy Canal	Main	1769	Max WS	388.41	8.94	15.60		15.79	0.001574	3.54	109.77	25.50	0.30
Poor Boy Canal	Main	1588	Max WS	388.41	8.74	15.33		15.51	0.001516	3.46	112.40	26.75	0.30
Poor Boy Canal	Main	1408	Max WS	388.40	8.55	15.07		15.25	0.001464	3.38	115.06	28.00	0.29
Poor Boy Canal	Main	1228	Max WS	388.40	8.35	14.82		14.99	0.001418	3.30	117.65	29.24	0.29
Poor Boy Canal	Main	1047	Max WS	388.40	8.16	14.57		14.74	0.001381	3.24	120.04	30.46	0.29
Poor Boy Canal	Main	867	Max WS	388.40	7.96	14.34		14.49	0.001346	3.17	122.46	31.66	0.28
Poor Boy Canal	Main	686	Max WS	388.40	7.77	14.10		14.25	0.001319	3.12	124.68	32.85	0.28
Poor Boy Canal	Main	634	Max WS	388.40	7.77	14.05		14.20	0.000757	3.10	125.25	33.14	0.23
Poor Boy Canal	Main	607		Culvert									
Poor Boy Canal	Main	581	Max WS	381.99	7.77	11.11		11.95	0.008465	7.34	52.08	23.77	0.72
Poor Boy Canal	Main	528	Max WS	382.57	6.90	11.21		11.59	0.004635	4.91	77.87	25.48	0.50
Poor Boy Canal	Main	441	Max WS	380.92	6.38	10.89		11.22	0.003896	4.63	82.30	25.66	0.46
Poor Boy Canal	Main	354	Max WS	379.19	5.87	10.63		10.91	0.003144	4.30	88.26	25.99	0.41
Poor Boy Canal	Main	267	Max WS	377.49	5.35	10.43		10.67	0.002424	3.92	96.21	26.45	0.36
Poor Boy Canal	Main	180	Max WS	375.93	4.83	10.29		10.48	0.001835	3.56	105.64	26.99	0.32
Poor Boy Canal	Main	92	Max WS	373.81	4.32	10.18		10.34	0.001388	3.22	116.00	27.58	0.28
Poor Boy Canal	Main	5	Max WS	240.02	3.80	10.12		10.18	0.000431	1.87	128.05	28.23	0.16
Gum Bayou	Upper	16105	Max WS	1196.98	6.00	11.36		11.36	0.000077	0.72	3538.45	1282.13	0.06
Gum Bayou	Upper	15247	Max WS	1183.32	5.60	11.30		11.30	0.000057	0.67	3971.65	1078.24	0.05
Gum Bayou	Upper	15205	Max WS	1184.19	3.30	11.30		11.30	0.000070	0.59	3481.60	1076.81	0.05
Gum Bayou	Upper	15182		Culvert									
Gum Bayou	Upper	15159	Max WS	897.93	5.00	11.02		11.02	0.000050	0.46	3161.40	1021.36	0.04
Gum Bayou	Upper	15116	Max WS	900.63	5.60	11.02		11.02	0.000042	0.54	3645.14	1022.90	0.04
Gum Bayou	Upper	14919	Max WS	911.68	5.81	11.00		11.00	0.000137	0.74	2050.20	913.06	0.07
Gum Bayou	Upper	14533	Max WS	897.27	5.72	10.94		10.95	0.000180	0.87	1877.47	894.33	0.08
Gum Bayou	Upper	14148	Max WS	906.03	5.62	10.91		10.91	0.000029	0.36	4176.62	2212.75	0.03
Gum Bayou	Upper	13853	Max WS	920.85	4.40	10.90		10.90	0.000012	0.33	5172.14	2204.78	0.02
Gum Bayou	Upper	13197	Max WS	955.61	3.80	10.89		10.89	0.000015	0.39	5109.95	2190.13	0.03
Gum Bayou	Upper	12799	Max WS	976.36	5.29	10.89		10.89	0.000018	0.33	4297.71	2171.92	0.03
Gum Bayou	Upper	12413	Max WS	996.48	5.20	10.88		10.88	0.000015	0.30	5572.72	3339.41	0.03
Gum Bayou	Upper	12276	Max WS	1003.79	5.20	10.88		10.88	0.000015	0.31	5567.16	3337.86	0.03
Gum Bayou	Upper	11780	Max WS	1030.49	3.52	10.87		10.87	0.000010	0.29	8119.44	4223.62	0.02
Gum Bayou	Upper	11732	Max WS	1033.32	3.62	10.87		10.87	0.000010	0.28	8264.55	4247.77	0.02
Gum Bayou	Upper	11648	Max WS	1037.94	3.52	10.87		10.87	0.000011	0.29	8114.16	4223.16	0.02
Gum Bayou	Upper	11146	Max WS	1065.40	3.91	10.86		10.86	0.000014	0.32	8068.87	4219.49	0.02
Gum Bayou	Upper	10808	Max WS	1083.95	4.20	10.86		10.86	0.000005	0.22	12054.94	5118.73	0.02
Gum Bayou	Upper	10740	Max WS	1087.73	1.30	10.86	5.88	10.86	0.000005	0.24	12063.41	5118.69	0.02
Gum Bayou	Upper	10711		Bridge									
Gum Bayou	Upper	10682	Max WS	960.89	2.40	10.18		10.36	0.000953	3.38	284.03	4813.58	0.22
Gum Bayou	Upper	10555	Max WS	961.59	4.10	10.16		10.18	0.000165	1.18	883.63	4799.61	0.09
Gum Bayou	Upper	10046	Max WS	959.20	3.70	10.12		10.12	0.000010	0.31	8241.96	4776.34	0.02
Gum Bayou	Lower	9910	Max WS	1199.22	3.90	10.12		10.12	0.000015	0.34	8125.45	4776.34	0.03

HEC-RAS Plan: 100 ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Gum Bayou	Lower	9149	Max WS	1197.36	1.64	10.11		10.11	0.000007	0.28	9661.93	3702.99	0.02
Gum Bayou	Lower	8649	Max WS	1347.17	0.76	10.11		10.11	0.000012	0.36	8410.14	3325.19	0.02
Gum Bayou	Lower	8532	Max WS	1382.06	0.76	10.11		10.11	0.000012	0.37	8405.45	3325.17	0.02
Gum Bayou	Lower	7891	Max WS	1574.05	0.70	10.10		10.10	0.000007	0.33	9319.26	2899.79	0.02
Gum Bayou	Lower	7813	Max WS	1597.45	0.50	10.10		10.10	0.000007	0.28	8779.36	2963.46	0.02
Gum Bayou	Lower	7775		Culvert									
Gum Bayou	Lower	7737	Max WS	1575.82	1.30	9.60		10.11	0.003646	5.75	273.84	2433.52	0.42
Gum Bayou	Lower	7656	Max WS	1599.06	0.60	9.60		9.60	0.000008	0.32	8732.66	2703.87	0.02
Gum Bayou	Lower	2746	Max WS	15.35	-3.37	5.80	-2.79	5.80	0.000000	0.03	461.89	91.46	0.00
Doubloon	to Pearl	15291	Max WS	1291.64	-3.39	7.48		7.49	0.000123	1.32	1736.44	533.49	0.08
Doubloon	to Pearl	14393	Max WS	1291.01	-3.39	7.34		7.36	0.000178	1.57	1669.37	782.07	0.10
Doubloon	to Pearl	13496	Max WS	1365.06	-3.39	7.16		7.17	0.000113	1.23	1971.10	600.05	0.08
Doubloon	to Pearl	12598	Max WS	1383.10	-3.39	6.95		7.00	0.000322	2.04	987.87	319.08	0.13
Doubloon	to Pearl	11636	Max WS	1403.99	-3.94	6.78		6.79	0.000079	1.01	2835.98	1088.72	0.06
Doubloon	to Pearl	10674	Max WS	1403.92	-4.49	6.73		6.73	0.000041	0.74	3711.04	2149.02	0.05
Doubloon	to Pearl	9711	Max WS	1545.46	-5.04	6.68		6.69	0.000063	0.92	2810.59	1048.18	0.06
Doubloon	to Pearl	8749	Max WS	1586.09	-5.60	6.42		6.50	0.000384	2.25	892.25	263.97	0.14
Doubloon	to Pearl	7787	Max WS	1624.66	-6.15	6.00		6.09	0.000466	2.42	728.10	180.84	0.15
Doubloon	to Pearl	6824	Max WS	1668.43	-6.70	5.52		5.61	0.000519	2.47	700.28	767.82	0.16
Doubloon	to Pearl	5862	Max WS	1710.26	-7.25	4.97		5.07	0.000589	2.54	679.22	126.58	0.17
Doubloon	to Pearl	4900	Max WS	1750.38	-7.80	4.67		4.70	0.000188	1.76	1233.30	887.65	0.12
Doubloon	to Pearl	4420	Max WS	1772.58	-7.88	4.57		4.61	0.000210	1.87	1186.96	953.05	0.13
Doubloon	to Pearl	3940	Max WS	1795.01	-7.96	4.48		4.53	0.000228	1.96	1135.13	925.22	0.13
Doubloon	to Pearl	3460	Max WS	1817.57	-8.04	4.39		4.44	0.000248	2.05	1104.30	935.46	0.14
Doubloon	to Pearl	2980	Max WS	1840.43	-8.12	4.32		4.35	0.000144	1.57	1684.40	977.82	0.10
Doubloon	to Pearl	2500	Max WS	1863.39	-8.20	4.25		4.28	0.000150	1.61	1687.28	989.53	0.11
Doubloon	to Pearl	2020	Max WS	1886.57	-8.29	4.18		4.20	0.000161	1.67	1688.76	1025.03	0.11
Doubloon	to Pearl	1540	Max WS	1910.00	-8.37	4.10		4.13	0.000156	1.65	1751.51	1061.19	0.11
Doubloon	to Pearl	1060	Max WS	1933.68	-8.45	4.03		4.06	0.000137	1.55	1786.41	1096.20	0.10
Doubloon	to Pearl	580	Max WS	1957.62	-8.53	3.97		3.99	0.000133	1.53	1830.20	1122.76	0.10
Doubloon	to Pearl	100	Max WS	10.00	-8.61	3.91	-7.67	3.91	0.000000	0.01	1880.99	1140.95	0.00
Doubloon	to Marsh	19396	Max WS	647.89	-2.36	7.48		7.48	0.000033	0.67	1712.03	533.49	0.04
Doubloon	to Marsh	18926	Max WS	647.76	-1.55	7.26		7.40	0.000646	2.94	220.05	530.00	0.19
Doubloon	to Marsh	18916		Culvert									
Doubloon	to Marsh	18906	Max WS	640.12	-1.55	5.70		5.91	0.001346	3.65	175.32	413.04	0.26
Doubloon	to Marsh	18661	Max WS	638.68	-1.72	5.60		5.61	0.000036	0.60	1610.75	1268.57	0.04
Doubloon	to Marsh	18361	Max WS	907.16	-1.93	5.59		5.59	0.000050	0.71	2178.66	1264.21	0.05
Doubloon	to Marsh	18061	Max WS	910.26	-2.14	5.58		5.58	0.000037	0.62	2604.89	1260.84	0.04
Doubloon	to Marsh	17782	Max WS	913.51	-2.51	5.57		5.57	0.000023	0.50	3870.82	1769.43	0.03
Doubloon	to Marsh	17504	Max WS	913.04	-2.88	5.56		5.56	0.000042	0.69	2439.25	2066.07	0.05
Doubloon	to Marsh	17225	Max WS	1078.06	-3.25	5.41	0.54	5.51	0.000620	2.67	423.45	2372.66	0.18
Doubloon	to Marsh	17207		Bridge									
Doubloon	to Marsh	17188	Max WS	1030.32	-3.25	5.23		5.34	0.000657	2.70	390.79	2345.85	0.18
Doubloon	to Marsh	16717	Max WS	1018.35	-2.92	5.11		5.13	0.000128	1.17	1480.92	2331.55	0.08
Doubloon	to Marsh	16246	Max WS	1027.69	-2.59	5.07		5.08	0.000074	0.87	2491.20	2333.30	0.06

HEC-RAS Plan: 100 ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Doubloon	to Marsh	15776	Max WS	1040.43	-2.25	5.04		5.04	0.000064	0.79	2818.36	2341.00	0.06
Doubloon	to Marsh	15305	Max WS	1054.04	-1.92	5.01		5.02	0.000061	0.75	3012.30	2322.87	0.05
Doubloon	to Marsh	14834	Max WS	1067.83	-1.59	4.98		4.98	0.000072	0.79	2672.89	2267.37	0.06
Doubloon	to Marsh	14363	Max WS	1081.76	-1.26	4.94		4.95	0.000076	0.79	2613.47	2300.79	0.06
Doubloon	to Marsh	13893	Max WS	1095.91	-0.93	4.91		4.91	0.000082	0.79	2542.22	2287.49	0.06
Doubloon	to Marsh	13422	Max WS	1110.57	-0.59	4.87		4.87	0.000091	0.80	2462.76	2357.29	0.06
Doubloon	to Marsh	12951	Max WS	1125.38	-0.26	4.82		4.83	0.000104	0.82	2374.63	2444.09	0.07
Doubloon	to Marsh	12480	Max WS	1140.22	0.07	4.77		4.77	0.000122	0.85	2276.99	2441.52	0.07
Doubloon	to Marsh	12009	Max WS	1155.25	0.40	4.70		4.71	0.000150	0.89	2173.20	2497.16	0.08
Doubloon	to Marsh	11539	Max WS	1170.26	0.74	4.62		4.63	0.000197	0.96	2078.11	2691.45	0.09
Doubloon	to Marsh	11068	Max WS	1185.36	1.07	4.51		4.52	0.000249	1.00	1972.14	2682.38	0.10
Doubloon	to Marsh	10597	Max WS	1200.63	1.40	4.37		4.39	0.000343	1.07	1801.28	2584.11	0.11
Doubloon	to Marsh	10500	Max WS	1203.85	1.37	4.35		4.36	0.000155	0.73	2413.00	1374.42	0.08
Doubloon	to Marsh	10108	Max WS	1217.04	1.27	4.29		4.29	0.000173	0.76	2333.91	1357.51	0.08
Doubloon	to Marsh	9619	Max WS	1233.47	1.14	4.19		4.20	0.000216	0.89	2131.17	1354.30	0.09
Doubloon	to Marsh	9130	Max WS	1249.90	1.02	4.08		4.09	0.000238	0.97	1957.38	1195.06	0.10
Doubloon	to Marsh	8641	Max WS	1266.30	0.89	3.97		3.98	0.000206	1.04	1906.76	1074.88	0.11
Doubloon	to Marsh	8152	Max WS	1282.72	0.77	3.87		3.88	0.000201	1.03	1935.15	1062.29	0.11
Doubloon	to Marsh	7663	Max WS	1299.12	0.64	3.78		3.79	0.000198	1.02	1986.29	1094.32	0.11
Doubloon	to Marsh	7231	Max WS	1313.60	0.54	3.68		3.69	0.000225	1.08	1852.17	1002.58	0.12
Doubloon	to Marsh	6800	Max WS	1328.04	0.44	3.58		3.59	0.000264	1.17	1749.46	992.61	0.13
Doubloon	to Marsh	6368	Max WS	1342.49	0.34	3.45		3.47	0.000295	1.22	1699.90	1009.41	0.13
Doubloon	to Marsh	5937	Max WS	1356.89	0.24	3.32		3.34	0.000316	1.25	1621.20	901.52	0.14
Doubloon	to Marsh	5505	Max WS	1371.30	0.14	3.16		3.18	0.000399	1.37	1408.48	744.78	0.15
Doubloon	to Marsh	5083	Max WS	1390.47	0.01	2.98		2.99	0.000305	1.17	1846.15	1098.85	0.13
Doubloon	to Marsh	4661	Max WS	1409.58	-0.11	2.83		2.84	0.000264	1.07	2172.04	1406.38	0.12
Doubloon	to Marsh	4239	Max WS	1428.65	-0.24	2.70		2.70	0.000246	1.02	2408.18	1679.71	0.12
Doubloon	to Marsh	3745	Max WS	1444.61	-0.34	2.57		2.58	0.000257	1.03	2460.90	1819.65	0.12
Doubloon	to Marsh	3250	Max WS	1460.94	-0.44	2.45		2.46	0.000254	1.01	2508.04	1834.15	0.12
Doubloon	to Marsh	2756	Max WS	1477.23	-0.54	2.33		2.33	0.000242	0.98	2597.94	1882.13	0.12
Doubloon	to Marsh	2262	Max WS	1493.51	-0.64	2.21		2.22	0.000228	0.94	2698.88	1939.67	0.11
Doubloon	to Marsh	1767	Max WS	1509.84	-0.74	2.10		2.11	0.000216	0.92	2793.28	1991.66	0.11
Doubloon	to Marsh	1273	Max WS	5.00	-0.84	2.00	-0.54	2.00	0.000000	0.00	2886.29	2040.32	0.00
Bayou Vincent	Upper	6072	Max WS	4100.45	5.31	19.33		19.66	0.001133	4.88	1199.29	190.00	0.26
Bayou Vincent	Upper	5509	Max WS	4098.30	3.64	18.88		19.11	0.000736	4.21	1429.39	190.00	0.21
Bayou Vincent	Upper	5227	Max WS	4150.17	2.81	18.70		18.91	0.000609	3.97	1554.49	190.00	0.19
Bayou Vincent	Upper	5174	Max WS	4160.04	3.00	18.73	10.82	18.85	0.000474	2.84	1527.59	170.00	0.16
Bayou Vincent	Upper	5166	Bridge										
Bayou Vincent	Upper	5158	Max WS	4158.74	3.00	18.50		18.63	0.000513	2.91	1489.48	170.00	0.17
Bayou Vincent	Upper	4963	Max WS	4168.04	3.00	18.47		18.60	0.000520	2.92	1484.77	170.00	0.17
Bayou Vincent	Upper	4083	Max WS	4330.27	3.52	17.80		17.97	0.000947	3.51	1978.71	723.33	0.22
Bayou Vincent	Upper	3643	Max WS	4411.16	3.78	16.45		16.96	0.004091	5.87	825.03	165.15	0.44
Bayou Vincent	Upper	3590	Max WS	4421.10	4.30	16.57	11.17	16.66	0.000516	2.60	3028.51	1000.00	0.17
Bayou Vincent	Upper	3582	Bridge										
Bayou Vincent	Upper	3574	Max WS	4420.99	4.30	16.53		16.62	0.000532	2.63	2985.18	1000.00	0.17

HEC-RAS Plan: 100 ECM 032012 Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Bayou Vincent	Upper	3379	Max WS	4430.68	2.78	16.26		16.64	0.002686	5.08	990.12	375.45	0.36
Bayou Vincent	Upper	2851	Max WS	4526.88	1.84	14.79		15.23	0.002844	5.61	1213.26	851.74	0.38
Bayou Vincent	Upper	1795	Max WS	4719.34	-0.05	12.37		12.62	0.002068	5.54	2667.74	1216.14	0.33
Bayou Vincent	Upper	1267	Max WS	4719.29	-0.99	11.64		11.69	0.001058	4.02	4117.55	1325.85	0.22
Bayou Vincent	Lower	1214	Max WS	5121.53	-0.99	11.64		11.70	0.001246	4.36	4117.55	1325.85	0.24
Bayou Vincent	Lower	1126	Max WS	5121.44	-1.07	11.53		11.59	0.001282	4.42	4076.57	1323.78	0.24
Bayou Vincent	Lower	686	Max WS	5124.89	-1.49	10.90		10.98	0.001561	4.81	3804.35	1310.00	0.26
Bayou Vincent	Lower	86	Max WS	5129.72	-3.07	10.25		10.29	0.000681	3.37	5050.84	1350.00	0.18
Bayou Vincent	Lower	0	Max WS	15.06	-3.30	10.20	-2.56	10.20	0.000000	0.01	5290.82	1350.00	0.00

# Appendix D



ExpandedLocal.rep

HEC-RAS Version 4.1.0 Jan 2010  
U.S. Army Corps of Engineers  
Hydrologic Engineering Center  
609 Second Street  
Davis, California

```
X      X  XXXXXX   XXXX       XXXX       XX       XXXX
X      X  X       X   X       X   X       X   X       X
X      X  X       X           X   X       X   X       X
XXXXXXXX XXXX     X           XXX  XXXX     XXXXXX     XXXX
X      X  X       X           X   X       X   X           X
X      X  X       X   X       X   X       X   X           X
X      X  XXXXXX   XXXX       X   X       X   X       XXXXX
```

\*\*\*\*\*

PROJECT DATA

Project Title: ExpandedLocal  
Project File : ExpandedLocal.prj  
Run Date and Time: 1/2/2013 9:34:31 AM

Project in English units

Project Description:

Unsteady Flow Analysis Legend:

25ECM112011 - 25 Year Existing Conditions

Model

ECMnoHaas - Existing Conditions without Hass Rd Pond functioning  
25 yr

PCM 112011 - 2010 Recommended Improvements in this model

25yr AB PCM 1111 -

2010 Recommended Improvements with only AB Improvements

ABT - Alternative AB

plus Tenant Pond option

ABTH - Alt ABT plus Hass Pond upgrades

ABTHO - ABTH

plus Old River Road Pond option

ABD - AB plus increase culverts under Military  
Road on Doubloon

ABDE - ABD plus new bridge under 190 on W-15

ABD1E - ABE

plus a bigger Military Road culvert compared to ABD

ABT1 - similar to ABT

(obsolete option)

ABTHP - ABTH plus Pollard Pond option

ExpandedLocal.rep

ABTHPollard - same as  
 ABTHP (outdated)  
 ABTHG - ABTH plus Gause Pond  
 AB45TH - ABH with a 45 acre  
 tenant pond (more updated than other ABTH options)  
 AB54TH - ABH with a 54 acre  
 tenant pond (more updated than other ABTH options)  
 ABTHV - AB54TH plus David  
 Vey Pond option  
 AB54TVg - AB54T plus David Vey Pond under gravity  
 drainage  
 ABTV - 54 Acre Tenant Pond plus David Vey under gravity  
 ABTVPump -  
 Tenant pond plus David Vey Pumped pond  
 ABCTV - AB with 172508's C improvement  
 with Tenant and Vey gravity ponds  
 ABTb2V - ABT with a bypass channel to  
 connect to Reine with a modified tenant outfall  
 ABTb3V - ABT with a bypass  
 channel to connect to Reine without tenant outfall  
 ABTb4V - ABT with a bypass  
 channel to connect to Reine with an unmodified Tenant outfall  
 ABTb4V is the  
 selected recommendation as of July 2012  
 ABTb4v with SELA - ABTb4v improvements  
 with the recommended SELA improvements  
 ABTb4v w/out Vey-Haas - ABTb4V  
 recommended improvements without the Vey Pond and Hass pond improvements

\*\*\*\*\*

PLAN DATA

Plan Title: ABTb4V w/out Vey-Haas  
 Plan File : C:\Users\tfruge\Desktop\W15 Expanded RAS\ExpandedLocal.p40

Geometry Title: ABTb4V w/out Vey-Haas  
 Geometry File : C:\Users\tfruge\Desktop\W15 Expanded

RAS\ExpandedLocal.g43

Flow Title :  
 Flow File :

Plan Description:

Proposed Conditions which include Haas Rd pond and all working W14 improvements as of Nov 2011 with only the improvements A and B (not the new diversion ditch) plus Tenant Pond online.

ExpandedLocal.rep

Plan Summary Information:

Number of: Cross Sections =	409	Multiple Openings =	0
Culverts =	21	Inline Structures =	0
Bridges =	29	Lateral Structures =	4

Computational Information

Water surface calculation tolerance =	0.01
Critical depth calculation tolerance =	0.01
Maximum number of iterations =	20
Maximum difference tolerance =	0.3
Flow tolerance factor =	0.001

Computation Options

Critical depth computed only where necessary  
 Conveyance Calculation Method: At breaks in n values only  
 Friction Slope Method: Average Conveyance  
 Computational Flow Regime: Subcritical Flow

\*\*\*\*\*

GEOMETRY DATA

Geometry Title: ABTb4V w/out Vey-Haas  
 Geometry File : C:\Users\tfruge\Desktop\W15 Expanded RAS\ExpandedLocal.g43

Reach Connection Table

\*\*\*\*\*

* River	Reach	* Upstream Boundary	* Downstream Boundary *
* Bayou Vincent	Upper	*	* J5 *
* Bayou Vincent	Lower	* J5	* *
* Doubloon	to Pearl	* J1	* *
* Doubloon	to Marsh	* J1	* *
* Gum Bayou	Upper	*	* J7 *
* Gum Bayou	Lower	* J7	* *
* Poor Boy Canal	Main	* J6	* J7 *
* Reine Canal	Main	* J2	* J3a *
* W-15 Main	Upper	*	* J6 *
* W-15 Main	Mid	* J6	* J3a *
* W-15 Main	Upper1	* J3a	* J3b *
* W-15 Main	New	*	* J3b *
* W-15 Main	South	* J3b	* J1 *
* W14 Main	Upper	*	* J4 *
* W14 Main	Mid	* J4	* J2 *
* W14 Main	Lower	* J2	* *

\* West Diversion Main \* J4 \* J5 \*  
 \*\*\*\*\*

JUNCTION INFORMATION

Name: J1  
 Description:  
 Momentum computation Method  
 Add Friction  
 Do Not Add Weight

Length across Junction		Tributary		Length	Angle
River	Reach	River	Reach		
W-15 Main	South	to Doubloon	to Marsh	110	78
W-15 Main	South	to Doubloon	to Pearl	310	45

Name: J2  
 Description:  
 Momentum computation Method  
 Add Friction  
 Do Not Add Weight

Length across Junction		Tributary		Length	Angle
River	Reach	River	Reach		
W14 Main	Mid	to W14 Main	Lower	250	0
W14 Main	Mid	to Reine Canal	Main	1076	90

Name: J4  
 Description:  
 Momentum computation Method  
 Add Friction  
 Do Not Add Weight

Length across Junction		Tributary		Length	Angle
River	Reach	River	Reach		
W14 Main	Upper	to W14 Main	Mid	63	0
W14 Main	Upper	to West Diversion	Main	219	90

Name: J5  
 Description:  
 Momentum computation Method  
 Add Friction  
 Do Not Add Weight

Length across Junction		Tributary		Length	Angle
River	Reach	River	Reach		
West Diversion	Main	to Bayou Vincent	Lower	130	90
Bayou Vincent	Upper	to Bayou Vincent	Lower	500	0

ExpandedLocal.rep

Name: J6

Description:

Momentum computation Method  
 Add Friction  
 Do Not Add Weight

Length across Junction		Tributary		Reach	Length	Angle
River	Reach	River				
W-15 Main	Upper	to W-15 Main	Mid		451	0
W-15 Main	Upper	to Poor Boy Canal	Main		50	89

Name: J7

Description:

Momentum computation Method  
 Add Friction  
 Do Not Add Weight

Length across Junction		Tributary		Reach	Length	Angle
River	Reach	River				
Poor Boy Canal	Main	to Gum Bayou	Lower		5	83
Gum Bayou	Upper	to Gum Bayou	Lower		136	8

Name: J3a

Description:

Momentum computation Method  
 Add Friction  
 Do Not Add Weight

Length across Junction		Tributary		Reach	Length	Angle
River	Reach	River				
W-15 Main	Mid	to W-15 Main	Upper1		200	0
Reine Canal	Main	to W-15 Main	Upper1		220	45

Name: J3b

Description:

Energy computation Method

Length across Junction		Tributary		Reach	Length	Angle
River	Reach	River				
W-15 Main	New	to W-15 Main	South		10	
W-15 Main	Upper1	to W-15 Main	South		50	

CROSS SECTION

RIVER: Bayou Vincent

REACH: Upper

RS: 6072

ExpandedLocal.rep

INPUT

Description: Data from COEtoSTP River Sta 1.15

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	17.5	20	17.49	37.5	13.41	50.5	10.26	63.4	6.33
71	5.31	78.5	5.51	88.7	6.97	102.5	11.46	119.5	12.7
170	17.49	190	17.5						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	37.5	.05	102.5	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	37.5	102.5		563	563		.1	.3

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Upper RS: 5509

INPUT

Description: Data from Model COEtoSTP 1.04333\*

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	15.83	20	15.82	37.5	11.74	50.5	8.59	63.4	4.66
71	3.64	78.5	3.84	88.7	5.3	102.5	9.79	119.5	11.03
170	15.82	190	15.83						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	37.5	.05	102.5	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	37.5	102.5		282	282		.1	.3

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Upper RS: 5227

INPUT

ExpandedLocal.rep

Description: Data from COEtoSTP River Sta 0.99

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	15	20	14.99	37.5	10.91	50.5	7.76	63.4	3.83
71	2.81	78.5	3.01	88.7	4.47	102.5	8.96	119.5	10.2
170	14.99	190	15						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	37.5	.05	102.5	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	37.5	102.5		53	53		.1	.3

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Upper RS: 5174

INPUT

Description: Data from COEtoSTP River Sta 0.98

Station Elevation Data num= 46

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	14	1.1	14	13.6	12.8	13.61	12.8	14.7	12.8
14.71	12.8	27.2	12	27.21	12	28.3	12	28.31	12
40.8	10.9	40.81	10.9	41.9	10.9	41.91	10.9	54.4	7.8
54.41	7.8	55.5	7.8	55.51	7.8	68	3.83	68.1	3.83
69.1	3.83	69.11	3.83	71	3.83	81.6	3	81.61	3
82.7	3	82.71	3	95.2	4.47	95.21	4.47	96.3	4.47
96.31	4.47	108.8	9	108.81	9	109.9	9	109.91	9
122.4	10.2	122.41	10.2	123.5	10.2	123.51	10.2	136	12
136.1	12	137.1	12	137.11	12	150	14	150.1	14
170	14.99								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	0	.05	150	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	0	150		16	16		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
150.65	170	16.65	F

ExpandedLocal.rep

BRIDGE

RIVER: Bayou Vincent

REACH: Upper RS: 5166

INPUT

Description: Data from Army Corps Model

Distance from Upstream XS = 1

Deck/Roadway Width = 14

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 2

Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

\*\*\*\*\*  
 0 16.65 13.95 170 16.65 13.95

Upstream Bridge Cross Section Data

Station Elevation Data num= 46

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*  
 0 14 1.1 14 13.6 12.8 13.61 12.8 14.7 12.8  
 14.71 12.8 27.2 12 27.21 12 28.3 12 28.31 12  
 40.8 10.9 40.81 10.9 41.9 10.9 41.91 10.9 54.4 7.8  
 54.41 7.8 55.5 7.8 55.51 7.8 68 3.83 68.1 3.83  
 69.1 3.83 69.11 3.83 71 3.83 81.6 3 81.61 3  
 82.7 3 82.71 3 95.2 4.47 95.21 4.47 96.3 4.47  
 96.31 4.47 108.8 9 108.81 9 109.9 9 109.91 9  
 122.4 10.2 122.41 10.2 123.5 10.2 123.51 10.2 136 12  
 136.1 12 137.1 12 137.11 12 150 14 150.1 14  
 170 14.99

Manning's n Values num= 3

Sta n Val Sta n Val Sta n Val

\*\*\*\*\*  
 0 .1 0 .05 150 .1

Bank Sta: Left Right Coeff Contr. Expan.

0 150 .1 .3

Ineffective Flow num= 1

Sta L Sta R Elev Permanent

150.65 170 16.65 F

Downstream Deck/Roadway Coordinates

num= 2

Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

\*\*\*\*\*



0 16.65 13.95 170 16.65 13.95

Downstream Bridge Cross Section Data

Station Elevation Data num= 46

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	14	1.1	14	13.6	12.8	13.61	12.8	14.7	12.8
14.71	12.8	27.2	12	27.21	12	28.3	12	28.31	12
40.8	10.9	40.81	10.9	41.9	10.9	41.91	10.9	54.4	7.8
54.41	7.8	55.5	7.8	55.51	7.8	68	3.83	68.1	3.83
69.1	3.83	69.11	3.83	71	3.83	81.6	3	81.61	3
82.7	3	82.71	3	95.2	4.47	95.21	4.47	96.3	4.47
96.31	4.47	108.8	9	108.81	9	109.9	9	109.91	9
122.4	10.2	122.41	10.2	123.5	10.2	123.51	10.2	136	12
136.1	12	137.1	12	137.11	12	150	14	150.1	14
170	14.99								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	0	.05	150	.1

Bank Sta: Left Right Coeff Contr. Expan.  
 0 150 .1 .3

Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 150 170 16.65 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 10

Pier Data

Pier Station	Upstream=	Downstream=
	14.16	14.16
Upstream num=	2	
Width Elev Width Elev		
1.1 12 1.1 14.99		
Downstream num=	2	
Width Elev Width Elev		
1.1 12 1.1 14.99		

ExpandedLocal.rep

Pier Data

Pier Station Upstream= 27.75 Downstream= 27.75  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.1 12 1.1 14.99  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.1 12 1.1 14.99

Pier Data

Pier Station Upstream= 41.35 Downstream= 41.35  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.1 12 1.1 14.99  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.1 12 1.1 14.99

Pier Data

Pier Station Upstream= 54.5 Downstream= 54.5  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.1 12 1.1 14.99  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.1 12 1.1 14.99

Pier Data

Pier Station Upstream= 68.55 Downstream= 68.55  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.1 12 1.1 14.99  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.1 12 1.1 14.99

Pier Data

Pier Station Upstream= 82.15 Downstream= 82.15  
Upstream num= 2

ExpandedLocal.rep

```
Width  Elev  Width  Elev
*****
1.1    12    1.1    14.99
Downstream  num=      2
Width  Elev  Width  Elev
*****
1.1    12    1.1    14.99
```

```
Pier Data
Pier Station  Upstream= 95.75  Downstream= 95.75
Upstream  num=      2
Width  Elev  Width  Elev
*****
1.1    12    1.1    14.99
Downstream  num=      2
Width  Elev  Width  Elev
*****
1.1    12    1.1    14.99
```

```
Pier Data
Pier Station  Upstream= 109.35  Downstream= 109.35
Upstream  num=      2
Width  Elev  Width  Elev
*****
1.1    12    1.1    14.99
Downstream  num=      2
Width  Elev  Width  Elev
*****
1.1    12    1.1    14.99
```

```
Pier Data
Pier Station  Upstream= 122.95  Downstream= 122.95
Upstream  num=      2
Width  Elev  Width  Elev
*****
1.1    12    1.1    14.99
Downstream  num=      2
Width  Elev  Width  Elev
*****
1.1    12    1.1    14.99
```

```
Pier Data
Pier Station  Upstream= 136.55  Downstream= 136.55
Upstream  num=      2
Width  Elev  Width  Elev
*****
1.1    12    1.1    14.99
Downstream  num=      2
```

```

Width  Elev  Width  Elev
*****
1.1    12    1.1    14.99
    
```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth

inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: Bayou Vincent

REACH: Upper

RS: 5158

INPUT

Description: Data from COEtoSTP River Sta 0.95

Station Elevation Data num= 46

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	14	1.1	14	13.6	12.8	13.61	12.8	14.7	12.8
14.71	12.8	27.2	12	27.21	12	28.3	12	28.31	12
40.8	10.9	40.81	10.9	41.9	10.9	41.91	10.9	54.4	7.8
54.41	7.8	55.5	7.8	55.51	7.8	68	3.83	68.1	3.83
69.1	3.83	69.11	3.83	71	3.83	81.6	3	81.61	3
82.7	3	82.71	3	95.2	4.47	95.21	4.47	96.3	4.47
96.31	4.47	108.8	9	108.81	9	109.9	9	109.91	9
122.4	10.2	122.41	10.2	123.5	10.2	123.51	10.2	136	12
136.1	12	137.1	12	137.11	12	150	14	150.1	14
170	14.99								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	0	.05	150	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

ExpandedLocal.rep

0 150 50 50 50 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 150 170 16.65 F

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Upper RS: 4963

INPUT

Description: Data from COEtoSTP River Sta 0.94

Station Elevation Data num= 46  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 14 1.1 14 13.6 12.8 13.61 12.8 14.7 12.8  
 14.71 12.8 27.2 12 27.21 12 28.3 12 28.31 12  
 40.8 10.9 40.81 10.9 41.9 10.9 41.91 10.9 54.4 7.8  
 54.41 7.8 55.5 7.8 55.51 7.8 68 3.83 68.1 3.83  
 69.1 3.83 69.11 3.83 71 3.83 81.6 3 81.61 3  
 82.7 3 82.71 3 95.2 4.47 95.21 4.47 96.3 4.47  
 96.31 4.47 108.8 9 108.81 9 109.9 9 109.91 9  
 122.4 10.2 122.41 10.2 123.5 10.2 123.51 10.2 136 12  
 136.1 12 137.1 12 137.11 12 150 14 150.1 14  
 170 14.99

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .1 0 .05 150 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 0 150 880 880 880 .1 .3

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Upper RS: 4083

INPUT

Description: Data from COEtoSTP River Sta 0.773333\*

Station Elevation Data num= 47  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 473.71 16.67 707.04 16 940.37 16.67 993.71 16.67 1000 16.14  
 1001.36 16 1016.82 14.02 1016.83 14.02 1018.18 13.89 1018.19 13.88

ExpandedLocal.rep

1023.73	13.22	1033.64	12.88	1033.65	12.88	1035	12.86	1035.01	12.86
1050.45	12.23	1050.47	12.23	1051.81	12.2	1051.83	12.2	1067.27	10.91
1067.28	10.91	1068.63	10.88	1068.64	10.88	1074.99	10.23	1084.09	7.17
1084.21	7.13	1085.45	6.82	1085.46	6.82	1087.8	6.23	1095.2	4.22
1100.91	3.52	1101.27	3.52	1108.41	4.52	1109.04	4.57	1110.03	4.85
1116.18	6.91	1116.81	6.99	1123.95	8.28	1124.58	8.36	1131.72	9.85
1131.78	9.86	1132.35	9.93	1139.72	11.51	1140.01	11.56	1171.41	16.5
1190.27	16.31	1197.04	17						

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
473.71	.1	1000	.05	1139.72	.1			

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1000	1139.72		440	440	440		.1	.3

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Upper RS: 3643

INPUT  
 Description: Data from COEtoSTP River Sta 0.69

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
710.56	18	1060.56	17	1410.56	18	1490.56	18	1500	17.21
1526	13.58	1582.16	12.26	1604.31	4.65	1610.56	3.78	1616.03	4.72
1634.58	10.27	1676.58	17.47	1701.58	17.03	1710.56	18		

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
710.56	.1	1500	.05	1634.58	.1			

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1500	1634.58		53	53	53		.1	.3

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Upper RS: 3590

INPUT  
 Description: Data from COEtoSTP River Sta 0.68

ExpandedLocal.rep

Station Elevation Data num= 56

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
710.56	15	1060.56	14	1410.56	15	1490.56	15	1500	14.21
1526	10.58	1526.01	10.58	1538	10.4	1538.01	10.4	1539	10.4
1539.01	10.4	1551	10	1551.01	10	1552	10	1552.01	10
1565	9.6	1565.01	9.6	1566	9.6	1566.01	9.6	1578	9.3
1578.01	9.3	1579	9.3	1579.01	9.3	1582.16	9.26	1592	6.6
1592.01	6.6	1593	6.6	1593.01	6.6	1604.31	4.3	1606	4.3
1606.01	4.3	1607	4.3	1607.01	4.3	1610.56	4.3	1616.03	4.3
1619	4.3	1619.01	4.3	1620	4.3	1620.01	4.3	1633	6.3
1633.01	6.3	1634	6.3	1634.01	6.3	1634.58	7.27	1646	8.2
1646.01	8.2	1647	8.2	1647.01	8.2	1662	9.7	1662.01	9.7
1663	9.7	1663.01	9.7	1676.57	14.1	1676.58	14.1	1701.58	14.03
1710.56	15								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
710.56	.1	1500	.05	1676.58	.1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1500	1676.58		16	16	16		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
710.56	1524.61	15	F
1677.57	1710.56	15	F

BRIDGE

RIVER: Bayou Vincent  
 REACH: Upper RS: 3582

INPUT

Description: Data from Army Corp of Engineers Model  
 Distance from Upstream XS = 1  
 Deck/Roadway Width = 14  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 7

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
1410.56	15				1526	18.72	10.58	1526	18.72	16.18				
1676.58	18.72	16.18	1676.58	18.72	14.1	1701.58	18.72							
1710.56	18.72													

Upstream Bridge Cross Section Data

ExpandedLocal.rep

Station Elevation Data num= 56

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
710.56	15	1060.56	14	1410.56	15	1490.56	15	1500	14.21
1526	10.58	1526.01	10.58	1538	10.4	1538.01	10.4	1539	10.4
1539.01	10.4	1551	10	1551.01	10	1552	10	1552.01	10
1565	9.6	1565.01	9.6	1566	9.6	1566.01	9.6	1578	9.3
1578.01	9.3	1579	9.3	1579.01	9.3	1582.16	9.26	1592	6.6
1592.01	6.6	1593	6.6	1593.01	6.6	1604.31	4.3	1606	4.3
1606.01	4.3	1607	4.3	1607.01	4.3	1610.56	4.3	1616.03	4.3
1619	4.3	1619.01	4.3	1620	4.3	1620.01	4.3	1633	6.3
1633.01	6.3	1634	6.3	1634.01	6.3	1634.58	7.27	1646	8.2
1646.01	8.2	1647	8.2	1647.01	8.2	1662	9.7	1662.01	9.7
1663	9.7	1663.01	9.7	1676.57	14.1	1676.58	14.1	1701.58	14.03
1710.56	15								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
710.56	.1	1500	.05	1676.58	.1

Bank Sta: Left Right Coeff Contr. Expan.

1500	1676.58	.1	.3
------	---------	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
710.56	1524.61	15	F
1677.57	1710.56	15	F

Downstream Deck/Roadway Coordinates

num= 7

Sta Hi	Cord Lo	Cord	Sta Hi	Cord Lo	Cord	Sta Hi	Cord Lo	Cord
1410.56	15		1526	18.72	10.58	1526	18.72	16.18
1676.58	18.72	16.18	1676.58	18.72	14.1	1701.58	18.72	
1710.56	18.72							

Downstream Bridge Cross Section Data

Station Elevation Data num= 56

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
710.56	15	1060.56	14	1410.56	15	1490.56	15	1500	14.21
1526	10.58	1526.01	10.58	1538	10.4	1538.01	10.4	1539	10.4
1539.01	10.4	1551	10	1551.01	10	1552	10	1552.01	10
1565	9.6	1565.01	9.6	1566	9.6	1566.01	9.6	1578	9.3
1578.01	9.3	1579	9.3	1579.01	9.3	1582.16	9.26	1592	6.6
1592.01	6.6	1593	6.6	1593.01	6.6	1604.31	4.3	1606	4.3
1606.01	4.3	1607	4.3	1607.01	4.3	1610.56	4.3	1616.03	4.3
1619	4.3	1619.01	4.3	1620	4.3	1620.01	4.3	1633	6.3



ExpandedLocal.rep

1633.01	6.3	1634	6.3	1634.01	6.3	1634.58	7.27	1646	8.2
1646.01	8.2	1647	8.2	1647.01	8.2	1662	9.7	1662.01	9.7
1663	9.7	1663.01	9.7	1676.57	14.1	1676.58	14.1	1701.58	14.03
1710.56	15								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
710.56	.1	1500	.05	1676.58	.1

Bank Sta: Left Right Coeff Contr. Expan.  
 1500 1676.58 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
710.56	1525.11	15	F
1677.07	1710.56	15	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 10

Pier Data

Pier Station	Upstream=	1538.5	Downstream=	1538.5
Upstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	5	1	16.18	
Downstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	5	1	16.18	

Pier Data

Pier Station	Upstream=	1551.5	Downstream=	1551.5
Upstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	5	1	16.18	
Downstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	5	1	16.18	

ExpandedLocal.rep

Pier Data

Pier Station Upstream= 1565.5 Downstream= 1565.5  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1 5 1 16.18  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1 5 1 16.18

Pier Data

Pier Station Upstream= 1578.5 Downstream= 1578.5  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1 5 1 16.18  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1 5 1 16.18

Pier Data

Pier Station Upstream= 1592.5 Downstream= 1592.5  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1 5 1 16.18  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1 5 1 16.18

Pier Data

Pier Station Upstream= 1606.5 Downstream= 1606.5  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1 5 1 16.18  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1 5 1 16.18

Pier Data

Pier Station Upstream= 1619.5 Downstream= 1619.5  
Upstream num= 2

```

      Width  Elev   Width  Elev
*****
      1      5      1  16.18
Downstream  num=    2
      Width  Elev   Width  Elev
*****
      1      5      1  16.18

```

Pier Data

```

Pier Station      Upstream= 1633.5   Downstream= 1633.5
Upstream         num=    2
      Width  Elev   Width  Elev
*****
      1      5      1  16.18
Downstream       num=    2
      Width  Elev   Width  Elev
*****
      1      5      1  16.18

```

Pier Data

```

Pier Station      Upstream= 1646.5   Downstream= 1646.5
Upstream         num=    2
      Width  Elev   Width  Elev
*****
      1      5      1  16.18
Downstream       num=    2
      Width  Elev   Width  Elev
*****
      1      5      1  16.18

```

Pier Data

```

Pier Station      Upstream= 1662.5   Downstream= 1662.5
Upstream         num=    2
      Width  Elev   Width  Elev
*****
      1      5      1  16.18
Downstream       num=    2
      Width  Elev   Width  Elev
*****
      1      5      1  16.18

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

ExpandedLocal.rep

Energy Only

Additional Bridge Parameters

- Add Friction component to Momentum
- Do not add Weight component to Momentum
- Class B flow critical depth computations use critical depth inside the bridge at the upstream end
- Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Upper RS: 3574

INPUT

Description: Data from COEtoSTP River Sta 0.65

Station Elevation Data num= 56

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
710.56	15	1060.56	14	1410.56	15	1490.56	15	1500	14.21
1526	10.58	1526.01	10.58	1538	10.4	1538.01	10.4	1539	10.4
1539.01	10.4	1551	10	1551.01	10	1552	10	1552.01	10
1565	9.6	1565.01	9.6	1566	9.6	1566.01	9.6	1578	9.3
1578.01	9.3	1579	9.3	1579.01	9.3	1582.16	9.26	1592	6.6
1592.01	6.6	1593	6.6	1593.01	6.6	1604.31	4.3	1606	4.3
1606.01	4.3	1607	4.3	1607.01	4.3	1610.56	4.3	1616.03	4.3
1619	4.3	1619.01	4.3	1620	4.3	1620.01	4.3	1633	6.3
1633.01	6.3	1634	6.3	1634.01	6.3	1634.58	7.27	1646	8.2
1646.01	8.2	1647	8.2	1647.01	8.2	1662	9.7	1662.01	9.7
1663	9.7	1663.01	9.7	1676.57	14.1	1676.58	14.1	1701.58	14.03
1710.56	15								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
710.56	.1	1500	.05	1676.58	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1500 1676.58 53 53 53 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
710.56	1525.11	15	F
1677.07	1710.56	15	F

CROSS SECTION

ExpandedLocal.rep

RIVER: Bayou Vincent  
REACH: Upper RS: 3379

INPUT

Description: Data from COEtoSTP River Sta 0.64

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
710.56	17	1060.56	16	1410.56	17	1490.56	17	1500	16.21
1526	12.58	1582.16	11.26	1604.31	3.65	1610.56	2.78	1616.03	3.72
1634.58	9.27	1676.58	16.47	1701.58	16.03	1710.56	17		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
710.56	.1	1500	.05	1634.58	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1500	1634.58		528	528		.1	.3

Ineffective Flow	num=	Sta L	Sta R	Elev	Permanent
	1	710.56	1514.83	15	F

CROSS SECTION

RIVER: Bayou Vincent  
REACH: Upper RS: 2851

INPUT

Description: Data from COEtoSTP River Sta 0.54\*

Station Elevation Data num= 19

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
532.92	15.38	905.26	14.23	1277.6	14.58	1347.33	14.51	1362.71	14.24
1368.51	13.79	1372.75	13.49	1392.78	10.4	1436.04	8.6	1453.11	2.58
1457.92	1.84	1462.53	2.58	1473.68	5.63	1478.18	7.87	1489.03	9.08
1556.81	14.67	1578.71	14.82	1603.61	14.87	1620.42	15.75		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
532.92	.1	1372.75	.05	1478.18	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1372.75	1478.18		1056	1056		.1	.3

CROSS SECTION

ExpandedLocal.rep

RIVER: Bayou Vincent  
 REACH: Upper RS: 1795

INPUT

Description: Data from COEtoSTP River Sta 0.34\*

Station Elevation Data num= 19

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
177.64	12.12	594.66	10.69	1011.68	9.75	1089.78	9.53	1107	8.71
1113.5	8.29	1118.25	8.06	1126.34	6.03	1143.81	3.29	1150.7	.44
1152.64	-.05	1155.54	.3	1162.56	1.55	1165.4	5.06	1186.34	6.71
1317.27	11.08	1359.57	11.94	1407.67	12.55	1440.14	13.25		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
177.64	.1	1118.25	.05	1165.4	.1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1118.25	1165.4		528	528	528		.1	.3

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Upper RS: 1267

INPUT

Description: Data from COEtoSTP River Sta 0.24

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	10.5	961	7.04	986	5.54	991	5.34	1000	-.99
1007	-.49	1009	3.66	1035	5.53	1250	10.5	1350	12

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	991	.05	1009	.1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	991	1009		0	0	0		.1	.3

CROSS SECTION

ExpandedLocal.rep

RIVER: Bayou Vincent  
REACH: Lower RS: 1214

INPUT

Description: Data from COEtoSTP River Sta .23

Station Elevation Data		num= 10							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	10.5	961	7.04	986	5.54	991	5.34	1000	-.99
1007	-.49	1009	3.66	1035	5.53	1250	10.5	1350	12

Manning's n Values		num= 3			
Sta	n Val	Sta	n Val	Sta	n Val
0	.1	991	.05	1009	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	991	1009		88	88		.1	.3

CROSS SECTION

RIVER: Bayou Vincent  
REACH: Lower RS: 1126

INPUT

Description: Data from COEtoSTP River Sta .213333\*

Station Elevation Data		num= 10							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	10.42	961	6.96	986	5.46	991	5.26	1000	-1.07
1007	-.57	1009	3.58	1035	5.45	1250	10.42	1350	11.92

Manning's n Values		num= 3			
Sta	n Val	Sta	n Val	Sta	n Val
0	.1	991	.05	1009	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	991	1009		440	440		.1	.3

CROSS SECTION

RIVER: Bayou Vincent  
REACH: Lower RS: 686

INPUT

ExpandedLocal.rep

Description: Data from COEtoSTP River Sta 0.13

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	10	961	6.54	986	5.04	991	4.84	1000	-1.49
1007	-.99	1009	3.16	1035	5.03	1250	10	1350	11.5

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	991	.05	1009	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	991	1009		600	600	.1	.3

CROSS SECTION

RIVER: Bayou Vincent

REACH: Lower RS: 86

INPUT

Description: Data from COEtoSTP River Sta 0.01625\*



ExpandedLocal.rep

ExpandedLocal.rep

ExpandedLocal.rep

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	8.42	961	4.96	986	3.46	991	3.26	1000	-3.07
1007	-2.57	1009	1.58	1035	3.45	1250	8.42	1350	9.92

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	991	.05	1009	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	991	1009		86	86		.1	.3

CROSS SECTION

RIVER: Bayou Vincent  
 REACH: Lower RS: 0

INPUT

Description: Data from COEtoSTP River Sta 0

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
08.190001		961	4.73	986	3.23	991	3.03	1000	-3.3
1007	-2.8	1009	1.35	1035	3.22	1250	8.190001	1350	9.690001

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	991	.05	1009	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	991	1009		0	0		.1	.3

CROSS SECTION

RIVER: Doublon

ExpandedLocal.rep

REACH: to Pearl

RS: 15291

INPUT

Description: 310' DS Confluence with W-15

Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5.9	25	5.3	28	2.71	35	.71	45	-2.79
55	-3.39	65	-3.19	75	-.09	80	2.72	82	2.88
107	2.81	115.34	3.031	129.799	3.072	161.7	3.221	184.766	3.383
198.406	3.412	225.82	3.462	235.111	3.496	239.733	3.563	253.508	3.886
294.7	5.017	308.521	5.555	336.301	6.098	345.226	6.361	349.667	6.275
381.931	5.806	404.634	6.046	446.782	6.048	455.342	6.064	459.6	6.066
492.047	6.059	514.567	5.989	528.752	5.962	533.489	5.968		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	25	.05	82	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	25	82		898	898		.1	.3

CROSS SECTION

RIVER: Doubloon

REACH: to Pearl

RS: 14393

INPUT

Description:

Station Elevation Data num= 42

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5.9	25	5.3	28	2.71	35	.71	45	-2.79
55	-3.39	65	-3.19	75	-.09	80	2.72	82	2.88
106.21	3.058	118.92	3.133	144.8	3.41	155.689	3.517	161.037	3.589
176.705	3.796	215.863	4.27	222.078	4.356	249.006	4.744	264.388	4.972
274.853	5.078	299.811	5.377	334.375	5.673	336.495	5.688	393.898	6.053
423.983	6.171	441.501	6.238	453.42	6.268	511.471	6.423	512.942	6.427
516.073	6.435	572.464	6.585	598.959	6.659	631.986	6.743	654.036	6.796
686.447	6.866	689.459	6.872	691.508	6.875	702.28	6.915	751.03	7.059
773.935	7.039	782.072	7.011						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	25	.05	82	.06

ExpandedLocal.rep

Bank Sta: Left    Right    Lengths: Left Channel    Right    Coeff Contr.    Expan.  
                  25        82                    1509    897    1270                    .1        .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl                    RS: 13496

INPUT

Description:

Station Elevation Data    num=    41

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-449.311	10.003	405.892	10.061	383.328	9.459	351.134	8.72	337.084	8.202
-296.376	6.697	272.923	5.908	241.618	5.216	236.122	5.192	224.857	4.959
-186.86	4.073	150.655	4.224	132.102	4.213	-112.63	4.221	-88.915	4.172
-77.344	4.181	-52.113	4.209	-22.586	4.529	-15.312	4.526	-.403	4.823
0	4.825	0	5.9	25	5.3	28	2.71	35	.71
45	-2.79	55	-3.39	65	-3.19	75	-.09	80	2.72
82	2.88	107	2.81	123.632	3.676	172.844	3.891	174.08	3.904
174.862	3.909	178.326	3.905	224.529	3.859	237.98	3.945	274.977	3.997
291.138	3.988								

Manning's n Values    num=    3

Sta	n Val	Sta	n Val	Sta	n Val
*****					
-449.311	.06	25	.05	82	.06

Bank Sta: Left    Right    Lengths: Left Channel    Right    Coeff Contr.    Expan.  
                  25        82                    571    898    1088                    .1        .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl                    RS: 12598

INPUT

Description:

Station Elevation Data    num=    40

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-669.291	10.86	649.733	10.434	617.824	9.806	585.856	9.353	566.356	9.066
-557.751	8.971	514.888	8.51	-483.57	8.226	463.421	8.101	452.718	8.067
-417.762	8.03	413.315	8.029	411.953	8.025	409.389	8.02	360.485	7.945
-334.509	7.911	309.018	7.862	295.106	7.832	-257.55	7.753	255.703	7.746

ExpandedLocal.rep

-249.669	7.728	-206.082	7.576	-186.847	7.486	-172.312	7.417	-150.425	7.299
-130.427	7.169	-86.772	6.902	-52.833	6.548	-23.12	6.183	25	5.3
28	2.71	35	.71	45	-2.79	55	-3.39	65	-3.19
75	-.09	80	2.72	82	2.88	107	2.81	224	5.1

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-669.291	.06	25	.05	82	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	25	82		1182	962	764	.1
							.3

CROSS SECTION

RIVER: Doubloun  
 REACH: to Pearl RS: 11636

INPUT

Description:

Station Elevation Data num= 97

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-74	8.348	-68.141	8.373	-53.282	8.483	-38.901	8.444	1.561	8.477
43.371	8.009	56.403	7.766	88.869	7.247	111.245	6.288	122.6	5.35
126.38	5.21	128.52	3.54	129.8	2.67	133.87	1.7	137.79	.73
139.22	.31	144.57	-1.57	149.21	-3.12	149.92	-3.2	155.27	-3.56
160.62	-3.94	167.78	-3.52	171.23	-3.2	174.94	-1.96	181.83	.13
182.09	.26	187.13	2.69	187.82	2.75	189.25	3.12	211.23	3.07
225.383	3.333	257.978	3.569	263.375	3.591	270.806	3.595	320.248	3.588
356.161	3.631	377.12	3.684	405.975	3.805	433.993	3.876	454.344	4.371
459.103	4.497	477.489	4.981	490.796	5.209	539.993	6.144	547.544	6.295
549.587	6.341	553.144	6.377	585.636	6.913	604.292	7.082	651.975	7.65
657.734	7.717	661.04	7.732	673.265	7.729	717.789	7.622	750.806	7.568
774.537	7.518	806.537	7.369	816.572	7.326	831.827	7.261	846.609	7.188
873.224	7.04	890.667	6.923	936.389	6.53	949.507	6.393	974.454	5.97
1008.347	5.485	1026.168	4.897	1067.186	4.001	1115.948	3.962	1122.036	3.945
1126.026	3.926	1145.191	3.867	1184.866	3.748	1193.125	3.726	1205.728	3.71
1243.705	3.671	1295.508	3.741	1299.759	3.746	1302.545	3.756	1315.928	3.811
1361.385	3.987	1370.848	4.043	1385.288	4.109	1416.776	4.258	1419.776	4.273
1446.107	4.892	1453.176	5.032	1473.382	5.426	1494.365	6.021	1517.176	6.766
1531.544	7.235	1586.701	8.741	1589.706	8.812	1594.821	8.828	1647.868	8.98
1679.036	9.113	1706.029	9.141						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

ExpandedLocal.rep

-74 .06 126.38 .05 189.25 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 126.38 189.25 634 962 1160 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 10674

INPUT

Description:

Station Elevation Data		num= 151									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****											
-993	7.072	-976.105	7.168	-945.381	7.044	-913.787	6.634	-890.205	6.234		
-867.274	6.118	-835.029	5.887	-809.264	5.793	-779.854	5.754	-758.444	5.794		
-724.678	5.797	-689.954	5.688	-669.502	5.603	-649.613	5.612	-626.197	5.592		
-614.326	5.601	-578.038	5.704	-559.15	5.744	-540.782	5.913	-516.357	6.076		
-503.974	6.13	-479.744	5.961	-448.798	6.097	-443.13	6.103	-431.951	6.147		
-393.622	6.22	-354.206	6.359	-338.446	6.361	-323.121	6.334	-283.27	6.21		
-260.064	6.276	-228.094	6.297	-223.45	6.284	-214.29	6.277	-172.918	6.231		
-130.374	6.192	-117.743	6.178	-113.61	6.172	-110.634	6.173	-102.955	6.185		
-74.67	6.198	-65.621	6.229	-48.059	6.287	-13.952	6.347	3.622	6.366		
37.718	6.485	58.551	6.51	89.388	6.544	103.894	6.543	141.057	6.605		
179.87	6.145	192.727	6.094	220.94	5.39	227.75	5.12	230.16	3.41		
231.6	2.63	236.17	1.72	240.58	.76	242.19	.35	248.2	-1.78		
253.42	-3.45	254.22	-3.57	260.23	-4.01	266.25	-4.49	273.81	-3.79		
277.45	-3.2	281.38	-1.81	288.66	.34	288.94	.47	294.26	2.66		
294.99	2.73	296.5	3.36	315.45	3.33	326.619	3.526	371.192	3.572		
379.678	3.587	385.408	3.609	432.737	3.716	474.288	3.885	485.796	3.903		
502.842	4.328	509.223	4.497	527.608	4.981	540.916	5.209	590.113	6.144		
597.664	6.295	599.706	6.341	603.264	6.377	635.756	6.913	654.412	7.082		
702.095	7.65	707.854	7.717	711.16	7.732	723.385	7.729	767.909	7.622		
800.926	7.568	824.657	7.518	856.657	7.369	866.691	7.326	881.947	7.261		
896.729	7.188	923.344	7.04	940.787	6.923	986.509	6.53	999.627	6.393		
1024.574	5.971	1058.466	5.485	1076.288	4.897	1117.306	4.001	1166.068	3.962		
1172.156	3.945	1176.146	3.926	1195.311	3.867	1209.8	3.27	1211.4	2.59		
1216.48	1.73	1221.38	.78	1223.16	.39	1229.84	-1.98	1235.62	-3.78		
1236.52	-3.95	1243.2	-4.46	1257.84	-4.06	1261.68	-3.21	1265.81	-1.66		
1273.49	.56	1273.78	.68	1279.39	2.63	1280.16	2.7	1281.75	3.6		
1293.825	3.671	1345.628	3.741	1349.879	3.746	1352.665	3.756	1366.048	3.811		
1411.505	3.987	1420.968	4.043	1435.407	4.109	1466.896	4.258	1469.896	4.273		
1496.227	4.892	1503.296	5.032	1523.502	5.426	1544.485	6.021	1567.296	6.766		
1581.664	7.235	1636.82	8.741	1639.826	8.812	1644.941	8.828	1697.987	8.98		
1729.156	9.113										

ExpandedLocal.rep

Manning's n Values		num= 5		Sta n Val		Sta n Val		Sta n Val	
-993	.06	227.75	.05	296.5	.06	1166.068	.05	1293.825	.06
Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	227.75	296.5		1244	963	627		.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 9711

INPUT

Description:

Station Elevation Data		num= 111		Sta Elev		Sta Elev		Sta Elev	
156.745	9.336	175.278	9.231	188.165	9.063	242.946	7.457	248.106	7.313
281.345	6.4	308.046	5.727	319.28	5.42	329.12	5.03	331.8	3.27
333.4	2.59	338.48	1.73	343.38	.78	345.16	.39	351.84	-1.98
357.62	-3.78	358.52	-3.95	365.2	-4.46	371.88	-5.04	379.84	-4.06
383.68	-3.21	387.81	-1.66	395.49	.56	395.78	.68	401.39	2.63
402.16	2.7	403.75	3.6	419.68	3.59	528.867	5.355	560.866	6.123
570.181	6.308	587.15	6.638	606.425	7.145	617.007	7.098	653.355	7.057
667.334	7.036	673.141	7.027	678.92	7.02	689.51	6.998	729.204	6.919
776.886	6.696	785.267	6.663	792.245	6.624	824.001	6.43	841.331	6.125
894.979	5.611	897.394	5.581	900.296	5.527	953.458	4.487	997.713	4.154
1009.521	4.152	1023.705	4.127	1065.585	4.026	1077.893	4.001	1085.632	3.992
1096.125	3.983	1128	3.968	1209.8	3.27	1211.4	2.59	1216.48	1.73
1221.38	.78	1223.16	.39	1229.84	-1.98	1235.62	-3.78	1236.52	-3.95
1243.2	-4.46	1257.84	-4.06	1261.68	-3.21	1265.81	-1.66	1273.49	.56
1273.78	.68	1279.39	2.63	1280.16	2.7	1281.75	3.6	1297.68	3.59
1387.171	4.773	1395.803	4.871	1426.501	5.042	1459.933	5.781	1462.616	5.822
1492.746	6.344	1529.428	6.984	1532.694	7.037	1565.822	7.634	1596.24	7.683
1600.652	7.741	1605.456	7.749	1635.482	7.859	1663.053	7.887	1670.312	7.906
1678.217	7.911	1729.865	7.932	1733.222	7.932	1754.106	7.937	1775.392	7.942
1790.354	7.942	1810.716	7.942	1839.681	7.942	1850.509	7.944	1876.131	7.945
1910.664	7.947	1925.257	7.947	1952.011	7.949	1970.818	7.949	1987.335	7.945
2010.833	7.952	2022.659	7.952	2030.973	7.955	2057.983	7.943	2091.128	8.129
2093.307	8.129								

Manning's n Values		num= 5		Sta n Val		Sta n Val		Sta n Val	
156.745	.06	329.12	.05	403.75	.06	1128	.05	1281.75	.06



ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 329.12 403.75 962 962 962 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 8749

INPUT

Description:

Station Elevation Data num= 43

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
129	7.693	138.747	7.734	141.802	7.742	146.361	7.755	197.988	7.872
234.761	7.961	257.23	8	283.685	8.029	316.471	8.401	323.161	8.396
375.712	7.918	411.561	7.24	417.63	5.45	430.5	4.95	433.44	3.14
435.2	2.55	440.78	1.74	446.17	.81	448.12	.43	455.47	-2.19
461.83	-4.11	462.81	-4.32	470.16	-4.91	477.5	-5.6	485.88	-4.33
489.91	-3.22	494.25	-1.51	502.31	.78	502.62	.9	508.52	2.6
509.33	2.68	511	3.85	523.9	3.85	656.116	5.947	665.841	6.203
667.49	6.242	708.516	6.935	717.406	7.245	751.191	7.59	767.322	7.778
793.866	7.96	817.238	8.436	836.541	8.493				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
129	.06	430.5	.05	511	.06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 430.5 511 685 962 1126 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 7787

INPUT

Description:

Station Elevation Data num= 48

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
129	7.693	138.747	7.734	141.802	7.742	146.361	7.755	197.988	7.872
234.761	7.961	257.23	8	283.685	8.029	316.471	8.401	323.161	8.396
375.712	7.918	411.561	7.24	425.568	6.92	434.954	6.747	482.479	5.91
494.195	5.695	499.962	5.591	515.97	5.49	531.88	4.86	535.08	3
537	2.52	543.09	1.75	548.96	.83	551.09	.47	559.1	-2.39

ExpandedLocal.rep

566.04	-4.44	567.11	-4.69	575.12	-5.36	583.12	-6.15	591.91	-4.6
596.13	-3.22	600.69	-1.36	609.14	.99	609.47	1.11	615.65	2.57
616.49	2.66	618.25	4.09	628.13	4.11	656.116	5.947	665.841	6.203
667.49	6.242	708.516	6.935	717.406	7.245	751.191	7.59	767.322	7.778
793.866	7.96	817.238	8.436	836.541	8.493				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
129	.06	531.88	.05	618.25	.06

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	531.88	618.25		511	963	1504		.1	.3

CROSS SECTION

RIVER: Doubleton  
 REACH: to Pearl RS: 6824

INPUT

Description:

Station Elevation Data num= 91

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-756	9.553	748.539	9.639	715.276	10.148	699.069	10.677	679.163	10.288
-649.599	9.736	625.529	8.655	600.129	7.249	580.655	6.449	550.659	5.275
-535.781	4.911	501.189	4.153	458.701	4.087	451.719	4.091	403.586	4.035
-402.249	4.033	390.536	3.986	352.779	3.839	348.47	3.82	303.309	3.497
-266.54	3.619	253.839	3.615	221.666	3.712	204.369	3.773	176.986	3.931
-176.742	3.932	154.839	4.056	137.851	4.139	105.236	4.355	-63.188	4.632
-55.632	4.682	-49.771	4.713	-6.028	4.905	-5.731	4.907	-3.38	4.93
43.575	5.403	82.348	5.683	93.179	5.745	126.388	5.94	142.783	5.958
170.428	6.259	192.386	6.36	214.468	6.695	241.99	7.195	258.507	7.24
291.594	7.482	293.726	7.49	300.697	7.505	310.981	7.536	359.129	7.739
381.907	7.802	405.111	7.898	427.469	7.841	452.832	7.904	474.72	7.851
495.81	7.601	509.524	7.492	523.757	7.69	544.329	7.578	564.15	6.862
579.133	6.143	594.683	5.644	633.25	4.77	636.72	2.86	638.8	2.48
645.39	1.77	651.75	.86	654.06	.51	662.73	-2.6	670.25	-4.77
671.41	-5.06	680.08	-5.81	688.75	-6.7	697.94	-4.87	702.36	-3.23
707.12	-1.21	715.97	1.21	716.31	1.32	722.78	2.55	723.66	2.64
725.5	4.33	732.36	4.37	734.793	4.635	798.856	7.877	800.208	7.929
801.443	7.965	835.042	8.412	868.094	8.122	869.876	8.114	871.828	8.101
905.511	7.904								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

ExpandedLocal.rep

-756 .06 633.25 .05 725.5 .06

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
633.25	725.5	962	962	962	.1	.3	
Ineffective Flow		num=	1				
Sta L	Sta R	Elev	Permanent				
-756	405.11	7.9	F				

CROSS SECTION

RIVER: Doublon  
 REACH: to Pearl RS: 5862

INPUT

Description:

Station Elevation Data	num=	65							
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev									
*****									
106 8.382	118.683	8.372	139.495	8.298	172.577	8.246	189.967	8.218	
200.907	8.197	240.439	8.134	242.019	8.13	248.96	8.118	290.911	8.05
324.243	8.036	341.382	8.058	368.626	7.977	391.854	7.922	433.976	7.747
442.326	7.719	470.653	7.66	492.798	7.576	529.803	7.174	543.269	7.068
570.915	6.955	593.741	6.751	630.025	6.408	712.66	5.56	734.62	4.68
738.36	2.73	740.6	2.44	747.7	1.78	754.54	.88	757.03	.55
766.37	-2.8	774.46	-5.11	775.7	-5.44	785.04	-6.26	794.38	-7.25
803.97	-5.14	808.59	-3.24	813.56	-1.06	822.8	1.43	823.16	1.53
829.91	2.52	830.83	2.61	832.75	4.57	836.58	4.63	951.25	6.92
965.102	7.118	977.302	6.842	995.213	6.994	1024.647	6.975	1070.023	6.984
1078.055	6.961	1083.936	6.955	1095.033	7.032	1120.34	7.136	1133.749	7.201
1156.744	7.347	1189.444	7.681	1200.141	7.762	1229.553	8.021	1245.138	8.05
1295.855	8.226	1300.833	8.248	1305.248	8.258	1338.766	8.311	1354.083	8.344

Manning's n Values	num=	3			
Sta n Val Sta n Val Sta n Val					
*****					
106 .06	734.62	.05	832.75	.06	

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
734.62	832.75	1319	962	465	.1	.3	

CROSS SECTION

RIVER: Doublon  
 REACH: to Pearl RS: 4900

INPUT

ExpandedLocal.rep

Description:

Station Elevation Data num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	4.38	27.367	4.638	54.325	4.439	79.048	4.45	93.457	4.416
130.729	4.2	132.589	4.19	138.389	4.164	177	5.59	202	4.59
206	2.59	216	1.79	226	.59	236	-3.01	246	-5.81
256	-6.71	266	-7.8	276	-5.41	286	-.91	296	1.74
304	2.59	306	4.81	337.454	3.845	355.349	3.853	389.135	3.901
406.513	3.901	440.816	3.901	460.702	3.901	486	0	548	0
563.04	4.759	595.859	4.953	609.094	4.923	635.378	5.093	647.306	5.077
669.409	4.982	698.671	4.933	742.686	4.706	750.037	4.674	767.269	4.595
801.402	4.46	822.019	4.358	833.05	4.305	852.826	4.119	872.459	4.086
904.29	3.912	936.641	3.864	944	1	1028	11109.376		4.15
1109.765	4.154	1109.884	4.155	1160.321	5.441	1175.996	5.288	1210.877	5.473
1242.108	5.932	1261.434	6.019	1308.221	6.157	1311.99	6.169	1324.241	6.144
1333.181	6.135								

Manning's n Values num= 7

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	202	.04	306	.06	460.702	.04	563.04	.1
936.641	.04	1160.321	.1						

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

202	306	480	480	480	.1	.3
-----	-----	-----	-----	-----	----	----

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
635.38	1333.181	5.09	F

CROSS SECTION

RIVER: Doubloun

REACH: to Pearl

RS: 4420

INPUT

Description: Interpolates Section

Station Elevation Data num= 157

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	4.31	25.95	4.54	31.56	4.5	51.5	4.37	74.94	4.39
88.47	4.37	106.21	4.27	123.47	4.16	125.22	4.15	130.67	4.12
166.92	5.38	190.4	4.47	193.71	2.36	194.23	2.12	203.81	1.34
213.39	.21	222.97	-3.09	230.16	-5.02	232.54	-5.7	242.12	-6.7
251.7	-7.88	261.55	-5.44	271.4	-1.1	281.25	1.58	289.13	2.58
291.1	4.64	298.46	4.48	299.52	4.48	308.72	4.3	311.09	4.16
318.19	4.09	320.56	4.05	326.08	3.82	328.71	3.88	334.24	3.8

ExpandedLocal.rep

334.76	3.82	336.77	3.79	340.02	3.8	355.81	3.89	362.76	3.94
362.91	3.94	368.17	3.96	371.85	3.96	377.38	4.01	385	4.08
387.63	4.11	395.79	4.16	403.68	4.24	405.26	4.24	407.36	4.26
411.81	4.28	419.72	4.3	423.67	4.29	429.46	4.37	432.88	4.37
435.51	4.38	437.05	4.36	442.35	4.29	451.55	4.27	460.76	4.24
467.33	4.24	473.91	4.28	479.43	4.3	483.38	4.26	486.86	4.19
488.64	4.16	496	4.07	497.85	4.05	499.16	4.04	507.31	3.93
515.21	3.82	515.73	3.82	523.7	2.72	541.4	-.09	557.5	.14
579.8	.13	590.95	-.01	602.1	-.11	618.44	4.57	633.89	4.67
652.36	4.78	664.04	4.77	666.04	4.77	674.09	4.83	693.21	4.97
694.18	4.97	705.55	4.97	714.28	4.95	724.33	4.92	728.39	4.89
752.93	4.83	758.64	4.82	783.84	4.69	794.67	4.64	804.14	4.6
811.74	4.57	813.99	4.56	829.56	4.49	834.86	4.47	844.13	4.44
864.84	4.37	870.41	4.35	877.37	4.32	886.15	4.28	897.56	4.24
915.24	4.1	918	4.08	933.79	4.05	938.3	4.04	955.44	3.96
971.2	3.88	987.9	3.86	994.08	3.85	995.63	3.85	1004.64	3.84
1012.25	1.26	1023.46	1.26	1035.82	1.25	1053.6	1.23	1061.33	1.14
1078.33	.34	1093.79	.18	1099.08	.39	1101.52	.57	1111.57	1.28
1121.62	1.86	1123.94	2.02	1127.03	2.13	1157.17	3.24	1161.04	3.51
1183.21	4.29	1183.61	4.29	1183.73	4.3	1193.5	4.53	1195.05	4.57
1197.37	4.63	1215.92	5.06	1232.15	5.43	1233.7	5.46	1235.87	5.5
1252.07	5.32	1266.93	5.35	1271.57	5.38	1288.13	5.46	1302.49	5.65
1310.22	5.75	1320.42	5.89	1337.27	5.96	1340.4	5.98	1348.09	6
1372.82	6.08	1385.96	6.16	1388.76	6.17	1392.66	6.19	1405.32	6.21
1407.61	6.21	1414.56	6.2						

Manning's n Values num= 7

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	190.4	.04	291.1	.1	515.21	.04	618.44	.1
1004.64	.04	1161.04	.1						

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	190.4	291.1		480	480	480		.1	.3
Ineffective Flow			num=	1					
Sta L	Sta R	Elev	Permanent						
705.55	1414.56	4.97	F						

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 3940

INPUT

Description: Interpolated Section

Station Elevation Data	num=	157							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev

ExpandedLocal.rep

```
*****
  0      4.25  24.52  4.44  29.83  4.41  48.68  4.31  70.84  4.34
 83.49  4.31 100.08  4.23 116.22  4.12 117.85  4.11 122.94  4.08
156.85  5.18 178.8  4.34 181.97  1.87 182.46  1.64 191.62  .89
200.77  -.18 209.93 -3.17 216.81 -4.93 219.09 -5.59 228.24 -6.7
237.4   -7.96 247.1  -5.47 256.8  -1.28 266.5  1.42 274.26  2.57
276.2   4.46 285.86  4.3  287.24  4.32 299.31  4.15 302.41  3.94
311.73  3.95 314.83  3.91 325.52  3.74 332.77  3.7  333.46  3.76
336.09  3.74 340.36  3.76 361.05  3.93 370.16  4.02 370.36  4.02
377.26  4.06 382.09  4.05 389.33  4.15 399.34  4.28 402.79  4.34
413.48  4.43 423.83  4.59 425.9  4.59 425.9  4.6  428.65  4.62
434.49  4.65 444.87  4.7  450.04  4.68 457.63  4.83 462.11  4.85
465.56  4.85 467.58  4.81 474.53  4.68 486.6  4.63 498.67  4.58
 507.3   4.59 515.92  4.66 523.16  4.7  528.34  4.62 532.9  4.48
535.23  4.41 544.89  4.24 547.31  4.2  549.03  4.17 559.72  3.95
570.07  3.74 570.76  3.74 578.84  2.75 596.8  -.18 612.56  .28
634.38  .26 645.29  -.02 656.2  -.22 673.83  4.38 689.8  4.49
708.87  4.62 720.92  4.62 722.99  4.62 731.3  4.69 751.05  4.84
752.05  4.84 763.78  4.86 772.8  4.85 783.18  4.83 787.38  4.81
812.71  4.72 818.62  4.7  844.64  4.58 855.81  4.53 865.6  4.49
873.45  4.46 875.77  4.45 891.84  4.39 897.32  4.37 906.9  4.34
928.28  4.28 934.03  4.26 941.22  4.24 950.29  4.21 962.06  4.17
980.33  4.06 983.17  4.04 999.48  4 1004.13  4 1021.83  3.92
1038.11 3.85 1055.36 3.83 1061.74 3.82 1063.34 3.82 1072.64 3.81
 1080.5 1.52 1092.07 1.53 1104.84 1.51 1123.2 1.47 1131.18 1.28
1148.74 -.32 1164.71 -.64 1170.17 -.22 1172.69 .05 1183.06 1.09
1193.44 1.88 1195.83 2.12 1199.03 2.21 1230.16 3.31 1234.15 3.7
1257.04 4.43 1257.45 4.44 1257.58 4.44 1267.67 4.66 1269.27 4.71
1271.66 4.76 1290.82 5.17 1307.58 5.5 1309.17 5.54 1311.42 5.57
1328.15 5.36 1343.49 5.33 1348.28 5.37 1365.39 5.45 1380.21 5.62
1388.19 5.71 1398.73 5.84 1416.13 5.92 1419.36 5.94 1427.3 5.97
1452.84 6.04 1466.41 6.17 1469.3 6.19 1473.32 6.22 1486.4 6.27
1488.76 6.28 1495.94 6.26
```

```
Manning's n Values      num=      7
  Sta  n Val      Sta  n Val      Sta  n Val      Sta  n Val      Sta  n Val
*****
  0      .06  178.8      .04  276.2      .1  570.07      .04  673.83      .1
1072.64      .04 1234.15      .1
```

```
Bank Sta: Left  Right  Lengths: Left Channel  Right  Coeff Contr.  Expan.
          178.8  276.2              480    480    480              .1      .3
Ineffective Flow      num=      1
  Sta L  Sta R      Elev Permanent
    772.8 1495.94    4.85      F
```

CROSS SECTION

ExpandedLocal.rep

RIVER: Doubloon  
 REACH: to Pearl RS: 3460

INPUT

Description: Interpolated Section

Station Elevation Data		num= 156									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	4.18	23.1	4.35	28.1	4.31	45.86	4.24	66.73	4.28		
78.51	4.26	93.94	4.19	108.96	4.08	110.48	4.07	115.22	4.04		
146.77	4.97	167.2	4.22	170.22	1.37	170.69	1.17	179.43	.45		
188.16	-.56	196.9	-3.25	203.46	-4.84	205.63	-5.48	214.37	-6.69		
223.1	-8.04	232.65	-5.49	242.2	-1.47	251.75	1.26	259.39	2.56		
261.3	4.29	273.25	4.12	274.96	4.17	289.9	4.01	305.26	3.8		
309.1	3.77	322.33	3.6	331.3	3.6	332.15	3.69	335.41	3.69		
340.69	3.72	366.29	3.97	377.57	4.1	377.82	4.1	386.35	4.16		
392.33	4.14	401.29	4.3	413.67	4.48	417.94	4.57	431.17	4.71		
443.97	4.94	446.53	4.94	446.53	4.95	449.95	4.99	457.17	5.03		
470.01	5.09	476.41	5.07	485.8	5.3	491.35	5.32	495.62	5.33		
498.12	5.27	506.71	5.08	521.65	5	536.59	4.92	547.26	4.93		
557.93	5.04	566.89	5.11	573.29	4.98	578.94	4.77	581.83	4.67		
593.78	4.41	596.77	4.36	598.9	4.31	612.13	3.98	624.94	3.65		
625.79	3.65	633.99	2.78	652.2	-.27	667.61	.42	688.96	.39		
699.63	-.03	710.3	-.33	729.23	4.18	745.7	4.32	765.37	4.45		
777.81	4.47	779.94	4.47	788.51	4.54	808.89	4.72	809.92	4.72		
822.02	4.75	831.33	4.76	842.03	4.75	846.36	4.72	872.5	4.6		
878.59	4.59	905.43	4.47	916.96	4.41	927.06	4.38	935.15	4.35		
937.55	4.34	954.13	4.29	959.78	4.27	969.66	4.25	991.72	4.2		
997.66	4.18	1005.07	4.16	1014.42	4.14	1026.57	4.11	1045.41	4.01		
1048.35	3.99	1065.17	3.96	1069.97	3.95	1088.23	3.89	1105.02	3.82		
1122.81	3.8	1129.4	3.8	1131.05	3.79	1140.65	3.79	1148.75	1.79		
1160.69	1.79	1173.86	1.76	1192.8	1.7	1201.03	1.42	1219.15	-.98		
1235.62	-1.46	1241.25	-.83	1243.85	-.47	1254.56	.9	1265.26	1.9		
1267.73	2.21	1271.02	2.29	1303.14	3.38	1307.25	3.9	1330.87	4.57		
1331.3	4.58	1331.43	4.58	1341.84	4.79	1343.48	4.84	1345.95	4.9		
1365.71	5.28	1383.01	5.58	1384.65	5.61	1386.97	5.63	1404.23	5.39		
1420.06	5.32	1425	5.36	1442.64	5.44	1457.93	5.59	1466.17	5.67		
1477.03	5.8	1494.99	5.88	1498.32	5.9	1506.51	5.93	1532.86	6.01		
1546.86	6.17	1549.84	6.2	1553.99	6.24	1567.48	6.33	1569.92	6.35		
1577.33	6.32										

Manning's n Values		num= 7									
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	167.2	.04	261.3	.1	624.94	.04	729.23	.1		
1140.65	.04	1307.25	.06								

ExpandedLocal.rep

Bank Sta: Left      Right      Lengths: Left Channel      Right      Coeff Contr.      Expan.  
                  167.2      261.3                      480      480      480                      .1                      .3  
 Ineffective Flow      num=      1  
                  Sta L      Sta R      Elev      Permanent  
                  831.33      1577.33      4.76                      F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl                      RS: 2980

INPUT

Description: Interpolated Section

Station Elevation Data      num=      156

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	4.12	21.68	4.25	26.37	4.22	43.04	4.17	62.63	4.23
73.52	4.21	87.81	4.15	101.71	4.04	103.11	4.03	107.5	4
136.7	4.76	155.6	4.1	158.48	.87	158.93	.7	167.24	0
175.55	-.94	183.86	-3.32	190.11	-4.75	192.18	-5.36	200.49	-6.69
208.8	-8.12	218.2	-5.52	227.6	-1.65	237	1.1	244.52	2.55
246.4	4.11	260.64	3.94	262.68	4.01	280.48	3.87	298.8	3.66
303.37	3.63	319.14	3.47	329.83	3.51	330.84	3.63	334.73	3.63
341.02	3.68	371.54	4.01	384.98	4.18	385.27	4.19	395.45	4.27
402.57	4.24	413.25	4.44	428	4.68	433.09	4.8	448.86	4.98
464.12	5.28	467.17	5.28	467.17	5.3	471.24	5.35	479.85	5.4
495.15	5.49	502.78	5.46	513.97	5.76	520.58	5.8	525.67	5.8
528.65	5.73	538.9	5.47	556.7	5.36	574.51	5.26	587.22	5.27
599.94	5.42	610.62	5.51	618.25	5.34	624.98	5.07	628.43	4.92
642.67	4.58	646.23	4.51	648.77	4.44	664.54	4	679.8	3.57
680.82	3.57	689.13	2.81	707.6	-.36	722.67	.56	743.53	.52
753.97	-.04	764.4	-.44	784.62	3.99	801.6	4.14	821.87	4.28
834.69	4.31	836.89	4.32	845.73	4.4	866.73	4.59	867.79	4.6
880.26	4.64	889.85	4.66	900.89	4.66	905.35	4.63	932.28	4.49
938.56	4.47	966.23	4.35	978.11	4.3	988.52	4.27	996.86	4.24
999.33	4.23	1016.42	4.18	1022.24	4.17	1032.42	4.15	1055.16	4.11
1061.28	4.1	1068.91	4.08	1078.56	4.06	1091.08	4.04	1110.5	3.97
1113.52	3.95	1130.86	3.91	1135.8	3.91	1154.62	3.85	1171.93	3.8
1190.27	3.78	1197.06	3.77	1198.75	3.77	1208.65	3.76	1217	2.05
1229.3	2.06	1242.88	2.02	1262.4	1.94	1270.89	1.56	1289.56	-1.64
1306.53	-2.28	1312.34	-1.44	1315.02	-.99	1326.05	.72	1337.08	1.91
1339.63	2.31	1343.02	2.38	1376.12	3.45	1380.36	4.09	1404.7	4.71
1405.14	4.72	1405.27	4.72	1416	4.92	1417.7	4.98	1420.24	5.03
1440.61	5.4	1458.43	5.66	1460.13	5.69	1462.52	5.7	1480.31	5.42
1496.62	5.3	1501.71	5.35	1519.9	5.42	1535.66	5.56	1544.14	5.63
1555.34	5.75	1573.85	5.84	1577.28	5.86	1585.73	5.9	1612.88	5.97
1627.31	6.18	1630.38	6.22	1634.66	6.27	1648.56	6.39	1651.07	6.41



ExpandedLocal.rep

1658.71 6.38

Manning's n Values num= 7

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	155.6	.04	246.4	.1	679.8	.04	784.62	.1
1208.65	.04	1380.36	.06						

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	155.6	246.4		480	480	.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 2500

INPUT  
 Description: Interpolated Section

Station Elevation Data num= 154

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	4.05	20.26	4.15	24.64	4.13	40.22	4.1	58.52	4.18
68.54	4.16	81.67	4.11	94.45	4	95.75	3.99	99.78	3.96
126.62	4.55	144	3.97	146.73	.38	147.16	.23	155.05	-.45
162.94	-1.33	170.83	-3.4	176.76	-4.66	178.72	-5.25	186.61	-6.68
194.5	-8.2	203.75	-5.55	213	-1.84	222.25	.95	229.65	2.54
231.5	3.94	248.04	3.76	250.4	3.86	271.07	3.73	292.33	3.51
297.64	3.49	329.54	3.56	334.04	3.58	341.35	3.64	376.78	4.05
392.38	4.27	392.73	4.27	404.54	4.37	412.81	4.33	425.21	4.58
442.34	4.89	448.24	5.03	466.55	5.25	484.27	5.63	487.81	5.63
487.81	5.66	492.53	5.71	502.53	5.78	520.29	5.89	529.15	5.85
542.14	6.23	549.82	6.27	555.73	6.28	559.19	6.19	571.08	5.86
591.75	5.73	612.42	5.6	627.19	5.62	641.95	5.81	654.35	5.91
663.21	5.7	671.02	5.36	675.02	5.18	691.56	4.75	695.69	4.66
698.64	4.58	716.95	4.03	734.67	3.49	735.85	3.49	744.28	2.85
763	-.46	777.72	.69	798.11	.65	808.31	-.05	818.5	-.56
840.02	3.8	857.5	3.96	878.38	4.11	891.58	4.16	893.84	4.17
902.94	4.26	924.56	4.46	925.66	4.47	938.5	4.53	948.38	4.57
959.74	4.58	964.33	4.55	992.07	4.38	998.53	4.36	1027.02	4.24
1039.26	4.19	1049.97	4.16	1058.56	4.13	1061.11	4.13	1078.7	4.08
1084.7	4.07	1095.19	4.05	1118.6	4.02	1124.9	4.01	1132.76	4
1142.69	3.99	1155.58	3.98	1175.58	3.93	1178.7	3.91	1196.55	3.87
1201.64	3.86	1221.02	3.81	1238.84	3.77	1257.72	3.75	1264.71	3.74
1266.46	3.74	1276.65	3.74	1285.25	2.31	1297.92	2.32	1311.9	2.28
1332	2.17	1340.74	1.7	1359.96	-2.31	1377.44	-3.11	1383.42	-2.04
1386.18	-1.51	1397.54	.53	1408.9	1.93	1411.52	2.4	1415.02	2.46
1449.1	3.52	1453.47	4.28	1478.53	4.85	1478.98	4.86	1479.12	4.86

ExpandedLocal.rep

1490.17	5.05	1491.92	5.12	1494.54	5.17	1515.51	5.51	1533.86	5.74
1535.61	5.76	1538.07	5.76	1556.39	5.46	1573.18	5.29	1578.43	5.34
1597.15	5.41	1613.38	5.53	1622.12	5.59	1633.65	5.7	1652.71	5.8
1656.24	5.82	1664.94	5.86	1692.9	5.94	1707.76	6.19	1710.92	6.23
1715.32	6.29	1729.64	6.45	1732.23	6.48	1740.09	6.44		

Manning's n Values num= 7

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	144	.04	231.5	.1	734.67	.04	840.02	.1
1276.65	.04	1449.1	.06						

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	144	231.5		480	480		.1	.3

CROSS SECTION

RIVER: Doublon  
 REACH: to Pearl RS: 2020

INPUT  
 Description: Interpolated Section

Station Elevation Data num= 152

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	3.98	18.84	4.06	22.91	4.03	37.4	4.04	54.42	4.12
63.56	4.11	75.54	4.07	87.2	3.96	88.38	3.95	92.06	3.92
116.54	4.35	132.4	3.85	134.98	-.12	135.39	-.25	142.86	-.9
150.32	-1.71	157.79	-3.48	163.41	-4.57	165.26	-5.14	172.73	-6.68
180.2	-8.29	189.3	-5.58	198.4	-2.03	207.5	.79	214.78	2.53
216.6	3.77	235.43	3.58	238.12	3.7	261.65	3.59	328.23	3.5
333.36	3.53	341.68	3.6	382.03	4.08	399.79	4.35	400.18	4.36
413.63	4.47	423.05	4.42	437.17	4.73	456.67	5.09	463.39	5.26
484.24	5.53	504.41	5.98	508.45	5.98	508.45	6.01	513.83	6.08
525.21	6.15	545.43	6.29	555.52	6.24	570.31	6.69	579.06	6.74
585.78	6.76	589.72	6.64	603.26	6.25	626.8	6.1	650.34	5.94
667.15	5.96	683.96	6.19	698.08	6.31	708.17	6.06	717.06	5.65
721.62	5.44	740.45	4.91	745.15	4.81	748.52	4.71	769.36	4.05
789.54	3.41	790.88	3.41	799.42	2.88	818.4	-.55	832.78	.83
852.69	.78	862.64	-.07	872.6	-.67	895.42	3.61	913.4	3.79
934.88	3.94	948.46	4	950.79	4.02	960.15	4.11	982.4	4.34
983.53	4.35	996.74	4.42	1006.9	4.47	1018.59	4.5	1023.32	4.46
1051.86	4.26	1058.51	4.24	1087.82	4.12	1100.41	4.07	1111.43	4.05
1120.27	4.03	1122.88	4.02	1140.99	3.98	1147.16	3.97	1157.95	3.95
1182.03	3.93	1188.52	3.93	1196.61	3.91	1206.83	3.91	1220.09	3.91
1240.66	3.88	1243.87	3.87	1262.24	3.82	1267.48	3.82	1287.42	3.78
1305.75	3.74	1325.18	3.72	1332.37	3.71	1334.17	3.71	1344.65	3.71

ExpandedLocal.rep

1353.5	2.57	1366.54	2.58	1380.92	2.53	1401.6	2.4	1410.59	1.83
1430.37	-2.97	1448.35	-3.93	1454.51	-2.65	1457.34	-2.03	1469.03	.34
1480.72	1.95	1483.42	2.49	1487.01	2.54	1522.08	3.59	1526.57	4.47
1552.36	4.99	1552.83	5	1552.97	5	1564.33	5.18	1566.13	5.25
1568.83	5.31	1590.41	5.62	1609.29	5.82	1611.09	5.84	1613.62	5.82
1632.47	5.49	1649.75	5.27	1655.14	5.34	1674.41	5.4	1691.11	5.5
1700.1	5.55	1711.96	5.66	1731.56	5.76	1735.2	5.78	1744.15	5.82
1772.92	5.91	1788.21	6.2	1791.46	6.25	1795.99	6.32	1810.72	6.51
1813.38	6.55	1821.47	6.5						

Manning's n Values num= 7

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	132.4	.04	216.6	.1	789.54	.04	872.6	.1
1344.65	.04	1487.01	.06						

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	132.4	216.6		480	480		.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 1540

INPUT

Description: Interpolated Section

Station Elevation Data num= 159

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	3.92	17.42	3.96	21.19	3.94	34.58	3.97	50.31	4.07
58.57	4.06	69.4	4.04	79.94	3.92	81.01	3.91	84.33	3.88
106.47	4.14	120.8	3.73	123.24	-.62	123.62	-.72	130.67	-1.35
137.71	-2.09	144.76	-3.56	150.05	-4.48	151.81	-5.03	158.85	-6.67
165.9	-8.37	174.85	-5.61	183.8	-2.21	192.75	.63	199.91	2.52
201.7	3.59	222.82	3.41	225.84	3.55	252.24	3.45	259.03	2.82
265.82	.87	279.4	3.22	286.19	3.21	302.03	2.33	309.57	3.05
325.41	3.21	326.92	3.43	332.68	3.47	342.01	3.55	387.27	4.12
407.2	4.43	407.64	4.44	422.72	4.57	433.28	4.52	449.13	4.87
471	5.29	478.54	5.49	501.93	5.8	524.56	6.33	529.09	6.33
529.09	6.36	535.12	6.44	547.89	6.53	570.57	6.69	581.89	6.63
598.49	7.16	608.29	7.22	615.84	7.23	620.26	7.1	635.45	6.64
661.85	6.46	688.25	6.28	707.11	6.3	725.97	6.57	741.81	6.71
753.13	6.42	763.1	5.94	768.21	5.69	789.33	5.08	794.62	4.96
798.39	4.85	821.77	4.08	844.4	3.33	845.91	3.33	854.57	2.91
873.8	-.64	887.83	.97	907.27	.91	916.98	-.08	926.7	-.78
950.81	3.42	969.3	3.61	991.38	3.77	1005.35	3.85	1007.74	3.87
1017.36	3.97	1040.24	4.21	1041.39	4.22	1054.98	4.31	1065.43	4.38

ExpandedLocal.rep

1077.44	4.41	1082.3	4.37	1111.64	4.15	1118.48	4.13	1148.61	4.01
1161.56	3.96	1172.89	3.94	1181.98	3.92	1184.66	3.91	1203.28	3.88
1209.62	3.86	1220.71	3.85	1245.47	3.85	1252.14	3.84	1260.46	3.83
1270.96	3.84	1284.6	3.85	1305.75	3.84	1309.04	3.83	1327.93	3.78
1333.31	3.77	1353.81	3.74	1372.66	3.71	1392.63	3.69	1400.03	3.68
1401.88	3.68	1412.65	3.69	1421.75	2.84	1435.15	2.85	1449.94	2.78
1471.2	2.64	1480.44	1.97	1500.78	-3.63	1519.26	-4.75	1525.59	-3.26
1528.51	-2.55	1540.52	.15	1552.54	1.97	1555.31	2.59	1559.01	2.62
1595.06	3.65	1599.68	4.66	1626.19	5.13	1626.67	5.14	1626.82	5.14
1638.5	5.31	1640.35	5.39	1643.12	5.44	1665.31	5.73	1684.72	5.9
1686.57	5.91	1689.17	5.89	1708.54	5.52	1726.31	5.26	1731.86	5.33
1751.66	5.39	1768.83	5.48	1778.07	5.52	1790.27	5.61	1810.42	5.72
1814.16	5.74	1823.36	5.79	1852.94	5.87	1868.65	6.21	1872	6.26
1876.66	6.34	1891.8	6.57	1894.54	6.62	1902.85	6.56		

Manning's n Values num= 9

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	120.8	.04	201.7	.1	252.24	.04	326.92	.1
844.4	.04	950.81	.06	1412.65	.04	1595.06	.06		

Bank Sta:	Left	Right	Lengths:		Left	Channel	Right	Coeff	Contr.	Expan.
	120.8	201.7	480	480	480			.1	.3	
Ineffective Flow	num=		1							
Sta L	Sta R	Elev	Permanent							
252.24	326.92	3.59	F							

CROSS SECTION

RIVER: Doubloon  
 REACH: to Pearl RS: 1060

INPUT

Description: Interpolated Section

Station Elevation Data num= 159

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	3.85	16	3.86	19.46	3.85	31.76	3.9	46.21	4.01
53.59	4.01	63.27	4	72.69	3.88	73.64	3.87	76.61	3.84
96.39	3.93	109.2	3.61	111.49	-1.12	111.85	-1.19	118.47	-1.8
125.1	-2.48	131.73	-3.64	136.7	-4.39	138.35	-4.92	144.98	-6.66
151.6	-8.45	160.4	-5.63	169.2	-2.4	178	.47	185.04	2.51
186.8	3.42	210.21	3.23	213.56	3.39	242.83	3.3	250.35	2.6
257.88	.38	272.93	3.08	280.46	3.07	298.02	2.09	306.38	2.92
323.94	3.12	325.61	3.37	332	3.42	342.34	3.51	392.51	4.16
414.61	4.51	415.09	4.52	431.82	4.68	443.52	4.61	461.08	5.01
485.33	5.49	493.7	5.72	519.62	6.07	544.71	6.67	549.72	6.67

ExpandedLocal.rep

549.72	6.71	556.41	6.8	570.57	6.91	595.72	7.08	608.26	7.02
626.66	7.62	637.53	7.69	645.89	7.71	650.79	7.56	667.63	7.04
696.9	6.83	726.17	6.62	747.07	6.64	767.98	6.95	785.54	7.12
798.08	6.78	809.14	6.23	814.81	5.95	838.22	5.25	844.08	5.12
848.26	4.98	874.18	4.1	899.27	3.24	900.94	3.24	909.71	2.94
929.2	-.73	942.89	1.11	961.84	1.04	971.32	-.09	980.8	-.89
1006.21	3.22	1025.2	3.43	1047.89	3.61	1062.23	3.7	1064.69	3.72
1074.58	3.83	1098.07	4.09	1099.26	4.1	1113.22	4.2	1123.95	4.28
1136.3	4.33	1141.29	4.28	1171.43	4.04	1178.45	4.01	1209.41	3.9
1222.7	3.85	1234.35	3.83	1243.68	3.81	1246.44	3.8	1265.57	3.77
1272.08	3.76	1283.47	3.76	1308.91	3.76	1315.76	3.76	1324.3	3.75
1335.09	3.77	1349.1	3.78	1370.83	3.8	1374.22	3.78	1393.62	3.73
1399.15	3.73	1420.21	3.7	1439.57	3.68	1460.09	3.67	1467.69	3.66
1469.58	3.66	1480.66	3.66	1490	3.1	1503.77	3.11	1518.96	3.04
1540.8	2.87	1550.3	2.11	1571.19	-4.29	1590.18	-5.57	1596.68	-3.87
1599.67	-3.07	1612.02	-.03	1624.36	1.98	1627.21	2.68	1631.01	2.71
1668.04	3.72	1672.79	4.86	1700.02	5.27	1700.51	5.28	1700.66	5.28
1712.67	5.44	1714.57	5.53	1717.41	5.58	1740.2	5.85	1760.14	5.97
1762.04	5.99	1764.72	5.95	1784.62	5.56	1802.87	5.24	1808.57	5.32
1828.92	5.37	1846.55	5.45	1856.05	5.48	1868.58	5.57	1889.28	5.68
1893.12	5.7	1902.58	5.75	1932.96	5.84	1949.1	6.21	1952.54	6.28
1957.32	6.36	1972.88	6.63	1975.69	6.68	1984.24	6.62		

Manning's n Values num= 9

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	109.2	.04	186.8	.1	242.83	.04	323.94	.1
899.27	.04	1006.21	.06	1540.8	.04	1627.21	.06		

\*\*\*\*\*

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
109.2	186.8	480	480	480		.1	.3
Ineffective Flow	num=	1					
Sta L	Sta R	Elev	Permanent				
242.83	325.61	3.42	F				

CROSS SECTION

RIVER: Doublon  
 REACH: to Pearl RS: 580

INPUT

Description: Interpolated Section

Station Elevation Data num= 159

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	3.79	14.58	3.77	17.73	3.75	28.94	3.84	42.1	3.96
48.61	3.96	57.13	3.96	65.43	3.84	66.27	3.83	68.89	3.8

\*\*\*\*\*

ExpandedLocal.rep

86.32	3.72	97.6	3.48	99.75	-1.61	100.08	-1.67	106.28	-2.24
112.49	-2.86	118.69	-3.72	123.35	-4.3	124.89	-4.81	131.1	-6.66
137.3	-8.53	145.95	-5.66	154.6	-2.58	163.25	.31	170.17	2.5
171.9	3.24	197.61	3.05	201.28	3.24	233.41	3.16	241.68	2.37
249.94	-.12	266.47	2.93	274.73	2.93	294.01	1.84	303.19	2.78
322.47	3.02	324.31	3.3	331.32	3.37	342.67	3.47	397.76	4.2
422.01	4.6	422.55	4.61	440.91	4.78	453.76	4.71	473.04	5.16
499.67	5.7	508.85	5.95	537.31	6.35	564.85	7.02	570.36	7.02
570.36	7.07	577.71	7.17	593.25	7.28	620.86	7.48	634.63	7.41
654.83	8.09	666.76	8.17	675.95	8.18	681.33	8.01	699.82	7.43
731.95	7.19	764.08	6.96	787.04	6.99	809.99	7.33	829.27	7.52
843.04	7.14	855.18	6.52	861.4	6.2	887.11	5.42	893.54	5.27
898.13	5.12	926.59	4.13	954.13	3.16	955.97	3.16	964.86	2.97
984.6	-.82	997.94	1.25	1016.42	1.17	1025.66	-.1	1034.9	-1
1061.6	3.03	1081.1	3.26	1104.39	3.44	1119.12	3.54	1121.64	3.57
1131.79	3.68	1155.91	3.96	1157.13	3.97	1171.46	4.09	1182.48	4.19
1195.15	4.24	1200.27	4.2	1231.21	3.92	1238.42	3.9	1270.2	3.78
1283.85	3.73	1295.8	3.72	1305.39	3.7	1308.22	3.7	1327.85	3.67
1334.54	3.66	1346.24	3.66	1372.35	3.67	1379.38	3.67	1388.15	3.67
1399.23	3.69	1413.61	3.72	1435.92	3.75	1439.39	3.74	1459.31	3.69
1464.99	3.68	1486.6	3.67	1506.48	3.65	1527.54	3.64	1535.34	3.63
1537.29	3.63	1548.66	3.64	1558.25	3.36	1572.38	3.38	1587.98	3.3
1610.4	3.11	1620.15	2.25	1641.59	-4.95	1661.09	-6.39	1667.76	-4.48
1670.84	-3.59	1683.51	-.22	1696.18	2	1699.1	2.78	1703	2.79
1741.02	3.79	1745.89	5.05	1773.85	5.41	1774.36	5.42	1774.51	5.42
1786.83	5.57	1788.78	5.66	1791.71	5.71	1815.1	5.96	1835.57	6.05
1837.52	6.06	1840.26	6.02	1860.7	5.59	1879.44	5.23	1885.29	5.31
1906.17	5.36	1924.28	5.42	1934.02	5.44	1946.89	5.52	1968.14	5.64
1972.08	5.66	1981.79	5.72	2012.98	5.8	2029.55	6.22	2033.08	6.29
2037.99	6.39	2053.96	6.7	2056.85	6.75	2065.62	6.68		

Manning's n Values num= 10

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	97.6	.04	171.9	.1	233.41	.04	303.19	.1
954.13	.04	1061.6	.06	1610.4	.04	1699.1	.06	2065.62	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	97.6	171.9		480	480	.1	.3
Ineffective Flow		num=	1				
Sta L	Sta R	Elev	Permanent				
233.41	324.31	3.24	F				

CROSS SECTION

RIVER: Doublon  
 REACH: to Pearl RS: 100

ExpandedLocal.rep

INPUT

Description: 100' US Confluence with West Pearl River

Station Elevation Data num= 108

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	3.72	16	3.66	38	3.9	51	3.92	86	3.36
88	-2.11	110	-4.21	123	-8.61	157	3.07	185	2.87
189	3.08	224	3.02	233	2.15	242	-.61	260	2.79
269	2.79	290	1.59	300	2.64	321	2.92	323	3.24
343	3.43	403	4.24	430	4.69	450	4.88	464	4.8
485	5.3	514	5.9	524	6.18	555	6.62	585	7.37
591	7.37	591	7.42	599	7.53	646	7.88	661	7.8
683	8.55	696	8.64	706	8.66	732	7.82	767	7.56
802	7.3	827	7.33	852	7.71	873	7.92	888	7.5
908	6.46	936	5.59	943	5.42	948	5.25	979	4.15
1009	3.08	1011	3.08	1020	3	1040	-.91	1053	1.39
1071	1.3	1080	-.11	1089	-1.11	1117	2.84	1137	3.08
1176	3.39	1189	3.54	1215	3.85	1241	4.09	1254	4.16
1291	3.81	1331	3.67	1345	3.62	1370	3.59	1397	3.56
1409	3.56	1443	3.59	1452	3.59	1501	3.71	1525	3.64
1553	3.63	1595	3.61	1603	3.6	1605	3.6	1641	3.64
1657	3.55	1680	3.34	1690	2.39	1712	-5.61	1732	-7.21
1742	-4.11	1755	-.41	1768	2.02	1771	2.87	1775	2.87
1814	3.86	1819	5.24	1861	5.7	1863	5.8	1866	5.85
1890	6.07	1911	6.13	1913	6.14	1956	5.21	1962	5.3
2002	5.39	2012	5.4	2047	5.6	2061	5.68	2093	5.77
2110	6.23	2138	6.82	2147	6.74				

Manning's n Values num= 9

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	86	.04	157	.1	224	.04	260	.1
1009	.04	1137	.06	1680	.04	1775	.06		

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	86	157		0	0	0		.1	.3
Ineffective Flow			num=	1					
Sta L	Sta R	Elev	Permanent						
224	300	3.07	F						

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 19396

INPUT

ExpandedLocal.rep

Description: 108' DS Confluence with W-15

Station Elevation Data num= 33

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
675	5.968	679.74	5.962	693.92	5.989	716.44	6.059	748.89	6.066
753.15	6.064	761.71	6.048	803.85	6.046	826.56	5.806	858.82	6.275
863.26	6.361	872.19	6.098	899.97	5.555	913.79	5.017	954.98	3.886
968.76	3.563	973.38	3.496	982.67	3.462	1010.08	3.412	1023.72	3.383
1046.79	3.221	1078.69	3.072	1093.15	3.031	1101.49	2.81	1126.49	2.88
1128.49	2.72	1133.49	-.09	1143.49	-2.36	1163.49	-2.36	1173.49	.71
1180.49	2.71	1183.49	5.3	1208.49	5.9				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
675	.06	1126.49	.05	1183.49	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1126.49	1183.49		470	470		.1	.3
Ineffective Flow			num=	1				
Sta L	Sta R	Elev	Permanent					
675	676	8.02	F					

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 18926

INPUT

Description: 0.05' US Military Rd Culverts

Station Elevation Data num= 28

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1000	6.25	1020	5.62	1040	5.62	1060	5.62	1080	5.62
1100	5.02	1110	3.42	1130	2.69	1143	-1.55	1162	-1.55
1170	3.19	1190	3.79	1210	3.69	1230	3.59	1310	3.59
1330	2.69	1350	1.19	1359	1.19	1370	2.29	1390	2.19
1410	2.19	1420	2.69	1430	5.69	1450	6.09	1470	6.39
1490	6.79	1510	7.19	1530	7.19				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
1000	.06	1080	.05	1430	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1080	1430		20	20		.1	.3



ExpandedLocal.rep

Ineffective Flow num= 3  
 Sta L Sta R Elev Permanent  
 1000 1144 8.02 T  
 1161 1347.45 8.02 T  
 1359.05 1530 8.02 T

CULVERT

RIVER: Doubloon  
 REACH: to Marsh RS: 18916

INPUT

Description: Military Road Culverts  
 Distance from Upstream XS = .05  
 Deck/Roadway Width = 19.9  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 3  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 1000 6.04 1450 5.92 1530 5.84

Upstream Bridge Cross Section Data

Station Elevation Data num= 28  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 1000 6.25 1020 5.62 1040 5.62 1060 5.62 1080 5.62  
 1100 5.02 1110 3.42 1130 2.69 1143 -1.55 1162 -1.55  
 1170 3.19 1190 3.79 1210 3.69 1230 3.59 1310 3.59  
 1330 2.69 1350 1.19 1359 1.19 1370 2.29 1390 2.19  
 1410 2.19 1420 2.69 1430 5.69 1450 6.09 1470 6.39  
 1490 6.79 1510 7.19 1530 7.19

Manning's n Values

num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 1000 .06 1080 .05 1430 .06

Bank Sta: Left Right Coeff Contr. Expan.  
 1080 1430 .1 .3

Ineffective Flow num= 3  
 Sta L Sta R Elev Permanent  
 1000 1144 8.02 T  
 1161 1347.45 8.02 T  
 1359.05 1530 8.02 T

Downstream Deck/Roadway Coordinates

ExpandedLocal.rep

num= 3

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
1000		8.03			1450		8.02			1530		8.31		

Downstream Bridge Cross Section Data

Station Elevation Data num= 28

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1000	6.25	1020	5.62	1040	5.62	1060	5.62	1080	5.62
1100	5.02	1110	3.42	1130	2.69	1143	-1.55	1162	-1.55
1170	3.19	1190	3.79	1210	3.69	1230	3.59	1310	3.59
1330	2.69	1350	1.19	1359	1.19	1370	2.29	1390	2.19
1410	2.19	1420	2.69	1430	5.69	1450	6.09	1470	6.39
1490	6.79	1510	7.19	1530	7.19				

Manning's n Values num= 3

Sta	n	Sta	n	Sta	n
1000	.06	1080	.05	1430	.06

Bank Sta: Left Right Coeff Contr. Expan.  
 1080 1430 .1 .3

Ineffective Flow num= 3

Sta L	Sta R	Elev	Permanent
1000	1144	8.02	F
1161	1347.45	8.02	F
1359.05	1530	8.02	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 4

Culvert Name	Shape	Rise	Span	Exit Loss Coef
Culvert #1	Arch	5.7	8	.9
FHWA Chart # 43- Arch; Corrugated metal				
FHWA Scale # 3 - Thin wall projecting				
Solution Criteria = Highest U.S. EG				
Culvert Upstrm Dist	Length	Top n	Bottom n	Depth Blocked
1	.05	19.9	.024	.024
				0

ExpandedLocal.rep

Upstream Elevation = -1.44  
Centerline Station = 1148  
Downstream Elevation = -1.4  
Centerline Station = 1148

Culvert Name Shape Rise Span  
Culvert #2 Arch 5.7 8  
FHWA Chart # 43- Arch; Corrugated metal  
FHWA Scale # 3 - Thin wall projecting  
Solution Criteria = Highest U.S. EG  
Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
Exit Loss Coef  
1 .05 19.9 .024 .024 0 .9

Upstream Elevation = -1.31  
Centerline Station = 1157  
Downstream Elevation = -1.41  
Centerline Station = 1157

Culvert Name Shape Rise Span  
Culvert #4 Arch 2.6 5.1  
FHWA Chart # 43- Arch; Corrugated metal  
FHWA Scale # 3 - Thin wall projecting  
Solution Criteria = Highest U.S. EG  
Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
Exit Loss Coef  
1 .05 19.9 .024 .024 0 .9

Upstream Elevation = 1.72  
Centerline Station = 1350  
Downstream Elevation = 1.22  
Centerline Station = 1350

Culvert Name Shape Rise Span  
Culvert #3 Arch 2.6 5.1  
FHWA Chart # 43- Arch; Corrugated metal  
FHWA Scale # 3 - Thin wall projecting  
Solution Criteria = Highest U.S. EG  
Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
Exit Loss Coef  
1 .05 19.9 .024 .024 0 .9

Upstream Elevation = 1.56  
Centerline Station = 1356.5  
Downstream Elevation = 1.19  
Centerline Station = 1356.5

CROSS SECTION

ExpandedLocal.rep

RIVER: Doubloon  
 REACH: to Marsh RS: 18906

INPUT

Description: 0.05' DS Military Rd Culverts

Station Elevation Data num= 28

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1000	6.25	1020	5.62	1040	5.62	1060	5.62	1080	5.62
1100	5.02	1110	3.42	1130	2.69	1143	-1.55	1162	-1.55
1170	3.19	1190	3.79	1210	3.69	1230	3.59	1310	3.59
1330	2.69	1350	1.19	1359	1.19	1370	2.29	1390	2.19
1410	2.19	1420	2.69	1430	5.69	1450	6.09	1470	6.39
1490	6.79	1510	7.19	1530	7.19				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
1000	.06	1080	.05	1430	.06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

Left	Right	Left	Channel	Right	Coeff	Contr.	Expan.
1080	1430	245	245	245	.1	.3	

Ineffective Flow num= 3

Sta L	Sta R	Elev	Permanent
1000	1144	8.02	F
1161	1347.45	8.02	F
1359.05	1530	8.02	F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 18661

INPUT

Description:

Station Elevation Data num= 83

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-159	5.395	-144.92	5.423	-111.61	5.39	-62.7299	5.194	-61.53	5.191
-56.3599	5.168	-11.44	4.918	-.930053	4.7338	65002	3.953	60.87	3.575
88.73999	2.998122	6801	2.62	138.83	2.43	149.83	2.378	188.92	2.236
207.88	2.186	239.01	2.113	246.29	2.108	288.87	2.055	308.26	-1.72
339.1801	-1.72	366.87	2.043369	9301	2.044389	3199	2.045	432.67	2.077
439.5	2.08	466.84	2.118	489.69	2.151	527.7	2.23	539.88	2.264
558.14	2.327	590.06	2.421	620.87	2.542	640.25	2.611	683.6	2.795

ExpandedLocal.rep

690.44	2.819	693.55	2.835	733.1	2.998	739.77	3	780.1	3.227
789.03	3.258	798.87	3.369	838.3	3.676	874.11	4.021	887.58	4.136
921.11	4.348	936.84	4.477	968.11	4.701	986.11	4.846	1004.91	4.987
1014.51	5.056	1035.57	5.208	1058.71	5.319	1085.15	5.486	1102.92	5.581
1134.72	5.684	1147.13	5.751	1184.29	6.095	1191.33	6.131	1233.87	6.386
1235.54	6.393	1249.3	6.459	1279.75	6.604	1283.44	6.623	1286.97	6.64
1322.54	6.803	1333.37	6.857	1348.79	6.951	1383.33	7.132	1407.59	7.266
1432.13	7.424	1433.3	7.432	1449.63	7.522	1483.67	7.714	1490.98	7.751
1524.57	7.919	1532.34	7.958	1534.03	7.967	1573.7	8.161	1584.4	8.215
1615.06	8.359	1634.77	8.457	1638.87	8.476				

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
-159	.06	288.87	.05	366.87	.06			

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
288.87	366.87	300	300	300	.1	.3	
Ineffective Flow	num=	2					
Sta L	Sta R	Elev	Permanent				
-159	-1.63	8.02	T				
456.37	1638.87	8.02	T				

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 18361

INPUT

Description: Interpolated Section

Station Elevation Data num= 83

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-156.5	5.39	-142.42	5.42	-109.11	5.39	-60.2299	5.19	-59.03	5.19
-53.8599	5.17	-8.94006	4.921	5.69946	4.7341	1.5002	3.95	63.37	3.58
91.23999		3125.1801	2.62	141.33	2.43	152.33	2.38	191.42	2.24
210.38	2.19	241.51	2.11	248.79	2.11	291.37	2.06	310.76	-1.93
341.6801	-1.93	369.37	2.04372	4301	2.04391	8199	2.05	435.17	2.08
442	2.08	469.34	2.12	492.19	2.15	530.2	2.23	542.38	2.26
560.64	2.33	592.56	2.42	623.37	2.54	642.75	2.61	686.1	2.8
692.94	2.82	696.05	2.84	735.6	3	742.27	3	782.6	3.23
791.53	3.26	801.37	3.37	840.8	3.68	876.61	4.02	890.08	4.14
923.61	4.35	939.34	4.48	970.61	4.7	988.61	4.85	1007.41	4.99
1017.01	5.06	1038.07	5.21	1061.21	5.32	1087.65	5.49	1105.42	5.58
1137.22	5.68	1149.63	5.75	1186.79	6.09	1193.83	6.13	1236.37	6.39
1238.04	6.39	1251.8	6.46	1282.25	6.6	1285.94	6.62	1289.47	6.64
1325.04	6.8	1335.87	6.86	1351.29	6.95	1385.83	7.13	1410.09	7.27

ExpandedLocal.rep

1434.63	7.42	1435.8	7.43	1452.13	7.52	1486.17	7.71	1493.48	7.75
1527.07	7.92	1534.84	7.96	1536.53	7.97	1576.2	8.16	1586.9	8.22
1617.56	8.36	1637.27	8.46	1641.37	8.48				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-156.5	.06	291.37	.05	369.37	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	291.37	369.37		300	300		.1	.3
Ineffective Flow	num=		1					
Sta L	Sta R	Elev	Permanent					
611.37	1641.37	8.02	T					

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 18061

INPUT

Description:

Station Elevation Data num= 83

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-154	5.395	-139.92	5.423	-106.61	5.39	-57.7299	5.194	-56.53	5.191
-51.3599	5.168	-6.44006	4.9184	.069946	4.7343	6.5002	3.953	65.87	3.575
93.73999	2.998	127.6801	2.62	143.83	2.43	154.83	2.378	193.92	2.236
212.88	2.186	244.01	2.113	251.29	2.108	293.87	2.055	313.26	-2.14
344.1801	-2.14	371.87	2.043	374.9301	2.044	394.3199	2.045	437.67	2.077
444.5	2.08	471.84	2.118	494.69	2.151	532.7	2.23	544.88	2.264
563.14	2.327	595.06	2.421	625.87	2.542	645.25	2.611	688.6	2.795
695.44	2.819	698.55	2.835	738.1	2.998	744.77	3	785.1	3.227
794.03	3.258	803.87	3.369	843.3	3.676	879.11	4.021	892.58	4.136
926.11	4.348	941.84	4.477	973.11	4.701	991.11	4.846	1009.91	4.987
1019.51	5.056	1040.57	5.208	1063.71	5.319	1090.15	5.486	1107.92	5.581
1139.72	5.684	1152.13	5.751	1189.29	6.095	1196.33	6.131	1238.87	6.386
1240.54	6.393	1254.3	6.459	1284.75	6.604	1288.44	6.623	1291.97	6.64
1327.54	6.803	1338.37	6.857	1353.79	6.951	1388.33	7.132	1412.59	7.266
1437.13	7.424	1438.3	7.432	1454.63	7.522	1488.67	7.714	1495.98	7.751
1529.57	7.919	1537.34	7.958	1539.03	7.967	1578.7	8.161	1589.4	8.215
1620.06	8.359	1639.77	8.457	1643.87	8.476				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-154	.06	293.87	.05	371.87	.06

ExpandedLocal.rep

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
293.87	371.87	279	279	279	.1	.3	
Ineffective Flow	num=	1					
Sta L	Sta R	Elev	Permanent				
766.37	1643.87	8.02	T				

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 17782

INPUT

Description: Interpolated Section

Station Elevation Data	num=	307							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-102.67	5.63	-97.9	5.63	-88.08	5.61	-77.93	5.63	-71.01	5.64
-55.01	5.55	-44.12	5.52	-21.94	5.62	-19.4	5.61	-17.23	5.61
3.28	5.51	9.66	5.48	11.13	5.47	36.55	5.38	44.19	5.36
63.44	5.33	66.48	5.33	68.59	5.33	77.26	5.33	77.67	5.33
87.49	5.33	90.36	5.33	111.71	5.53	117.46	5.56	137.07	5.62
143.18	5.6	144.57	5.61	156.6	5.47	165.28	5.33	171.68	5.32
175.06	5.29	181.83	5.23	198.78	5.1	216.9	4.82	225.89	4.71
244.61	4.43	251.96	4.33	252.99	4.31	256.52	4.27	280.1	4.02
283.65	3.99	297.83	3.88	307.21	3.82	322.09	3.59	332.62	3.43
334.31	3.42	357.15	3.09	361.42	3.02	375.96	2.94	386.03	2.87
388.55	2.85	392.25	2.84	392.65	2.84	415.94	2.77	420.62	2.79
429.3	2.84	439.95	2.93	443.32	2.96	467.75	2.96	470.71	2.95
478.67	2.94	493.96	2.84	498.09	2.87	508.63	2.83	515.51	2.81
525.48	2.93	534.05	2.92	536.85	2.92	541.95	2.91	553.92	2.88
556.88	2.86	563.52	2.82	582.85	2.74	596.64	2.67	596.93	2.67
609.43	2.46	611.77	2.43	628.64	2.33	640.69	2.24	650.33	2.24
669.62	2.16	684.25	1.99	695.38	-.88	706.51	-2.51	727.12	-2.51
741.73	-.6	754.25	1.81	759.42	1.92	768.81	2.13	778.71	2.13
792.2	2.18	798.45	2.2	799.23	2.2	801	2.21	828.09	2.3
829.58	2.3	850.23	2.32	857.84	2.33	865.49	2.36	866.95	2.36
877.03	2.44	887.6	2.53	904.84	2.4	917.36	2.37	923.25	2.38
932.34	2.39	947.11	2.44	959.46	2.48	961.88	2.5	976.87	2.58
997.72	2.6	1006.63	2.58	1014.08	2.61	1026.14	2.62	1036.39	2.64
1046.73	2.71	1063.1	2.81	1066.15	2.85	1077.6	2.88	1085.65	2.9
1095.91	2.69	1105.93	2.77	1120.97	2.88	1125.18	2.89	1131.56	2.88
1131.88	2.88	1154.22	2.74	1168.25	2.82	1183.25	2.82	1183.65	2.82
1207.11	2.95	1210.84	3.01	1212.28	2.97	1215.52	2.99	1216.41	2.99
1241.31	3.04	1262.8	3.21	1270.34	3.25	1282.35	3.28	1289.7	3.3
1299.37	3.33	1301.26	3.32	1306.52	3.31	1310.08	3.3	1328.41	3.3
1357.35	3.5	1357.44	3.51	1357.58	3.51	1373.38	3.58	1378.42	3.59

ExpandedLocal.rep

1384.66	3.6	1386.47	3.6	1399.37	3.65	1415.5	3.7	1420.32	3.71
1423.9	3.72	1438.63	3.75	1443.62	3.76	1445.06	3.76	1452.84	3.78
1467.93	3.8	1471.37	3.81	1484.57	3.87	1488.09	3.88	1499.12	3.9
1510.78	3.94	1526.88	3.99	1533.47	4.03	1551.23	4.06	1554.63	4.06
1556.16	4.07	1563.04	4.16	1582.38	4.4	1601.54	4.59	1610.13	4.7
1611.77	4.72	1624.23	4.82	1634.54	4.88	1637.88	4.89	1659.36	5.02
1665.63	5.06	1687.45	5.16	1691.22	5.17	1693.38	5.18	1695.08	5.19
1717.82	5.33	1721.13	5.35	1730.8	5.4	1748.88	5.49	1766.52	5.58
1770.68	5.59	1776.63	5.62	1801.11	5.75	1802.24	5.76	1804.38	5.77
1811.86	5.8	1832.13	5.9	1832.89	5.9	1849.12	5.97	1851.12	5.98
1859.88	6	1873.81	6.05	1884.73	6.04	1887.63	6.04	1896.5	6.06
1915.39	6.1	1923.84	6.13	1936.26	6.18	1943.14	6.22	1945.11	6.22
1968.54	6.32	1970.89	6.32	1987.26	6.38	1998.58	6.41	1998.64	6.41
2016.55	6.46	2026.39	6.49	2052.26	6.46	2052.34	6.46	2054.14	6.46
2060.67	6.46	2073.32	6.46	2081.89	6.47	2087.98	6.52	2109.64	6.65
2123.7	6.74	2136.15	6.81	2137.39	6.82	2148.05	6.84	2159.42	6.88
2165.14	6.9	2185.08	7.03	2192.89	7.08	2195.14	7.08	2219.96	7.1
2220.64	7.1	2222.79	7.1	2230.85	7.1	2246.05	7.11	2248.39	7.11
2266.57	7.13	2276.14	7.14	2297.53	7.16	2302.29	7.16	2303.76	7.16
2303.9	7.16	2309.49	7.17	2309.73	7.17	2331.65	7.19	2338.01	7.19
2359.4	7.21	2369.87	7.22	2373.73	7.23	2387.15	7.24	2388.17	7.24
2395.67	7.26	2414.24	7.29	2414.9	7.29	2433.9	7.32	2442.65	7.34
2445.16	7.35	2470.4	7.4	2472.63	7.4	2480.88	7.42	2498.15	7.46
2513.65	7.49	2516.6	7.49	2525.9	7.51	2552.32	7.57	2553.65	7.57
2555.13	7.58	2557.11	7.58	2558.3	7.58	2581.4	7.63	2584.72	7.63
2588.03	7.64	2609.15	7.68	2623.75	7.71	2636.9	7.74	2642.27	7.75
2654.62	7.77	2659.47	7.78	2664.65	7.79	2682.71	7.82	2692.41	7.84
2695.19	7.85	2711.41	7.88	2720.16	7.9	2724.55	7.9	2727.4	7.91
2730.91	7.91	2747.91	7.94	2766.62	8.02	2775.66	8.05	2794.47	8.13
2802.34	8.16	2803.41	8.16	2807.12	8.18	2812.56	8.21	2831.16	8.31
2838.06	8.35	2858.91	8.48	2864.39	8.53	2873.78	8.6	2886.66	8.7
2897.71	8.75	2904.64	8.79						

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -102.67 .06 684.25 .05 754.25 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 684.25 754.25 278 278 278 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 2084 2904.64 7.36 F

CROSS SECTION

RIVER: Doublon



REACH: to Marsh

RS: 17504

INPUT

Description: Interpolated Section

Station Elevation Data num= 307

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-51.33	5.87	-44.52	5.87	-30.46	5.81	-15.94	5.84	-6.04	5.85
16.86	5.69	32.44	5.65	64.17	5.84	67.81	5.84	70.91	5.84
100.26	5.67	109.39	5.63	111.49	5.61	147.87	5.49	158.8	5.48
186.34	5.46	190.69	5.46	193.71	5.47	206.12	5.48	206.71	5.48
220.75	5.53	224.85	5.54	255.4	6.01	263.64	6.07	291.7	6.25
300.44	6.23	302.43	6.26	319.64	6.02	332.05	5.82	341.21	5.88
346.06	5.85	355.74	5.8	379.99	5.74	405.92	5.38	418.78	5.26
445.56	4.91	456.09	4.78	457.57	4.76	462.6	4.7	496.35	4.43
501.43	4.41	521.72	4.35	535.14	4.34	556.43	4.06	571.49	3.87
573.92	3.84	606.6	3.33	612.71	3.23	633.51	3.15	647.91	3.07
651.53	3.05	656.82	3.06	657.4	3.06	690.71	3.08	697.42	3.14
709.83	3.27	725.07	3.48	729.9	3.55	764.85	3.59	769.08	3.58
780.48	3.57	802.35	3.41	808.27	3.47	823.35	3.43	833.18	3.4
847.45	3.65	859.71	3.65	863.72	3.66	871.01	3.63	888.15	3.58
892.37	3.56	901.89	3.48	929.53	3.35	949.27	3.22	949.69	3.22
967.58	2.82	970.92	2.75	995.06	2.57	1012.31	2.4	1026.09	2.4
1053.69	2.26	1074.62	1.92	1087.19	-1.72	1099.75	-2.88	1110.06	-2.88
1124.36	-1.3	1136.62	1.57	1143.91	1.8	1157.14	2.21	1171.08	2.22
1190.08	2.31	1198.88	2.35	1199.99	2.36	1202.47	2.37	1240.63	2.54
1242.73	2.55	1271.81	2.57	1282.53	2.59	1293.3	2.64	1295.37	2.65
1309.56	2.8	1324.45	2.96	1348.73	2.69	1366.36	2.63	1374.66	2.64
1387.46	2.65	1408.27	2.74	1425.66	2.82	1429.07	2.84	1450.19	3
1479.55	3	1492.1	2.96	1502.59	3	1519.58	3.02	1534.02	3.03
1548.58	3.15	1571.64	3.33	1575.93	3.39	1592.06	3.43	1603.39	3.46
1617.84	3.03	1631.96	3.16	1653.15	3.37	1659.08	3.37	1668.07	3.35
1668.52	3.35	1699.97	3.01	1719.74	3.14	1740.86	3.1	1741.43	3.1
1774.48	3.31	1779.73	3.43	1781.75	3.33	1786.32	3.36	1787.57	3.36
1822.64	3.41	1852.91	3.68	1863.53	3.74	1880.44	3.78	1890.8	3.81
1904.43	3.84	1907.08	3.82	1914.49	3.78	1919.5	3.75	1945.32	3.71
1986.08	4.05	1986.21	4.05	1986.4	4.05	2008.66	4.15	2015.77	4.18
2024.54	4.19	2027.1	4.2	2045.27	4.25	2067.99	4.29	2074.78	4.31
2079.82	4.31	2100.57	4.32	2107.6	4.33	2109.61	4.33	2120.57	4.33
2141.84	4.33	2146.68	4.34	2165.27	4.37	2170.23	4.37	2185.77	4.36
2202.19	4.39	2224.86	4.42	2234.15	4.46	2259.16	4.43	2263.94	4.43
2266.1	4.44	2275.79	4.57	2303.03	4.95	2330.02	5.22	2342.11	5.4
2344.42	5.42	2361.98	5.57	2376.5	5.62	2381.2	5.64	2411.46	5.81
2420.29	5.86	2451.02	5.98	2456.34	6	2459.37	6.01	2461.77	6.02
2493.79	6.18	2498.46	6.21	2512.08	6.26	2537.55	6.37	2562.39	6.47
2568.25	6.49	2576.63	6.52	2611.11	6.66	2612.7	6.66	2615.72	6.67
2626.25	6.71	2654.81	6.82	2655.88	6.82	2678.73	6.88	2681.55	6.89
2693.89	6.9	2713.51	6.94	2728.88	6.88	2732.98	6.86	2745.47	6.87

ExpandedLocal.rep

2772.06	6.9	2783.98	6.94	2801.47	7	2811.15	7.04	2813.93	7.05
2846.94	7.15	2850.24	7.15	2873.3	7.21	2889.25	7.24	2889.32	7.24
2914.55	7.31	2928.41	7.35	2964.85	7.23	2964.97	7.23	2967.5	7.22
2976.7	7.2	2994.52	7.16	3006.58	7.14	3015.16	7.2	3045.67	7.34
3065.47	7.45	3083	7.53	3084.75	7.53	3099.76	7.56	3115.78	7.58
3123.84	7.6	3151.92	7.79	3162.93	7.87	3166.09	7.86	3201.06	7.81
3202.01	7.8	3205.03	7.8	3216.4	7.79	3237.8	7.77	3241.1	7.76
3266.7	7.74	3280.19	7.73	3310.3	7.71	3317.01	7.7	3319.09	7.7
3319.27	7.7	3327.15	7.7	3327.49	7.7	3358.36	7.68	3367.32	7.67
3397.45	7.65	3412.19	7.64	3417.63	7.64	3436.53	7.63	3437.98	7.63
3448.54	7.63	3474.7	7.63	3475.62	7.63	3502.38	7.64	3514.71	7.64
3518.24	7.64	3553.79	7.67	3556.94	7.68	3568.55	7.69	3592.88	7.7
3614.71	7.71	3618.86	7.71	3631.96	7.72	3669.17	7.73	3671.05	7.73
3673.14	7.73	3675.92	7.73	3677.6	7.73	3710.14	7.74	3714.81	7.74
3719.48	7.74	3749.22	7.76	3769.78	7.77	3788.31	7.78	3795.86	7.78
3813.27	7.79	3820.09	7.79	3827.4	7.79	3852.83	7.81	3866.48	7.82
3870.4	7.82	3893.25	7.84	3905.57	7.85	3911.75	7.85	3915.77	7.85
3920.71	7.85	3944.65	7.86	3971.02	7.95	3983.74	8	4010.23	8.09
4021.33	8.14	4022.83	8.14	4028.06	8.17	4035.71	8.21	4061.91	8.34
4071.63	8.41	4101	8.62	4108.72	8.69	4121.94	8.81	4140.09	8.98
4155.65	9.05	4165.41	9.09						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-51.33	.06	1074.62	.05	1136.62	.06

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1074.62	1136.62		279	279	279		.1	.3
Ineffective Flow	num=		2						
Sta L	Sta R	Elev	Permanent						
-51.33	598	7.36	F						
1422	4165.41	7.36	F						

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 17225

INPUT

Description: 6' US Hwy 190

Station Elevation Data		num=		229					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	6.105	8.866	6.098	27.161	6.011	58.929	6.067	88.723	5.827
108.993	5.766	150.285	6.07	159.056	6.06	197.245	5.842	209.12	5.779
211.847	5.761	259.184	5.606	273.41	5.593	309.247	5.585	334.972	5.637

ExpandedLocal.rep

354.018	5.724	359.353	5.747	399.1	6.478	409.817	6.586	446.323	6.888
457.699	6.865	460.281	6.91	498.829	6.318	510.744	6.435	529.656	6.38
561.208	6.384	594.934	5.941	611.672	5.807	660.211	5.228	662.136	5.2
668.692	5.137	712.6	4.837	745.608	4.826	763.064	4.863	790.767	4.528
813.527	4.273	856.045	3.571	863.991	3.441	891.061	3.366	909.8	3.277
914.503	3.252	922.139	3.28	965.486	3.388	990.366	3.696	1016.47	4.143
1061.95	4.2251067	.453	4.2151082	.283	4.2131110	.735	3.9881118	.437	4.08
1150.858	3.987	1169.42	4.3641185	.372	4.3781190	.585	4.3861222	.373	4.29
1227.872	4.2541240	.252	4.1451276	.222	3.9561302	.445	3.771	1330.07	3.067
1361.482	2.8121383	.919	2.55	1401.85	2.5671437	.768	2.36	1465	1.85
1479	-2.56	1493	-3.25	1507	-2.01	1519	1.331545	.466	2.3
1563.452	2.3151599	.315	2.5071600	.739	2.5111603	.943	2.5241653	.164	2.785
1655.883	2.7871693	.389	2.8131707	.223	2.8461723	.784	2.9341761	.293	3.402
1792.626	2.9811815	.363	2.8861842	.582	2.9161869	.433	3.0411891	.863	3.154
1923.503	3.412	1961.38	3.4091977	.573	3.337	1991.1	3.3912031	.643	3.428
2080.178	3.852085	.713	3.936	2121.14	4.0152139	.783	3.3642157	.992	3.546
2185.329	3.8492192	.978	3.855	2205.15	3.8082245	.727	3.2712271	.227	3.453
2298.477	3.382341	.842	3.6652348	.614	3.842351	.227	3.7012357	.124	3.737
2403.977	3.7722443	.022	4.1632456	.726	4.2442478	.535	4.2852509	.476	4.355
2528.919	4.1992562	.226	4.1232614	.817	4.5962614	.975	4.5972615	.228	4.598
2653.107	4.7712667	.725	4.7942691	.169	4.8512720	.475	4.8892729	.231	4.901
2735.733	4.9022762	.502	4.893	2771.57	4.8922774	.174	4.8882821	.992	4.869
2852.368	4.8652872	.414	4.8212893	.594	4.8372922	.836	4.852	2934.82	4.892
2973.258	4.7992976	.046	4.8142988	.547	4.989	3023.68	5.4953058	.498	5.853
3074.102	6.0893099	.724	6.3073124	.524	6.3863163	.564	6.5993174	.946	6.668
3214.591	6.8013225	.368	6.8353228	.462	6.847	3275.79	7.065	3293.36	7.129
3326.212	7.2493358	.258	7.3593376	.634	7.4123423	.157	7.5683427	.056	7.578
3440.636	7.6173477	.478	7.7353511	.984	7.796	3527.9	7.804	3553.21	7.826
3578.322	7.6823594	.436	7.6913628	.744	7.704	3666.68	7.8223679	.166	7.864
3682.75	7.8733729	.587	7.985	3759.34	8.0383780	.009	8.0713812	.547	8.164
3830.431	8.2013877	.445	7.9983880	.853	7.9883892	.725	7.9523931	.275	7.809
3942.343	7.8883981	.697	8.0394007	.242	8.164032	.119	8.25	4072.14	8.286
4082.541	8.314118	.769	8.5594132	.963	8.6594137	.038	8.6474183	.385	8.511
4201.937	8.474233	.807	8.4134266	.835	8.3564284	.229	8.3294331	.733	8.248
4334.651	8.2414344	.814	8.2254385	.073	8.1634396	.632	8.1474435	.495	8.088
4461.53	8.0514485	.917	8.0184501	.409	8.0054536	.339	7.9664570	.858	7.951
4586.761	7.9424591	.327	7.9444637	.183	7.9464656	.225	7.9494687	.605	7.945
4721.123	7.934738	.027	7.9194786	.021	7.8834788	.449	7.8824796	.903	7.877
4838.871	7.857	4850.92	7.8494889	.293	7.8384915	.818	7.8284939	.715	7.82
4980.716	7.8064990	.137	7.8025022	.947	7.7965040	.559	7.7955045	.615	7.794
5090.98	7.7985110	.513	7.7855141	.402	7.7825175	.411	7.895191	.824	7.94
5240.31	8.1135242	.246	8.1195248	.992	8.1555292	.668	8.3835305	.208	8.476
5343.09	8.7615370	.106	9.0225393	.512	9.2535426	.182	9.404		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 1465 .05 1519 .06

ExpandedLocal.rep

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
1465	1519	37	37	37	.1	.3	
Ineffective Flow	num=	2					
Sta L	Sta R	Elev	Permanent				
0	1459	7.36	F				
15255426.182		7.36	F				

BRIDGE

RIVER: Doubloon  
 REACH: to Marsh RS: 17207

INPUT

Description: Hwy 190 Bridge  
 Distance from Upstream XS = 6  
 Deck/Roadway Width = 25  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num=	6								
Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0	7.36	-3.25	1465	7.36	-3.25	1465	7.36	4.8	
1519	7.36	4.8	1519	7.36	-3.255426.182		7.36	-3.25	

Upstream Bridge Cross Section Data

Station	Elevation	Data	num=	229					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
0	6.105	8.866	6.098	27.161	6.011	58.929	6.067	88.723	5.827
108.993	5.766	150.285	6.07	159.056	6.06	197.245	5.842	209.12	5.779
211.847	5.761	259.184	5.606	273.41	5.593	309.247	5.585	334.972	5.637
354.018	5.724	359.353	5.747	399.1	6.478	409.817	6.586	446.323	6.888
457.699	6.865	460.281	6.91	498.829	6.318	510.744	6.435	529.656	6.38
561.208	6.384	594.934	5.941	611.672	5.807	660.211	5.228	662.136	5.2
668.692	5.137	712.6	4.837	745.608	4.826	763.064	4.863	790.767	4.528
813.527	4.273	856.045	3.571	863.991	3.441	891.061	3.366	909.8	3.277
914.503	3.252	922.139	3.28	965.486	3.388	990.366	3.696	1016.47	4.143
1061.95	4.225	1067.453	4.215	1082.283	4.213	1110.735	3.988	1118.437	4.08
1150.858	3.987	1169.42	4.364	1185.372	4.378	1190.585	4.386	1222.373	4.29
1227.872	4.254	1240.252	4.145	1276.222	3.956	1302.445	3.771	1330.07	3.067
1361.482	2.812	1383.919	2.55	1401.85	2.567	1437.768	2.36	1465	1.85
1479	-2.56	1493	-3.25	1507	-2.01	1519	1.331	1545.466	2.3
1563.452	2.315	1599.315	2.507	1600.739	2.511	1603.943	2.524	1653.164	2.785
1655.883	2.787	1693.389	2.813	1707.223	2.846	1723.784	2.934	1761.293	3.402
1792.626	2.981	1815.363	2.886	1842.582	2.916	1869.433	3.041	1891.863	3.154
1923.503	3.412	1961.38	3.409	1977.573	3.337	1991.1	3.391	2031.643	3.428

ExpandedLocal.rep

2080.178	3.852085.713	3.936	2121.14	4.0152139.783	3.3642157.992	3.546		
2185.329	3.8492192.978	3.855	2205.15	3.8082245.727	3.2712271.227	3.453		
2298.477	3.382341.842	3.6652348.614		3.842351.227	3.7012357.124	3.737		
2403.977	3.7722443.022	4.1632456.726		4.2442478.535	4.2852509.476	4.355		
2528.919	4.1992562.226	4.1232614.817		4.5962614.975	4.5972615.228	4.598		
2653.107	4.7712667.725	4.7942691.169		4.8512720.475	4.8892729.231	4.901		
2735.733	4.9022762.502	4.893	2771.57	4.8922774.174	4.8882821.992	4.869		
2852.368	4.8652872.414	4.8212893.594		4.8372922.836	4.852	2934.82	4.892	
2973.258	4.7992976.046	4.8142988.547		4.989	3023.68	5.4953058.498	5.853	
3074.102	6.0893099.724	6.3073124.524		6.3863163.564	6.5993174.946	6.668		
3214.591	6.8013225.368	6.8353228.462		6.847	3275.79	7.065	3293.36	7.129
3326.212	7.2493358.258	7.3593376.634		7.4123423.157	7.5683427.056	7.578		
3440.636	7.6173477.478	7.7353511.984		7.796	3527.9	7.804	3553.21	7.826
3578.322	7.6823594.436	7.6913628.744		7.704	3666.68	7.8223679.166	7.864	
3682.75	7.8733729.587	7.985	3759.34	8.0383780.009	8.0713812.547	8.164		
3830.431	8.2013877.445	7.9983880.853		7.9883892.725	7.9523931.275	7.809		
3942.343	7.8883981.697	8.0394007.242		8.164032.119	8.25	4072.14	8.286	
4082.541	8.314118.769	8.5594132.963		8.6594137.038	8.6474183.385	8.511		
4201.937	8.474233.807	8.4134266.835		8.3564284.229	8.3294331.733	8.248		
4334.651	8.2414344.814	8.2254385.073		8.1634396.632	8.1474435.495	8.088		
4461.53	8.0514485.917	8.0184501.409		8.0054536.339	7.9664570.858	7.951		
4586.761	7.9424591.327	7.9444637.183		7.9464656.225	7.9494687.605	7.945		
4721.123	7.934738.027	7.9194786.021		7.8834788.449	7.8824796.903	7.877		
4838.871	7.857	4850.92		7.8494889.293	7.8384915.818	7.8284939.715	7.82	
4980.716	7.8064990.137	7.8025022.947		7.7965040.559	7.7955045.615	7.794		
5090.98	7.7985110.513	7.7855141.402		7.7825175.411	7.895191.824	7.94		
5240.31	8.1135242.246	8.1195248.992		8.1555292.668	8.3835305.208	8.476		
5343.09	8.7615370.106	9.0225393.512		9.2535426.182	9.404			

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	1465	.05	1519	.06

Bank Sta: Left Right Coeff Contr. Expan.

1465	1519	.1	.3
------	------	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	1459	7.36	F
15255426.182		7.36	F

Downstream Deck/Roadway Coordinates num= 6

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
0	7.36	-3.25	1465	7.36	-3.25	1465	7.36	4.8
1519	7.36	4.8	1519	7.36	-3.255426.182	1519	7.36	-3.25

ExpandedLocal.rep

Downstream Bridge Cross Section Data

Station Elevation Data num= 229

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	6.105	8.866	6.098	27.161	6.011	58.929	6.067	88.723	5.827
108.993	5.766	150.285	6.07	159.056	6.06	197.245	5.842	209.12	5.779
211.847	5.761	259.184	5.606	273.41	5.593	309.247	5.585	334.972	5.637
354.018	5.724	359.353	5.747	399.1	6.478	409.817	6.586	446.323	6.888
457.699	6.865	460.281	6.91	498.829	6.318	510.744	6.435	529.656	6.38
561.208	6.384	594.934	5.941	611.672	5.807	660.211	5.228	662.136	5.2
668.692	5.137	712.6	4.837	745.608	4.826	763.064	4.863	790.767	4.528
813.527	4.273	856.045	3.571	863.991	3.441	891.061	3.366	909.8	3.277
914.503	3.252	922.139	3.28	965.486	3.388	990.366	3.696	1016.47	4.143
1061.95	4.225	1067.453	4.215	1082.283	4.213	1110.735	3.988	1118.437	4.08
1150.858	3.987	1169.42	4.364	1185.372	4.378	1190.585	4.386	1222.373	4.29
1227.872	4.254	1240.252	4.145	1276.222	3.956	1302.445	3.771	1330.07	3.067
1361.482	2.812	1383.919	2.55	1401.85	2.567	1437.768	2.36	1465	1.85
1479	-2.56	1493	-3.25	1507	-2.01	1519	1.331	1545.466	2.3
1563.452	2.315	1599.315	2.507	1600.739	2.511	1603.943	2.524	1653.164	2.785
1655.883	2.787	1693.389	2.813	1707.223	2.846	1723.784	2.934	1761.293	3.402
1792.626	2.981	1815.363	2.886	1842.582	2.916	1869.433	3.041	1891.863	3.154
1923.503	3.412	1961.38	3.409	1977.573	3.337	1991.1	3.391	2031.643	3.428
2080.178	3.852	2085.713	3.936	2121.14	4.015	2139.783	3.364	2157.992	3.546
2185.329	3.849	2192.978	3.855	2205.15	3.808	2245.727	3.271	2271.227	3.453
2298.477	3.382	2341.842	3.665	2348.614	3.842	2351.227	3.701	2357.124	3.737
2403.977	3.772	2443.022	4.163	2456.726	4.244	2478.535	4.285	2509.476	4.355
2528.919	4.199	2562.226	4.123	2614.817	4.596	2614.975	4.597	2615.228	4.598
2653.107	4.771	2667.725	4.794	2691.169	4.851	2720.475	4.889	2729.231	4.901
2735.733	4.902	2762.502	4.893	2771.57	4.892	2774.174	4.888	2821.992	4.869
2852.368	4.865	2872.414	4.821	2893.594	4.837	2922.836	4.852	2934.82	4.892
2973.258	4.799	2976.046	4.814	2988.547	4.989	3023.68	5.495	3058.498	5.853
3074.102	6.089	3099.724	6.307	3124.524	6.386	3163.564	6.599	3174.946	6.668
3214.591	6.801	3225.368	6.835	3228.462	6.847	3275.79	7.065	3293.36	7.129
3326.212	7.249	3358.258	7.359	3376.634	7.412	3423.157	7.568	3427.056	7.578
3440.636	7.617	3477.478	7.735	3511.984	7.796	3527.9	7.804	3553.21	7.826
3578.322	7.682	3594.436	7.691	3628.744	7.704	3666.68	7.822	3679.166	7.864
3682.75	7.873	3729.587	7.985	3759.34	8.038	3780.009	8.071	3812.547	8.164
3830.431	8.201	3877.445	7.998	3880.853	7.988	3892.725	7.952	3931.275	7.809
3942.343	7.888	3981.697	8.039	4007.242	8.164	4032.119	8.25	4072.14	8.286
4082.541	8.314	4118.769	8.559	4132.963	8.659	4137.038	8.647	4183.385	8.511
4201.937	8.474	4233.807	8.413	4266.835	8.356	4284.229	8.329	4331.733	8.248
4334.651	8.241	4344.814	8.225	4385.073	8.163	4396.632	8.147	4435.495	8.088
4461.53	8.051	4485.917	8.018	4501.409	8.005	4536.339	7.966	4570.858	7.951
4586.761	7.942	4591.327	7.944	4637.183	7.946	4656.225	7.949	4687.605	7.945
4721.123	7.934	4738.027	7.919	4786.021	7.883	4788.449	7.882	4796.903	7.877
4838.871	7.857	4850.92	7.849	4889.293	7.838	4915.818	7.828	4939.715	7.82
4980.716	7.806	4990.137	7.802	5022.947	7.796	5040.559	7.795	5045.615	7.794
5090.98	7.798	5110.513	7.785	5141.402	7.782	5175.411	7.895	5191.824	7.94

ExpandedLocal.rep

5240.31 8.1135242.246 8.1195248.992 8.1555292.668 8.3835305.208 8.476  
 5343.09 8.7615370.106 9.0225393.512 9.2535426.182 9.404

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 1465 .05 1519 .06

Bank Sta: Left Right Coeff Contr. Expan.  
 1465 1519 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 1462 7.36 F  
 15225426.182 7.36 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 4

Pier Data  
 Pier Station Upstream= 1466 Downstream= 1466  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 -3.25 1 4.8  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 -3.25 1 4.8

Pier Data  
 Pier Station Upstream= 1483.4 Downstream= 1483.4  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 -3.25 1 4.8  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 -3.25 1 4.8

Pier Data

Pier Station Upstream= 1500.8 Downstream= 1500.8

Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 -3.25 1 4.8

Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 -3.25 1 4.8

Pier Data

Pier Station Upstream= 1518.2 Downstream= 1518.2

Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 -3.25 1 4.8

Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 -3.25 1 4.8

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth  
inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: Doubloon

REACH: to Marsh RS: 17188

INPUT

Description: 6' DS Hwy 190

Station Elevation Data num= 229

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									



ExpandedLocal.rep

0	6.105	8.866	6.098	27.161	6.011	58.929	6.067	88.723	5.827
108.993	5.766	150.285	6.07	159.056	6.06	197.245	5.842	209.12	5.779
211.847	5.761	259.184	5.606	273.41	5.593	309.247	5.585	334.972	5.637
354.018	5.724	359.353	5.747	399.1	6.478	409.817	6.586	446.323	6.888
457.699	6.865	460.281	6.91	498.829	6.318	510.744	6.435	529.656	6.38
561.208	6.384	594.934	5.941	611.672	5.807	660.211	5.228	662.136	5.2
668.692	5.137	712.6	4.837	745.608	4.826	763.064	4.863	790.767	4.528
813.527	4.273	856.045	3.571	863.991	3.441	891.061	3.366	909.8	3.277
914.503	3.252	922.139	3.28	965.486	3.388	990.366	3.696	1016.47	4.143
1061.95	4.2251067	4.53	4.2151082	4.283	4.2131110	4.735	3.9881118	4.437	4.08
1150.858	3.987	1169.42	4.3641185	4.372	4.3781190	4.585	4.3861222	4.373	4.29
1227.872	4.2541240	4.252	4.1451276	4.222	3.9561302	4.445	3.771	1330.07	3.067
1361.482	2.8121383	2.919	2.55	1401.85	2.5671437	2.768	2.36	1465	1.85
1479	-2.56	1493	-3.25	1507	-2.01	1519	1.331545	4.466	2.3
1563.452	2.3151599	2.315	2.5071600	2.739	2.5111603	2.943	2.5241653	2.164	2.785
1655.883	2.7871693	2.389	2.8131707	2.223	2.8461723	2.784	2.9341761	2.293	3.402
1792.626	2.9811815	2.363	2.8861842	2.582	2.9161869	2.433	3.0411891	2.863	3.154
1923.503	3.412	1961.38	3.4091977	3.573	3.337	1991.1	3.3912031	3.643	3.428
2080.178	3.852085	3.713	3.936	2121.14	4.0152139	4.783	3.3642157	3.992	3.546
2185.329	3.8492192	3.978	3.855	2205.15	3.8082245	3.727	3.2712271	3.227	3.453
2298.477	3.382341	3.842	3.6652348	3.614	3.842351	3.227	3.7012357	3.124	3.737
2403.977	3.7722443	3.022	4.1632456	4.726	4.2442478	4.535	4.2852509	4.476	4.355
2528.919	4.1992562	4.226	4.1232614	4.817	4.5962614	4.975	4.5972615	4.228	4.598
2653.107	4.7712667	4.725	4.7942691	4.169	4.8512720	4.475	4.8892729	4.231	4.901
2735.733	4.9022762	4.502	4.893	2771.57	4.8922774	4.174	4.8882821	4.992	4.869
2852.368	4.8652872	4.414	4.8212893	4.594	4.8372922	4.836	4.852	2934.82	4.892
2973.258	4.7992976	4.046	4.8142988	4.547	4.989	3023.68	5.4953058	4.498	5.853
3074.102	6.0893099	6.724	6.3073124	6.524	6.3863163	6.564	6.5993174	6.946	6.668
3214.591	6.8013225	6.368	6.8353228	6.462	6.847	3275.79	7.065	3293.36	7.129
3326.212	7.2493358	7.258	7.3593376	7.634	7.4123423	7.157	7.5683427	7.056	7.578
3440.636	7.6173477	7.478	7.7353511	7.984	7.796	3527.9	7.804	3553.21	7.826
3578.322	7.6823594	7.436	7.6913628	7.744	7.704	3666.68	7.8223679	7.166	7.864
3682.75	7.8733729	7.587	7.985	3759.34	8.0383780	8.009	8.0713812	8.547	8.164
3830.431	8.2013877	8.445	7.9983880	8.853	7.9883892	7.725	7.9523931	7.275	7.809
3942.343	7.8883981	7.697	8.0394007	8.242	8.164032	8.119	8.25	4072.14	8.286
4082.541	8.314118	8.769	8.5594132	8.963	8.6594137	8.038	8.6474183	8.385	8.511
4201.937	8.474233	8.807	8.4134266	8.835	8.3564284	8.229	8.3294331	8.733	8.248
4334.651	8.2414344	8.814	8.2254385	8.073	8.1634396	8.632	8.1474435	8.495	8.088
4461.53	8.0514485	8.917	8.0184501	8.409	8.0054536	8.339	7.9664570	8.858	7.951
4586.761	7.9424591	7.327	7.9444637	7.183	7.9464656	7.225	7.9494687	7.605	7.945
4721.123	7.934738	7.027	7.9194786	7.021	7.8834788	7.449	7.8824796	7.903	7.877
4838.871	7.857	4850.92	7.8494889	7.293	7.8384915	7.818	7.8284939	7.715	7.82
4980.716	7.8064990	7.137	7.8025022	7.947	7.7965040	7.559	7.7955045	7.615	7.794
5090.98	7.7985110	7.513	7.7855141	7.402	7.7825175	7.411	7.895191	8.824	7.94
5240.31	8.1135242	8.246	8.1195248	8.992	8.1555292	8.668	8.3835305	8.208	8.476
5343.09	8.7615370	8.106	9.0225393	9.512	9.2535426	9.182	9.404		

Manning's n Values

num= 3

ExpandedLocal.rep

Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 1465 .05 1519 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1465 1519 471 471 471 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 1462 7.36 F  
 15225426.182 7.36 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 16717

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-81	6.02	-71.68	6.02	-65.19	5.99	-52.46	5.94	-31.44	5.97
-30.37	5.97	-29.57	5.97	-19.08	5.98	4.44	5.81	12.22	5.76
31.47	5.7	33.52	5.7	36.42	5.72	39.25	5.73	58.59	5.86
74.07	5.95	76.91	5.97	80.76	5.97	86.12	5.96	92.51	5.93
108.88	5.84	125.1	5.75	126.25	5.75	138.72	5.69	141.59	5.67
143.69	5.66	147.27	5.65	153.54	5.63	169.44	5.58	178.5	5.55
191.33	5.5	206.27	5.49	211.64	5.48	213.32	5.48	214.58	5.48
235.95	5.47	243.93	5.47	248.13	5.47	270.96	5.51	275.62	5.52
280.29	5.54	282.95	5.55	290.97	5.59	296.57	5.61	302.45	5.71
317.76	5.96	336.66	6.26	338.34	6.28	349.6	6.38	352.57	6.4
373.69	6.54	387.39	6.63	387.95	6.63	397.7	6.61	399.91	6.6
402.62	6.64	422.2	6.37	443.12	6.08	454.72	6.18	455.64	6.19
457.01	6.18	457.64	6.18	458.73	6.18	475.51	6.14	479.8	6.14
491.82	6.14	501.97	6.14	508.67	6.14	519.78	6.01	524.15	5.96
526.64	5.93	535.75	5.83	544.1	5.73	561.45	5.61	561.69	5.61
580.81	5.41	590.65	5.31	596.26	5.25	612.69	5.09	614.71	5.06
616.77	5.04	621.6	5	631.08	4.95	641.85	4.88	665.89	4.74
667.73	4.73	668.14	4.73	679.22	4.73	700.72	4.72	701.45	4.72
702.42	4.72	702.67	4.72	720.76	4.76	737.08	4.58	749.86	4.45
757.96	4.38	767.04	4.29	772.69	4.24	773.78	4.23	788.99	4.02
808.31	3.77	815.19	3.67	818.45	3.63	826.8	3.51	843.93	3.49
854.86	3.47	855.24	3.47	872.42	3.41	874.93	3.4	876.82	3.4
879.55	3.39	879.87	3.38	887.9	3.42	891.29	3.43	915.17	3.49
929.66	3.53	933.44	3.54	950.78	3.75	959.58	3.85	964.63	3.93
986.4	4.26	986.59	4.26	986.89	4.26	987.01	4.27	1022.02	4.33
1030.5	4.34	1034.8	4.35	1040.58	4.34	1044.12	4.34	1056.16	4.35

ExpandedLocal.rep

1057.64	4.34	1076.35	4.21	1078.56	4.2	1086.06	4.15	1092.02	4.21
1094.15	4.24	1109.33	4.2	1120.25	4.18	1125.02	4.17	1128.21	4.16
1143.21	4.44	1147.72	4.52	1158.02	4.53	1164.48	4.54	1169.96	4.55
1184.82	4.51	1191.03	4.5	1195.85	4.48	1203.36	4.46	1209.13	4.43
1222.14	4.33	1224.03	4.32	1235.07	4.27	1257.04	4.16	1259.94	4.14
1260.3	4.14	1287.49	3.95	1290.04	3.89	1313.14	3.33	1316.51	3.25
1323.04	3.19	1326.92	3.16	1335.79	3.07	1349.52	2.95	1356.05	2.86
1371.78	2.66	1373.09	2.65	1389.05	2.62	1391.93	2.62	1411.28	2.47
1429.67	2.37	1458.29	1.89	1466.21	-.21	1474.14	-2.26	1477.74	-2.37
1481.33	-2.49	1495.71	-2.92	1503.18	-2.35	1510.64	-1.81	1511.79	-1.72
1518.11	-.31	1525.57	1.39	1550.78	2.29	1567.91	2.31	1602.07	2.48
1603.42	2.49	1606.48	2.5	1653.36	2.74	1655.95	2.74	1691.67	2.77
1704.85	2.8	1720.62	2.88	1756.34	3.31	1786.19	2.92	1807.84	2.84
1833.77	2.86	1835.63	2.87	1837.54	2.88	1859.34	2.99	1880.71	3.1
1910.84	3.35	1946.92	3.35	1962.34	3.29	1975.23	3.34	1977.01	3.35
1998.12	3.38	2013.84	3.39	2060.07	3.8	2065.34	3.88	2099.08	3.96
2116.84	3.37	2118.41	3.38	2134.18	3.54	2160.22	3.82	2167.5	3.83
2179.1	3.79	2210.79	3.39	2217.75	3.29	2242.03	3.46	2259.81	3.41
2267.99	3.39	2309.29	3.66	2315.74	3.82	2318.23	3.69	2323.62	3.72
2323.85	3.72	2368.47	3.76	2401.18	4.08	2405.66	4.12	2418.71	4.2
2439.49	4.23	2468.96	4.3	2486.38	4.16	2487.47	4.15	2519.2	4.08
2542.58	4.29	2569.29	4.52	2569.44	4.53	2569.68	4.53	2605.76	4.69
2619.68	4.71	2642.01	4.76	2649.15	4.77	2669.92	4.8	2678.26	4.81
2683.96	4.81	2684.45	4.81	2709.95	4.8	2718.59	4.8	2721.07	4.79
2766.61	4.78	2795.54	4.77	2811.89	4.74	2814.64	4.73	2825.33	4.74
2834.81	4.74	2835.67	4.75	2862.66	4.76	2874.08	4.8	2910.69	4.71
2913.34	4.72	2914.29	4.74	2925.25	4.88	2958.71	5.35	2966.73	5.43
2974.65	5.51	2991.87	5.69	3006.74	5.91	3031.14	6.11	3054.76	6.18
3091.94	6.38	3102.79	6.44	3108.1	6.46	3140.55	6.57	3150.81	6.6
3153.76	6.61	3198.83	6.82	3210.6	6.86	3215.57	6.88	3246.86	6.99
3249.51	7	3277.38	7.09	3294.88	7.14	3335.59	7.28	3339.19	7.29
3342.91	7.3	3355.84	7.34	3390.88	7.45	3390.93	7.45	3423.8	7.51
3438.96	7.52	3462.92	7.54	3463.06	7.54	3486.98	7.4	3502.33	7.41
3532.28	7.43	3535.01	7.43	3571.14	7.54	3583.03	7.58	3586.45	7.58
3625.68	7.68	3631.06	7.69	3659.39	7.74	3673.65	7.76	3679.08	7.77
3710.07	7.86	3727.1	7.89	3771.88	7.7	3775.13	7.69	3786.44	7.66
3788.45	7.65	3815.05	7.56	3823.15	7.53	3833.7	7.6	3871.18	7.74
3895.51	7.85	3919.2	7.94	3951.21	7.97	3956.46	7.97	3957.32	7.97
3960.44	7.98	3967.23	7.99	3991.04	8.15	4001.73	8.23	4015.25	8.32
4019.13	8.31	4063.28	8.18	4080.95	8.15	4085.44	8.14	4097.83	8.12
4111.3	8.09	4142.76	8.04	4159.33	8.02	4204.57	7.94	4207.35	7.94
4210.4	7.93	4217.03	7.92	4239.2	7.89	4255.38	7.87	4266.39	7.85
4276.72	7.84	4303.4	7.8	4328.2	7.77	4351.43	7.74	4366.18	7.73
4380.6	7.71	4399.45	7.69	4432.33	7.68	4439.48	7.68	4447.48	7.67
4451.82	7.68	4495.5	7.68	4513.64	7.68	4521.98	7.68	4543.52	7.68
4575.45	7.67	4585.33	7.66	4591.55	7.66	4637.26	7.63	4639.57	7.63
4647.63	7.62	4663.38	7.62	4687.6	7.61	4699.07	7.6	4735.62	7.59
4760.89	7.58	4765.01	7.58	4783.65	7.58	4804.75	7.57	4822.7	7.57

ExpandedLocal.rep

4831.67	7.56	4835.29	7.56	4862.92	7.56	4879.7	7.56	4884.51	7.56
4927.72	7.56	4946.15	7.55	4946.33	7.55	4975.75	7.55	5008.14	7.65
5023.77	7.7	5067.78	7.86	5069.95	7.86	5071.79	7.87	5078.22	7.9
5087.52	7.95	5090.52	7.97	5119.82	8.12	5131.76	8.2	5167.84	8.47
5193.58	8.71	5215.87	8.93	5228.93	8.99	5246.99	9.07		

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
-81	.06	1458.29	.05	1525.57	.06			

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1458.29	1525.57		471	471		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-811226.607	7.359	F	
1757.39	5246.99	7.369	F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 16246

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-162	5.94	-152.23	5.94	-145.43	5.91	-132.08	5.86	-110.05	5.89
-108.93	5.89	-108.09	5.89	-97.09	5.9	-72.44	5.74	-64.28	5.69
-44.1	5.63	-41.95	5.63	-38.91	5.65	-35.94	5.66	-15.67	5.77
.55	5.86	3.53	5.87	7.57	5.87	13.19	5.86	19.88	5.83
37.04	5.75	54.04	5.66	55.25	5.66	68.33	5.59	71.33	5.58
73.54	5.57	77.29	5.56	83.86	5.54	100.53	5.48	110.03	5.45
123.47	5.4	139.14	5.38	144.77	5.37	146.52	5.37	147.84	5.37
170.24	5.36	178.61	5.35	183.01	5.35	206.94	5.38	211.83	5.39
216.72	5.41	219.51	5.41	227.92	5.45	233.8	5.47	239.96	5.57
256	5.8	275.82	6.06	277.57	6.09	289.38	6.17	292.49	6.19
314.64	6.3	328.99	6.38	329.59	6.38	339.8	6.35	342.12	6.34
344.96	6.38	365.48	6.11	387.42	5.84	399.57	5.93	400.54	5.94
401.98	5.93	402.63	5.93	403.78	5.93	421.37	5.89	425.87	5.89
438.47	5.89	449.11	5.89	456.12	5.89	467.77	5.77	472.35	5.73
474.96	5.7	484.51	5.61	493.27	5.52	511.46	5.41	511.7	5.41
531.75	5.24	542.06	5.15	547.95	5.09	565.17	4.94	567.29	4.92
569.45	4.9	574.51	4.87	584.44	4.82	595.73	4.76	620.93	4.64
622.87	4.63	623.3	4.63	634.91	4.62	657.45	4.62	658.22	4.62
659.22	4.62	659.48	4.62	678.45	4.65	695.56	4.49	708.96	4.38

ExpandedLocal.rep

717.44	4.31	726.97	4.23	732.89	4.2	734.03	4.19	749.98	4.01
770.23	3.8	777.44	3.72	780.86	3.68	789.61	3.59	807.57	3.58
819.03	3.58	819.43	3.58	837.44	3.54	840.07	3.53	842.04	3.53
844.9	3.52	845.25	3.52	853.66	3.55	857.21	3.56	882.24	3.64
897.43	3.69	901.4	3.7	919.58	3.9	928.8	4	934.09	4.08
956.92	4.38	957.11	4.38	957.43	4.39	957.55	4.39	994.25	4.45
1003.14	4.47	1007.65	4.48	1013.71	4.47	1017.42	4.47	1030.04	4.48
1031.59	4.47	1051.2	4.36	1053.53	4.35	1061.38	4.31	1067.63	4.37
1069.86	4.39	1085.78	4.37	1097.22	4.35	1102.22	4.35	1105.57	4.34
1121.29	4.6	1126.02	4.68	1136.82	4.69	1143.59	4.7	1149.33	4.71
1164.9	4.68	1171.42	4.67	1176.47	4.66	1184.34	4.64	1190.4	4.61
1204.03	4.51	1206.01	4.51	1217.58	4.46	1240.61	4.34	1243.65	4.33
1244.04	4.33	1272.53	4.13	1275.21	4.08	1299.43	3.52	1302.96	3.43
1309.8	3.37	1313.87	3.33	1323.17	3.23	1337.56	3.08	1344.4	2.99
1360.9	2.76	1362.27	2.74	1379	2.67	1382.02	2.66	1402.3	2.48
1421.58	2.38	1451.57	1.93	1460.43	-.06	1469.29	-1.97	1474.14	-2.06
1479	-2.19	1498.43	-2.59	1506.86	-2.04	1515.29	-1.51	1516.58	-1.44
1523.71	-.14	1532.14	1.45	1556.09	2.29	1572.37	2.3	1604.82	2.46
1606.11	2.47	1609.01	2.48	1653.55	2.7	1656.01	2.7	1689.95	2.72
1702.47	2.75	1717.45	2.83	1751.4	3.23	1779.75	2.87	1800.32	2.78
1824.96	2.81	1826.73	2.82	1828.54	2.83	1849.25	2.93	1869.55	3.04
1898.18	3.28	1932.46	3.3	1947.11	3.25	1959.35	3.3	1961.04	3.3
1981.1	3.34	1996.04	3.36	2039.96	3.75	2044.97	3.83	2077.02	3.91
2093.9	3.37	2095.39	3.38	2110.37	3.53	2135.11	3.8	2142.03	3.81
2153.05	3.77	2183.15	3.4	2189.77	3.32	2212.84	3.47	2229.73	3.42
2237.5	3.4	2276.74	3.65	2282.87	3.8	2285.23	3.68	2290.35	3.71
2290.57	3.71	2332.97	3.74	2364.05	4.04	2368.3	4.08	2380.7	4.15
2400.44	4.18	2428.43	4.24	2444.99	4.12	2446.03	4.11	2476.17	4.05
2498.39	4.24	2523.76	4.45	2523.9	4.45	2524.13	4.45	2558.41	4.6
2571.64	4.62	2592.85	4.67	2599.63	4.68	2619.37	4.7	2627.29	4.71
2632.7	4.71	2633.18	4.71	2657.4	4.7	2665.61	4.7	2667.96	4.7
2711.23	4.68	2738.72	4.68	2754.25	4.64	2756.86	4.64	2767.02	4.65
2776.03	4.65	2776.84	4.65	2802.49	4.66	2813.33	4.7	2848.11	4.62
2850.64	4.63	2851.54	4.64	2861.95	4.78	2893.74	5.21	2901.36	5.29
2908.89	5.36	2925.25	5.52	2939.37	5.72	2962.56	5.91	2985	5.98
3020.32	6.16	3030.62	6.22	3035.68	6.24	3066.5	6.34	3076.25	6.37
3079.05	6.38	3121.88	6.57	3133.05	6.61	3137.78	6.63	3167.51	6.73
3170.02	6.74	3196.5	6.83	3213.13	6.88	3251.81	7	3255.23	7.01
3258.76	7.02	3271.05	7.06	3304.34	7.16	3304.39	7.16	3335.61	7.22
3350.02	7.23	3372.78	7.25	3372.92	7.25	3395.64	7.13	3410.22	7.14
3438.68	7.15	3441.27	7.15	3475.6	7.25	3486.9	7.29	3490.14	7.3
3527.42	7.38	3532.52	7.39	3559.45	7.44	3573	7.46	3578.15	7.47
3607.6	7.55	3623.78	7.58	3666.32	7.41	3669.41	7.4	3680.15	7.37
3682.06	7.36	3707.34	7.27	3715.03	7.25	3725.05	7.31	3760.66	7.44
3783.78	7.55	3806.29	7.63	3836.7	7.65	3841.68	7.66	3842.5	7.66
3845.47	7.66	3851.92	7.68	3874.54	7.83	3884.7	7.89	3897.54	7.98
3901.23	7.97	3943.17	7.86	3959.96	7.82	3964.22	7.81	3976	7.8
3988.8	7.77	4018.68	7.73	4034.42	7.71	4077.41	7.64	4080.05	7.64

ExpandedLocal.rep

4082.95	7.63	4089.25	7.62	4110.31	7.59	4125.68	7.57	4136.14	7.56
4145.96	7.55	4171.31	7.51	4194.87	7.49	4216.93	7.46	4230.95	7.45
4244.66	7.44	4262.56	7.42	4293.8	7.41	4300.6	7.41	4308.19	7.41
4312.32	7.41	4353.82	7.41	4371.05	7.42	4378.97	7.42	4399.44	7.42
4429.77	7.41	4439.16	7.4	4445.07	7.4	4488.5	7.38	4490.7	7.38
4498.35	7.37	4513.31	7.37	4536.33	7.36	4547.23	7.35	4581.95	7.35
4605.96	7.34	4609.88	7.34	4627.58	7.34	4647.63	7.33	4664.68	7.33
4673.21	7.33	4676.64	7.33	4702.9	7.32	4718.83	7.33	4723.41	7.32
4764.46	7.33	4781.97	7.32	4782.14	7.32	4810.09	7.32	4840.86	7.42
4855.72	7.46	4897.53	7.61	4899.59	7.62	4901.34	7.62	4907.45	7.65
4916.29	7.7	4919.13	7.71	4946.97	7.85	4958.32	7.93	4992.6	8.18
5017.04	8.41	5038.23	8.61	5050.63	8.66	5067.79	8.74		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-162	.06	1451.57	.05	1532.14	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1451.57	1532.14		470	470		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-162	1149.33	4.71	F
1992.78	5067.79	7.35857	F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 15776

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-243	5.86	-232.79	5.85	-225.66	5.83	-211.71	5.78	-188.66	5.81
-187.49	5.81	-186.61	5.81	-175.11	5.82	-149.32	5.67	-140.78	5.62
-119.68	5.57	-117.43	5.56	-114.24	5.57	-111.14	5.59	-89.93	5.69
-72.97	5.76	-69.85	5.78	-65.62	5.77	-59.75	5.76	-52.75	5.73
-34.8	5.65	-17.01	5.57	-15.75	5.56	-2.07	5.5	1.07	5.48
3.38	5.48	7.3	5.46	14.18	5.44	31.61	5.38	41.55	5.35
55.61	5.3	72	5.27	77.89	5.27	79.73	5.26	81.11	5.26
104.54	5.24	113.29	5.23	117.9	5.24	142.93	5.25	148.04	5.26
153.16	5.27	156.08	5.27	164.87	5.31	171.02	5.34	177.46	5.43
194.25	5.64	214.97	5.87	216.81	5.89	229.16	5.96	232.42	5.98
255.58	6.06	270.59	6.12	271.22	6.13	281.9	6.09	284.32	6.08
287.3	6.11	308.76	5.86	331.71	5.61	344.43	5.69	345.44	5.69

ExpandedLocal.rep

346.94	5.69	347.63	5.69	348.83	5.68	367.23	5.65	371.93	5.65
385.11	5.65	396.24	5.65	403.58	5.65	415.76	5.54	420.55	5.49
423.29	5.47	433.27	5.39	442.44	5.31	461.46	5.22	461.72	5.22
482.69	5.06	493.48	4.98	499.63	4.94	517.64	4.8	519.86	4.78
522.12	4.77	527.41	4.73	537.81	4.69	549.62	4.64	575.98	4.53
578	4.52	578.45	4.52	590.6	4.52	614.18	4.51	614.98	4.51
616.03	4.51	616.3	4.51	636.14	4.55	654.04	4.4	668.06	4.31
676.93	4.25	686.89	4.17	693.09	4.16	694.28	4.15	710.97	4
732.14	3.84	739.69	3.77	743.27	3.74	752.42	3.66	771.2	3.68
783.19	3.68	783.61	3.68	802.45	3.66	805.2	3.66	807.26	3.66
810.26	3.65	810.62	3.65	819.42	3.69	823.13	3.7	849.32	3.79
865.2	3.84	869.36	3.86	888.37	4.06	898.02	4.15	903.56	4.23
927.43	4.5	927.63	4.5	927.96	4.51	928.1	4.51	966.48	4.57
975.78	4.59	980.49	4.6	986.83	4.6	990.72	4.6	1003.92	4.61
1005.54	4.6	1026.05	4.51	1028.49	4.5	1036.7	4.47	1043.23	4.53
1045.57	4.55	1062.22	4.54	1074.19	4.53	1079.42	4.52	1082.93	4.52
1099.37	4.76	1104.31	4.84	1115.61	4.85	1122.69	4.86	1128.7	4.87
1144.99	4.85	1151.8	4.84	1157.09	4.83	1165.32	4.81	1171.66	4.78
1185.92	4.7	1187.99	4.69	1200.09	4.65	1224.18	4.53	1227.36	4.52
1227.77	4.51	1257.57	4.32	1260.37	4.26	1285.71	3.7	1289.4	3.62
1296.56	3.54	1300.81	3.5	1310.54	3.38	1325.59	3.21	1332.75	3.12
1350.01	2.86	1351.44	2.84	1368.94	2.73	1372.1	2.71	1393.32	2.49
1413.48	2.4	1444.86	1.97	1454.64	.09	1464.43	-1.67	1470.55	-1.76
1476.67	-1.89	1501.14	-2.25	1510.54	-1.72	1519.93	-1.22	1521.37	-1.15
1529.32	.03	1538.71	1.52	1561.41	2.28	1576.83	2.29	1607.57	2.44
1608.79	2.44	1611.54	2.45	1653.74	2.66	1656.07	2.66	1688.23	2.68
1700.09	2.7	1714.29	2.77	1746.45	3.14	1773.31	2.81	1792.81	2.73
1816.14	2.76	1817.82	2.76	1819.54	2.77	1839.16	2.88	1858.39	2.98
1885.52	3.21	1918	3.24	1931.88	3.2	1943.48	3.25	1945.08	3.26
1964.08	3.3	1978.24	3.33	2019.85	3.7	2024.59	3.77	2054.97	3.86
2070.95	3.37	2072.36	3.38	2086.56	3.52	2110	3.77	2116.56	3.78
2126.99	3.75	2155.52	3.42	2161.78	3.34	2183.65	3.48	2199.65	3.43
2207.01	3.41	2244.19	3.64	2250	3.77	2252.24	3.66	2257.09	3.69
2257.29	3.69	2297.46	3.73	2326.91	4	2330.94	4.04	2342.69	4.1
2361.39	4.13	2387.91	4.19	2403.6	4.07	2404.58	4.07	2433.14	4.01
2454.19	4.18	2478.23	4.38	2478.36	4.38	2478.58	4.38	2511.06	4.52
2523.59	4.53	2543.69	4.58	2550.12	4.59	2568.82	4.61	2576.32	4.62
2581.45	4.62	2581.9	4.62	2604.85	4.61	2612.62	4.61	2614.86	4.61
2655.85	4.59	2681.9	4.58	2696.61	4.55	2699.08	4.55	2708.71	4.55
2717.24	4.56	2718.02	4.56	2742.31	4.57	2752.59	4.6	2785.54	4.53
2787.93	4.54	2788.79	4.55	2798.65	4.68	2828.77	5.07	2835.99	5.14
2843.12	5.21	2858.62	5.35	2872	5.54	2893.97	5.71	2915.23	5.77
2948.7	5.94	2958.46	6	2963.25	6.01	2992.45	6.11	3001.69	6.13
3004.35	6.14	3044.92	6.32	3055.51	6.36	3059.99	6.37	3088.15	6.47
3090.54	6.48	3115.63	6.56	3131.38	6.61	3168.02	6.73	3171.27	6.74
3174.61	6.75	3186.26	6.78	3217.79	6.88	3217.84	6.88	3247.43	6.93
3261.07	6.94	3282.64	6.96	3282.77	6.96	3304.3	6.85	3318.12	6.86
3345.08	6.87	3347.53	6.87	3380.06	6.97	3390.76	7	3393.84	7.01

ExpandedLocal.rep

3429.16	7.09	3433.99	7.1	3459.5	7.14	3472.34	7.16	3477.22	7.17
3505.12	7.24	3520.45	7.27	3560.76	7.11	3563.68	7.1	3573.86	7.08
3575.67	7.07	3599.62	6.99	3606.91	6.96	3616.4	7.03	3650.14	7.15
3672.04	7.24	3693.37	7.31	3722.19	7.34	3726.91	7.34	3727.69	7.34
3730.5	7.35	3736.6	7.36	3758.03	7.5	3767.66	7.56	3779.83	7.64
3783.33	7.63	3823.06	7.53	3838.97	7.5	3843.01	7.49	3854.16	7.47
3866.29	7.46	3894.61	7.41	3909.52	7.4	3950.25	7.34	3952.75	7.33
3955.5	7.33	3961.47	7.32	3981.42	7.3	3995.98	7.28	4005.89	7.27
4015.19	7.26	4039.21	7.23	4061.53	7.2	4082.44	7.18	4095.73	7.17
4108.71	7.16	4125.67	7.15	4155.27	7.14	4161.71	7.14	4168.9	7.14
4172.82	7.14	4212.13	7.15	4228.46	7.15	4235.97	7.15	4255.36	7.16
4284.1	7.15	4292.99	7.14	4298.59	7.14	4339.74	7.12	4341.82	7.12
4349.07	7.12	4363.25	7.12	4385.05	7.11	4395.38	7.11	4428.28	7.1
4451.02	7.1	4454.74	7.1	4471.51	7.1	4490.51	7.09	4506.67	7.09
4514.74	7.09	4518	7.09	4542.87	7.09	4557.97	7.09	4562.31	7.09
4601.2	7.1	4617.79	7.09	4617.95	7.09	4644.43	7.09	4673.59	7.18
4687.66	7.22	4727.28	7.36	4729.23	7.37	4730.89	7.37	4736.68	7.4
4745.05	7.44	4747.74	7.46	4774.12	7.59	4784.87	7.66	4817.35	7.89
4840.51	8.1	4860.58	8.29	4872.34	8.34	4888.59	8.41		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -243 .06 1444.86 .05 1538.71 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1444.86 1538.71 471 471 471 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -243 1128.7 4.87 F  
 2228.17 4888.59 7.35785 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 15305

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-324	5.78	-313.34	5.77	-305.9	5.75	-291.33	5.71	-267.27	5.73
-266.04	5.73	-265.13	5.73	-253.12	5.74	-226.19	5.6	-217.28	5.55
-195.25	5.5	-192.9	5.49	-189.58	5.5	-186.33	5.52	-164.2	5.6
-146.48	5.67	-143.23	5.68	-138.82	5.67	-132.68	5.66	-125.37	5.63
-106.63	5.55	-88.06	5.48	-86.75	5.47	-72.46	5.41	-69.18	5.39



ExpandedLocal.rep

-66.78	5.38	-62.68	5.37	-55.5	5.35	-37.3	5.29	-26.93	5.25
-12.25	5.2	4.87	5.17	11.01	5.16	12.93	5.15	14.37	5.15
38.83	5.13	47.97	5.12	52.78	5.12	78.91	5.12	84.25	5.12
89.59	5.13	92.64	5.13	101.82	5.17	108.24	5.2	114.97	5.29
132.49	5.48	154.13	5.68	156.05	5.69	168.94	5.76	172.34	5.77
196.53	5.83	212.2	5.87	212.85	5.87	224	5.83	226.53	5.82
229.64	5.85	252.05	5.6	276.01	5.37	289.28	5.44	290.34	5.44
291.91	5.44	292.62	5.44	293.88	5.44	313.09	5.4	318	5.41
331.76	5.4	343.38	5.4	351.04	5.4	363.76	5.3	368.76	5.26
371.61	5.24	382.04	5.17	391.6	5.1	411.46	5.02	411.74	5.02
433.63	4.88	444.89	4.81	451.31	4.78	470.12	4.66	472.44	4.64
474.8	4.63	480.32	4.6	491.17	4.57	503.5	4.52	531.02	4.42
533.14	4.42	533.6	4.42	546.29	4.42	570.9	4.41	571.74	4.41
572.84	4.41	573.12	4.41	593.83	4.44	612.52	4.31	627.16	4.23
636.42	4.18	646.82	4.12	653.29	4.12	654.53	4.11	671.95	3.99
694.06	3.87	701.94	3.82	705.67	3.8	715.23	3.74	734.84	3.77
747.35	3.79	747.79	3.79	767.46	3.78	770.33	3.79	772.49	3.78
775.61	3.78	775.99	3.78	785.17	3.82	789.06	3.84	816.39	3.94
832.98	4	837.31	4.01	857.16	4.21	867.24	4.31	873.02	4.38
897.94	4.62	898.15	4.63	898.5	4.63	898.64	4.63	938.71	4.7
948.42	4.72	953.34	4.73	959.96	4.73	964.02	4.73	977.8	4.74
979.49	4.74	1000.91	4.66	1003.45	4.66	1012.02	4.63	1018.84	4.69
1021.29	4.71	1038.67	4.7	1051.16	4.7	1056.63	4.69	1060.28	4.69
1077.45	4.92	1082.61	4.99	1094.41	5.01	1101.8	5.02	1108.07	5.03
1125.08	5.02	1132.19	5.01	1137.71	5	1146.3	4.99	1152.92	4.96
1167.81	4.88	1169.97	4.88	1182.61	4.83	1207.76	4.72	1211.08	4.7
1211.5	4.7	1242.62	4.5	1245.54	4.45	1271.99	3.89	1275.85	3.8
1283.32	3.72	1287.76	3.67	1297.92	3.54	1313.63	3.35	1321.1	3.24
1339.12	2.96	1340.62	2.93	1358.89	2.78	1362.18	2.76	1384.34	2.51
1405.39	2.41	1438.14	2.01	1448.86	.23	1459.57	-1.37	1466.95	-1.45
1474.33	-1.59	1503.86	-1.92	1514.21	-1.4	1524.57	-.93	1526.16	-.87
1534.93	.2	1545.29	1.58	1566.72	2.27	1581.28	2.28	1610.33	2.42
1611.48	2.42	1614.07	2.43	1653.93	2.61	1656.14	2.62	1686.51	2.63
1697.71	2.66	1711.12	2.72	1741.5	3.05	1766.87	2.75	1785.29	2.68
1807.33	2.7	1808.92	2.71	1810.54	2.72	1829.07	2.82	1847.24	2.93
1872.86	3.15	1903.53	3.19	1916.65	3.15	1927.6	3.21	1929.12	3.21
1947.06	3.26	1960.43	3.29	1999.74	3.65	2004.22	3.72	2032.91	3.81
2048.01	3.37	2049.34	3.38	2062.75	3.51	2084.89	3.75	2091.09	3.76
2100.94	3.73	2127.89	3.44	2133.8	3.37	2154.45	3.48	2169.57	3.44
2176.52	3.42	2211.64	3.63	2217.12	3.75	2219.24	3.65	2223.82	3.68
2224.01	3.68	2261.96	3.71	2289.77	3.96	2293.58	4	2304.67	4.05
2322.34	4.08	2347.39	4.13	2362.21	4.03	2363.14	4.02	2390.11	3.97
2410	4.13	2432.7	4.31	2432.83	4.31	2433.03	4.31	2463.71	4.43
2475.55	4.45	2494.53	4.49	2500.6	4.49	2518.26	4.51	2525.35	4.52
2530.2	4.52	2530.62	4.52	2552.3	4.52	2559.64	4.51	2561.75	4.51
2600.47	4.49	2625.07	4.49	2638.97	4.46	2641.31	4.46	2650.4	4.46
2658.46	4.47	2659.19	4.47	2682.14	4.48	2691.84	4.51	2722.97	4.44
2725.23	4.45	2726.04	4.46	2735.35	4.57	2763.8	4.93	2770.62	4.99

ExpandedLocal.rep

2777.36	5.05	2792	5.19	2804.64	5.36	2825.39	5.51	2845.47	5.57
2877.08	5.72	2886.3	5.77	2890.83	5.79	2918.41	5.87	2927.13	5.9
2929.64	5.91	2967.97	6.07	2977.97	6.11	2982.2	6.12	3008.8	6.21
3011.05	6.22	3034.75	6.3	3049.63	6.34	3084.24	6.45	3087.31	6.46
3090.47	6.47	3101.46	6.5	3131.25	6.59	3131.3	6.59	3159.24	6.64
3172.13	6.65	3192.5	6.67	3192.63	6.67	3212.96	6.57	3226.01	6.58
3251.48	6.6	3253.8	6.6	3284.52	6.68	3294.63	6.71	3297.53	6.72
3330.89	6.79	3335.46	6.8	3359.56	6.84	3371.68	6.86	3376.29	6.87
3402.64	6.93	3417.13	6.96	3455.2	6.82	3457.96	6.81	3467.57	6.78
3469.28	6.78	3491.91	6.7	3498.79	6.68	3507.75	6.74	3539.62	6.85
3560.31	6.94	3580.46	7	3607.67	7.02	3612.13	7.03	3612.87	7.03
3615.52	7.03	3621.29	7.05	3641.53	7.17	3650.63	7.23	3662.12	7.3
3665.42	7.29	3702.95	7.2	3717.98	7.17	3721.8	7.17	3732.33	7.15
3743.79	7.14	3770.53	7.1	3784.62	7.08	3823.09	7.03	3825.45	7.03
3828.05	7.03	3833.68	7.02	3852.53	7	3866.29	6.98	3875.65	6.98
3884.43	6.97	3907.12	6.94	3928.2	6.92	3947.95	6.9	3960.5	6.9
3972.76	6.89	3988.78	6.88	4016.74	6.87	4022.82	6.87	4029.62	6.87
4033.31	6.87	4070.45	6.88	4085.87	6.89	4092.96	6.89	4111.28	6.89
4138.43	6.89	4146.82	6.88	4152.11	6.88	4190.98	6.87	4192.95	6.87
4199.79	6.87	4213.19	6.87	4233.78	6.86	4243.54	6.86	4274.61	6.86
4296.09	6.86	4299.6	6.86	4315.45	6.85	4333.39	6.85	4348.65	6.85
4356.28	6.85	4359.35	6.85	4382.85	6.85	4397.11	6.86	4401.21	6.86
4437.94	6.87	4453.61	6.86	4453.76	6.86	4478.78	6.86	4506.32	6.95
4519.61	6.99	4557.03	7.11	4558.87	7.12	4560.44	7.12	4565.9	7.15
4573.81	7.19	4576.36	7.2	4601.27	7.32	4611.43	7.39	4642.11	7.6
4663.98	7.79	4682.94	7.96	4694.04	8.01	4709.4	8.08		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -324 .06 1438.14 .05 1545.29 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1438.14 1545.29 471 471 471 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -324 1094.41 5.01 F  
 2463.57 4709.4 7.35714 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 14834

INPUT  
 Description: Interpolated Section  
 Station Elevation Data num= 394

ExpandedLocal.rep

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-405	5.7	-393.89	5.69	-386.14	5.67	-370.95	5.63	-345.88	5.65
-344.6	5.65	-343.65	5.65	-331.13	5.65	-303.07	5.52	-293.78	5.48
-270.82	5.43	-268.37	5.42	-264.91	5.43	-261.53	5.44	-238.46	5.51
-220	5.57	-216.61	5.58	-212.01	5.57	-205.62	5.56	-198	5.54
-178.47	5.46	-159.12	5.38	-157.75	5.38	-142.86	5.32	-139.44	5.3
-136.93	5.29	-132.67	5.28	-125.18	5.25	-106.22	5.19	-95.4	5.15
-80.1	5.1	-62.27	5.06	-55.87	5.05	-53.86	5.05	-52.36	5.04
-26.87	5.01	-17.35	5	-12.33	5	14.9	4.99	20.46	4.99
26.03	5	29.2	4.99	38.77	5.04	45.46	5.07	52.47	5.15
70.73	5.32	93.28	5.48	95.29	5.5	108.72	5.55	112.26	5.56
137.47	5.59	153.8	5.62	154.48	5.62	166.1	5.57	168.74	5.56
171.98	5.58	195.33	5.35	220.3	5.13	234.14	5.19	235.24	5.2
236.87	5.19	237.62	5.19	238.92	5.19	258.94	5.16	264.06	5.16
278.4	5.16	290.51	5.16	298.49	5.16	311.75	5.06	316.96	5.03
319.94	5.01	330.8	4.95	340.77	4.89	361.47	4.82	361.75	4.82
384.57	4.71	396.31	4.65	403	4.62	422.6	4.51	425.01	4.5
427.47	4.49	433.23	4.47	444.54	4.44	457.39	4.4	486.07	4.32
488.27	4.31	488.76	4.31	501.98	4.31	527.63	4.31	528.5	4.31
529.65	4.31	529.94	4.31	551.53	4.34	571	4.22	586.25	4.16
595.91	4.12	606.74	4.06	613.49	4.08	614.78	4.07	632.94	3.98
655.98	3.91	664.19	3.87	668.08	3.85	678.04	3.81	698.48	3.87
711.52	3.89	711.98	3.89	732.47	3.91	735.47	3.91	737.71	3.91
740.97	3.91	741.36	3.91	750.93	3.96	754.98	3.97	783.47	4.09
800.75	4.15	805.27	4.17	825.96	4.37	836.46	4.46	842.48	4.53
868.46	4.75	868.68	4.75	869.03	4.75	869.18	4.75	910.95	4.82
921.06	4.84	926.19	4.85	933.09	4.86	937.32	4.86	951.68	4.88
953.44	4.87	975.76	4.82	978.41	4.81	987.35	4.79	994.45	4.85
997	4.86	1015.11	4.87	1028.13	4.87	1033.83	4.87	1037.64	4.87
1055.53	5.09	1060.91	5.15	1073.2	5.17	1080.91	5.18	1087.44	5.2
1105.17	5.19	1112.58	5.18	1118.33	5.17	1127.29	5.16	1134.18	5.14
1149.7	5.07	1151.95	5.06	1165.12	5.02	1191.33	4.9	1194.79	4.89
1195.23	4.89	1227.66	4.68	1230.7	4.63	1258.27	4.07	1262.29	3.99
1270.08	3.89	1274.71	3.84	1285.29	3.69	1301.67	3.48	1309.45	3.37
1328.23	3.06	1329.79	3.03	1348.83	2.84	1352.27	2.81	1375.35	2.52
1397.29	2.42	1431.43	2.05	1443.07	.38	1454.71	-1.07	1463.36	-1.15
1472	-1.29	1506.57	-1.59	1517.89	-1.08	1529.21	-.63	1530.96	-.58
1540.54	.37	1551.86	1.64	1572.03	2.26	1585.74	2.27	1613.08	2.4
1614.16	2.4	1616.61	2.41	1654.13	2.57	1656.2	2.57	1684.79	2.59
1695.33	2.61	1707.96	2.67	1736.55	2.97	1760.44	2.69	1777.77	2.63
1798.52	2.65	1800.01	2.66	1801.54	2.67	1818.98	2.77	1836.08	2.87
1860.2	3.08	1889.07	3.13	1901.42	3.11	1911.73	3.16	1913.15	3.16
1930.05	3.22	1942.63	3.26	1979.63	3.6	1983.85	3.66	2010.85	3.76
2025.06	3.37	2026.32	3.39	2038.94	3.51	2059.78	3.72	2065.61	3.73
2074.89	3.71	2100.25	3.46	2105.82	3.39	2125.26	3.49	2139.49	3.45
2146.03	3.43	2179.09	3.62	2184.25	3.73	2186.24	3.64	2190.55	3.66
2190.74	3.66	2226.45	3.7	2252.63	3.93	2256.21	3.96	2266.66	4.01

ExpandedLocal.rep

2283.29	4.03	2306.87	4.08	2320.82	3.98	2321.69	3.98	2347.08	3.93
2365.8	4.08	2387.17	4.24	2387.29	4.24	2387.48	4.24	2416.36	4.35
2427.5	4.36	2445.37	4.4	2451.08	4.4	2467.71	4.42	2474.38	4.43
2478.94	4.43	2479.34	4.43	2499.75	4.42	2506.66	4.42	2508.64	4.42
2545.09	4.4	2568.25	4.4	2581.33	4.37	2583.53	4.37	2592.09	4.37
2599.67	4.38	2600.36	4.38	2621.96	4.38	2631.1	4.41	2660.4	4.35
2662.52	4.36	2663.28	4.37	2672.05	4.47	2698.83	4.79	2705.25	4.85
2711.59	4.9	2725.38	5.02	2737.27	5.17	2756.8	5.31	2775.71	5.37
2805.46	5.51	2814.14	5.55	2818.4	5.56	2844.36	5.64	2852.58	5.67
2854.94	5.68	2891.01	5.83	2900.42	5.86	2904.41	5.87	2929.45	5.95
2931.57	5.96	2953.88	6.03	2967.88	6.07	3000.46	6.18	3003.35	6.19
3006.32	6.19	3016.67	6.22	3044.71	6.31	3044.75	6.31	3071.06	6.35
3083.19	6.36	3102.37	6.38	3102.48	6.38	3121.62	6.29	3133.91	6.3
3157.88	6.32	3160.06	6.32	3188.98	6.4	3198.49	6.43	3201.23	6.43
3232.63	6.5	3236.93	6.51	3259.61	6.54	3271.02	6.56	3275.36	6.57
3300.17	6.63	3313.8	6.65	3349.64	6.52	3352.24	6.51	3361.29	6.49
3362.9	6.49	3384.19	6.42	3390.67	6.4	3399.11	6.45	3429.11	6.55
3448.58	6.63	3467.54	6.69	3493.16	6.71	3497.36	6.71	3498.05	6.71
3500.55	6.72	3505.98	6.73	3525.03	6.84	3533.59	6.89	3544.41	6.96
3547.52	6.95	3582.85	6.87	3596.99	6.85	3600.58	6.84	3610.5	6.83
3621.28	6.82	3646.46	6.79	3659.72	6.77	3695.93	6.73	3698.15	6.73
3700.6	6.72	3705.9	6.72	3723.64	6.7	3736.59	6.69	3745.4	6.68
3753.67	6.68	3775.02	6.66	3794.87	6.64	3813.46	6.62	3825.27	6.62
3836.81	6.61	3851.9	6.6	3878.21	6.6	3883.93	6.6	3890.33	6.6
3893.81	6.61	3928.77	6.62	3943.28	6.62	3949.96	6.63	3967.2	6.63
3992.75	6.63	4000.66	6.63	4005.64	6.62	4042.22	6.62	4044.07	6.62
4050.52	6.62	4063.12	6.62	4082.51	6.61	4091.69	6.61	4120.94	6.61
4141.16	6.61	4144.46	6.61	4159.38	6.61	4176.27	6.61	4190.63	6.61
4197.81	6.61	4200.71	6.61	4222.82	6.62	4236.25	6.62	4240.1	6.62
4274.68	6.63	4289.43	6.63	4289.57	6.63	4313.12	6.63	4339.04	6.71
4351.55	6.75	4386.78	6.87	4388.51	6.87	4389.99	6.88	4395.13	6.9
4402.58	6.94	4404.97	6.95	4428.42	7.06	4437.98	7.12	4466.86	7.31
4487.45	7.49	4505.3	7.64	4515.75	7.68	4530.2	7.74		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -405 .06 1431.43 .05 1551.86 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1431.43 1551.86 471 471 471 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -405 1087.44 5.2 F  
 2698.96 4530.2 7.35642 F

CROSS SECTION

ExpandedLocal.rep

RIVER: Doubloon  
 REACH: to Marsh

RS: 14363

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-486	5.61	-474.44	5.61	-466.37	5.6	-450.58	5.56	-424.48	5.57
-423.16	5.57	-422.16	5.57	-409.14	5.57	-379.95	5.45	-370.28	5.41
-346.39	5.36	-343.85	5.35	-340.24	5.36	-336.73	5.37	-312.72	5.43
-293.52	5.47	-289.99	5.48	-285.2	5.48	-278.55	5.47	-270.63	5.44
-250.31	5.36	-230.17	5.29	-228.74	5.28	-213.26	5.22	-209.7	5.21
-207.09	5.2	-202.65	5.19	-194.86	5.16	-175.13	5.09	-163.88	5.05
-147.96	5	-129.41	4.95	-122.74	4.94	-120.66	4.94	-119.1	4.93
-92.58	4.9	-82.67	4.88	-77.45	4.88	-49.12	4.86	-43.32	4.86
-37.54	4.86	-34.23	4.85	-24.27	4.9	-17.32	4.93	-10.02	5.01
8.98	5.15	32.44	5.29	34.52	5.3	48.5	5.34	52.19	5.35
78.41	5.35	95.41	5.36	96.11	5.36	108.21	5.31	110.95	5.3
114.32	5.32	138.62	5.1	164.59	4.9	178.99	4.94	180.13	4.95
181.83	4.94	182.61	4.94	183.97	4.94	204.8	4.92	210.13	4.92
225.05	4.91	237.65	4.91	245.95	4.91	259.74	4.83	265.17	4.8
268.26	4.78	279.57	4.73	289.94	4.68	311.47	4.63	311.77	4.62
335.51	4.53	347.72	4.48	354.68	4.46	375.07	4.37	377.59	4.36
380.14	4.35	386.14	4.33	397.9	4.31	411.27	4.28	441.11	4.21
443.4	4.21	443.91	4.21	457.66	4.21	484.35	4.2	485.26	4.2
486.45	4.2	486.76	4.2	509.22	4.23	529.48	4.13	545.35	4.08
555.4	4.06	566.67	4	573.69	4.03	575.04	4.03	593.92	3.97
617.9	3.94	626.44	3.92	630.49	3.91	640.85	3.88	662.11	3.96
675.68	4	676.16	4	697.48	4.03	700.6	4.04	702.94	4.04
706.32	4.05	706.73	4.05	716.69	4.09	720.9	4.11	750.54	4.24
768.53	4.31	773.23	4.33	794.75	4.52	805.68	4.61	811.94	4.68
838.97	4.87	839.2	4.87	839.57	4.87	839.72	4.88	883.18	4.94
893.7	4.96	899.04	4.98	906.22	4.98	910.61	4.99	925.56	5.01
927.39	5	950.61	4.97	953.37	4.96	962.67	4.95	970.06	5
972.71	5.02	991.56	5.03	1005.1	5.04	1011.03	5.04	1015	5.05
1033.61	5.25	1039.21	5.31	1052	5.33	1060.01	5.35	1066.81	5.36
1085.26	5.36	1092.97	5.35	1098.95	5.34	1108.27	5.33	1115.44	5.31
1131.59	5.25	1133.93	5.25	1147.63	5.21	1174.9	5.09	1178.5	5.08
1178.96	5.07	1212.7	4.86	1215.87	4.82	1244.55	4.25	1248.73	4.17
1256.84	4.07	1261.65	4.01	1272.67	3.85	1289.7	3.62	1297.81	3.49
1317.34	3.15	1318.96	3.13	1338.77	2.9	1342.35	2.86	1366.37	2.53
1389.2	2.43	1424.71	2.09	1437.29	.53	1449.86	-.78	1459.76	-.84
1469.67	-.99	1509.29	-1.26	1521.57	-.76	1533.86	-.34	1535.75	-.3
1546.14	.54	1558.43	1.7	1577.34	2.26	1590.2	2.26	1615.83	2.37
1616.85	2.38	1619.14	2.38	1654.32	2.53	1656.26	2.53	1683.07	2.54
1692.96	2.56	1704.79	2.61	1731.6	2.88	1754	2.64	1770.25	2.58

ExpandedLocal.rep

1789.7	2.6	1791.1	2.6	1792.53	2.61	1808.89	2.71	1824.92	2.81
1847.54	3.01	1874.61	3.08	1886.18	3.06	1895.85	3.11	1897.19	3.12
1913.03	3.19	1924.83	3.22	1959.52	3.55	1963.47	3.61	1988.8	3.71
2002.12	3.37	2003.3	3.39	2015.13	3.5	2034.67	3.7	2040.14	3.71
2048.84	3.69	2072.62	3.47	2077.84	3.41	2096.07	3.5	2109.41	3.46
2115.54	3.44	2146.54	3.61	2151.38	3.71	2153.24	3.63	2157.29	3.65
2157.46	3.65	2190.95	3.68	2215.49	3.89	2218.85	3.91	2228.65	3.96
2244.24	3.98	2266.35	4.02	2279.43	3.94	2280.25	3.93	2304.05	3.89
2321.6	4.02	2341.64	4.16	2341.75	4.17	2341.93	4.17	2369.01	4.26
2379.46	4.27	2396.21	4.31	2401.57	4.31	2417.16	4.33	2423.42	4.33
2427.69	4.33	2428.06	4.33	2447.19	4.33	2453.68	4.33	2455.54	4.32
2489.71	4.31	2511.42	4.3	2523.69	4.28	2525.75	4.28	2533.78	4.28
2540.89	4.28	2541.54	4.28	2561.79	4.29	2570.36	4.31	2597.83	4.26
2599.82	4.26	2600.53	4.27	2608.76	4.36	2633.87	4.65	2639.89	4.7
2645.83	4.75	2658.75	4.85	2669.9	4.99	2688.22	5.12	2705.94	5.16
2733.85	5.29	2741.98	5.33	2745.97	5.34	2770.32	5.41	2778.02	5.43
2780.23	5.44	2814.06	5.58	2822.88	5.61	2826.61	5.62	2850.09	5.69
2852.08	5.7	2873	5.77	2886.13	5.8	2916.68	5.9	2919.38	5.91
2922.17	5.92	2931.88	5.94	2958.17	6.02	2958.21	6.02	2982.87	6.07
2994.25	6.07	3012.23	6.09	3012.34	6.09	3030.28	6.02	3041.8	6.03
3064.28	6.04	3066.32	6.04	3093.44	6.11	3102.36	6.14	3104.92	6.14
3134.37	6.2	3138.4	6.21	3159.66	6.25	3170.36	6.26	3174.44	6.27
3197.69	6.32	3210.47	6.34	3244.08	6.22	3246.51	6.22	3255	6.2
3256.51	6.19	3276.47	6.14	3282.55	6.12	3290.46	6.16	3318.59	6.25
3336.85	6.32	3354.63	6.38	3378.65	6.4	3382.58	6.4	3383.23	6.4
3385.57	6.4	3390.66	6.41	3408.53	6.52	3416.56	6.56	3426.7	6.62
3429.61	6.62	3462.74	6.54	3476	6.52	3479.37	6.52	3488.67	6.51
3498.78	6.5	3522.38	6.47	3534.82	6.46	3568.77	6.43	3570.85	6.42
3573.14	6.42	3578.12	6.42	3594.75	6.4	3606.89	6.4	3615.15	6.39
3622.91	6.38	3642.93	6.37	3661.54	6.36	3678.97	6.34	3690.04	6.34
3700.86	6.34	3715.01	6.33	3739.68	6.33	3745.05	6.33	3751.04	6.33
3754.31	6.34	3787.08	6.35	3800.69	6.36	3806.95	6.36	3823.12	6.37
3847.08	6.37	3854.49	6.37	3859.16	6.37	3893.46	6.36	3895.2	6.36
3901.24	6.36	3913.06	6.36	3931.23	6.36	3939.85	6.36	3967.27	6.37
3986.23	6.37	3989.33	6.37	4003.31	6.37	4019.15	6.37	4032.62	6.38
4039.35	6.38	4042.06	6.38	4062.8	6.38	4075.39	6.39	4079	6.39
4111.42	6.4	4125.26	6.4	4125.39	6.4	4147.46	6.4	4171.77	6.48
4183.5	6.51	4216.53	6.62	4218.15	6.62	4219.54	6.63	4224.36	6.65
4231.34	6.68	4233.59	6.69	4255.58	6.79	4264.54	6.85	4291.61	7.02
4310.92	7.18	4327.65	7.32	4337.45	7.36	4351	7.41		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -486 .06 1424.71 .05 1558.43 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1424.71 1558.43 470 470 470 .1 .3

ExpandedLocal.rep

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -486 1066.81 5.36 F  
 2934.35 4351 7.35571 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 13893

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-567	5.53	-554.99	5.53	-546.61	5.52	-530.2	5.48	-503.09	5.49
-501.71	5.49	-500.68	5.49	-487.15	5.49	-456.82	5.38	-446.78	5.34
-421.96	5.29	-419.32	5.28	-415.58	5.29	-411.92	5.3	-386.99	5.34
-367.03	5.38	-363.37	5.38	-358.4	5.38	-351.49	5.37	-343.25	5.34
-322.14	5.27	-301.22	5.2	-299.74	5.19	-283.65	5.13	-279.96	5.11
-277.25	5.11	-272.63	5.09	-264.54	5.07	-244.04	5	-232.36	4.95
-215.82	4.89	-196.54	4.85	-189.62	4.83	-187.46	4.83	-185.83	4.82
-158.28	4.78	-147.99	4.76	-142.57	4.76	-113.13	4.72	-107.11	4.72
-101.1	4.72	-97.67	4.72	-87.32	4.76	-80.1	4.79	-72.52	4.86
-52.78	4.99	-28.4	5.09	-26.24	5.11	-11.72	5.13	-7.89	5.14
19.36	5.11	37.01	5.11	37.74	5.11	50.31	5.05	53.16	5.04
56.66	5.05	81.9	4.84	108.89	4.66	123.84	4.7	125.03	4.7
126.8	4.69	127.61	4.7	129.02	4.7	150.66	4.67	156.19	4.67
171.69	4.66	184.78	4.67	193.41	4.66	207.74	4.59	213.37	4.57
216.59	4.55	228.33	4.51	239.11	4.47	261.48	4.43	261.78	4.43
286.45	4.35	299.13	4.32	306.37	4.3	327.55	4.23	330.16	4.22
332.82	4.21	339.04	4.2	351.27	4.18	365.16	4.16	396.16	4.11
398.54	4.1	399.07	4.1	413.35	4.1	441.08	4.1	442.02	4.1
443.26	4.1	443.58	4.1	466.91	4.13	487.96	4.04	504.45	4.01
514.88	3.99	526.6	3.95	533.89	3.99	535.29	3.99	554.91	3.96
579.81	3.98	588.69	3.97	592.9	3.96	603.66	3.96	625.75	4.05
639.85	4.1	640.34	4.11	662.5	4.16	665.73	4.17	668.16	4.17
671.68	4.18	672.1	4.18	682.45	4.23	686.82	4.25	717.62	4.39
736.3	4.46	741.18	4.48	763.54	4.68	774.9	4.77	781.41	4.83
809.48	4.99	809.72	4.99	810.11	5	810.26	5	855.41	5.07
866.34	5.09	871.89	5.1	879.34	5.11	883.91	5.12	899.44	5.14
901.35	5.14	925.47	5.12	928.33	5.11	937.99	5.11	945.67	5.16
948.42	5.18	968	5.2	982.08	5.21	988.23	5.22	992.35	5.22
1011.69	5.41	1017.5	5.46	1030.79	5.49	1039.12	5.51	1046.18	5.52
1065.34	5.53	1073.35	5.53	1079.58	5.52	1089.25	5.51	1096.7	5.49
1113.48	5.44	1115.92	5.43	1130.15	5.4	1158.48	5.28	1162.22	5.26
1162.69	5.26	1197.75	5.04	1201.04	5	1230.83	4.44	1235.18	4.35

ExpandedLocal.rep

1243.6	4.24	1248.6	4.18	1260.04	4	1277.74	3.75	1286.16	3.62
1306.45	3.25	1308.14	3.22	1328.72	2.95	1332.43	2.91	1357.39	2.54
1381.1	2.45	1418	2.12	1431.5	.67	1445	-.48	1456.17	-.54
1467.33	-.7	1512	-.93	1525.25	-.44	1538.5	-.05	1540.54	-.01
1551.75	.71	1565	1.76	1582.66	2.25	1594.66	2.26	1618.58	2.35
1619.53	2.35	1621.67	2.36	1654.51	2.49	1656.33	2.49	1681.35	2.5
1690.58	2.52	1701.63	2.56	1726.65	2.79	1747.56	2.58	1762.73	2.53
1780.89	2.55	1782.2	2.55	1783.53	2.56	1798.8	2.66	1813.77	2.76
1834.88	2.95	1860.15	3.02	1870.95	3.02	1879.98	3.07	1881.23	3.07
1896.01	3.15	1907.03	3.19	1939.41	3.5	1943.1	3.55	1966.74	3.66
1979.18	3.38	1980.28	3.39	1991.32	3.49	2009.56	3.67	2014.67	3.68
2022.79	3.67	2044.99	3.49	2049.86	3.44	2066.87	3.51	2079.33	3.47
2085.05	3.45	2113.99	3.6	2118.5	3.69	2120.25	3.62	2124.02	3.63
2124.18	3.63	2155.44	3.67	2178.36	3.85	2181.49	3.87	2190.64	3.91
2205.19	3.93	2225.83	3.97	2238.04	3.89	2238.8	3.89	2261.02	3.86
2277.41	3.97	2296.11	4.09	2296.22	4.09	2296.38	4.09	2321.66	4.18
2331.41	4.19	2347.05	4.22	2352.05	4.22	2366.6	4.23	2372.45	4.24
2376.44	4.24	2376.78	4.24	2394.64	4.23	2400.69	4.23	2402.43	4.23
2434.33	4.21	2454.6	4.21	2466.05	4.19	2467.98	4.18	2475.47	4.19
2482.11	4.19	2482.71	4.19	2501.62	4.2	2509.61	4.22	2535.26	4.17
2537.12	4.17	2537.78	4.18	2545.46	4.26	2568.9	4.51	2574.52	4.55
2580.06	4.59	2592.13	4.69	2602.54	4.81	2619.63	4.92	2636.18	4.96
2662.23	5.07	2669.82	5.1	2673.55	5.11	2696.27	5.18	2703.46	5.2
2705.52	5.21	2737.1	5.33	2745.34	5.36	2748.82	5.37	2770.74	5.44
2772.6	5.44	2792.12	5.5	2804.38	5.54	2832.9	5.62	2835.42	5.63
2838.02	5.64	2847.08	5.66	2871.63	5.74	2871.66	5.74	2894.69	5.78
2905.3	5.79	2922.09	5.8	2922.19	5.8	2938.95	5.74	2949.7	5.75
2970.68	5.77	2972.59	5.77	2997.9	5.83	3006.23	5.85	3008.62	5.86
3036.1	5.91	3039.87	5.92	3059.72	5.95	3069.71	5.96	3073.51	5.97
3095.22	6.01	3107.15	6.03	3138.51	5.93	3140.79	5.92	3148.71	5.91
3150.12	5.9	3168.76	5.85	3174.43	5.84	3181.81	5.88	3208.07	5.95
3225.11	6.02	3241.71	6.06	3264.13	6.08	3267.81	6.08	3268.41	6.08
3270.6	6.09	3275.35	6.1	3292.03	6.19	3299.52	6.23	3308.99	6.28
3311.71	6.28	3342.63	6.22	3355.01	6.2	3358.16	6.2	3366.84	6.19
3376.27	6.18	3398.31	6.16	3409.91	6.15	3441.61	6.12	3443.55	6.12
3445.69	6.12	3450.34	6.12	3465.87	6.11	3477.2	6.1	3484.91	6.1
3492.14	6.09	3510.84	6.08	3528.21	6.07	3544.48	6.06	3554.81	6.06
3564.92	6.06	3578.12	6.06	3601.15	6.07	3606.16	6.07	3611.76	6.07
3614.8	6.07	3645.4	6.09	3658.1	6.09	3663.95	6.1	3679.04	6.1
3701.4	6.11	3708.32	6.11	3712.68	6.11	3744.7	6.11	3746.32	6.11
3751.96	6.11	3763	6.11	3779.96	6.12	3788	6.12	3813.6	6.12
3831.3	6.13	3834.19	6.13	3847.24	6.13	3862.03	6.13	3874.6	6.14
3880.88	6.14	3883.42	6.14	3902.77	6.15	3914.52	6.15	3917.9	6.15
3948.16	6.17	3961.08	6.17	3961.2	6.17	3981.81	6.18	4004.5	6.24
4015.45	6.27	4046.28	6.37	4047.8	6.37	4049.09	6.38	4053.59	6.4
4060.11	6.43	4062.2	6.44	4082.73	6.53	4091.09	6.58	4116.37	6.73
4134.39	6.87	4150.01	7	4159.16	7.03	4171.81	7.08		



ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -567 .06 1418 .05 1565 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1418 1565 471 471 471 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -567 1065.34 5.53 F  
 3169.75 4171.81 7.355 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 13422

INPUT

Description: Interpolated Section

Station Elevation Data num= 394  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -648 5.45 -635.54 5.45 -626.85 5.44 -609.82 5.41 -581.7 5.41  
 -580.27 5.41 -579.2 5.41 -565.17 5.41 -533.7 5.3 -523.29 5.27  
 -497.54 5.22 -494.79 5.22 -490.91 5.22 -487.12 5.23 -461.25 5.26  
 -440.55 5.28 -436.75 5.29 -431.59 5.28 -424.42 5.27 -415.88 5.24  
 -393.98 5.17 -372.28 5.1 -370.74 5.1 -354.05 5.04 -350.22 5.02  
 -347.4 5.01 -342.62 5 -334.22 4.97 -312.96 4.9 -300.83 4.85  
 -283.68 4.79 -263.68 4.74 -256.5 4.72 -254.25 4.72 -252.57 4.72  
 -223.98 4.67 -213.31 4.65 -207.68 4.64 -177.14 4.59 -170.9 4.59  
 -164.66 4.59 -161.1 4.58 -150.37 4.62 -142.87 4.66 -135.01 4.72  
 -114.53 4.83 -89.25 4.9 -87 4.91 -71.94 4.92 -67.96 4.93  
 -39.7 4.88 -21.39 4.86 -20.62 4.86 -7.59 4.79 -4.63 4.78  
 -1 4.78 25.19 4.59 53.18 4.42 68.7 4.45 69.93 4.45  
 71.76 4.44 72.6 4.45 74.07 4.45 96.51 4.43 102.25 4.43  
 118.33 4.42 131.91 4.42 140.87 4.42 155.73 4.35 161.57 4.33  
 164.91 4.32 177.1 4.29 188.27 4.26 211.48 4.23 211.8 4.23  
 237.39 4.18 250.55 4.15 258.05 4.14 280.03 4.09 282.74 4.08  
 285.49 4.07 291.95 4.06 304.63 4.06 319.04 4.04 351.2 4  
 353.67 4 354.22 4 369.04 4 397.8 3.99 398.78 3.99  
 400.07 3.99 400.4 3.99 424.61 4.02 446.44 3.95 463.55 3.93  
 474.37 3.93 486.52 3.89 494.09 3.95 495.54 3.95 515.9 3.95  
 541.73 4.01 550.94 4.02 555.3 4.02 566.47 4.03 589.39 4.15  
 604.01 4.21 604.53 4.21 627.51 4.28 630.87 4.29 633.39 4.3  
 637.04 4.31 637.48 4.31 648.21 4.37 652.75 4.39 684.69 4.54  
 704.08 4.61 709.14 4.64 732.34 4.83 744.11 4.92 750.87 4.98  
 779.99 5.11 780.24 5.12 780.64 5.12 780.81 5.12 827.64 5.19

ExpandedLocal.rep

838.99	5.21	844.74	5.23	852.47	5.24	857.21	5.25	873.32	5.27
875.3	5.27	900.32	5.27	903.29	5.27	913.31	5.27	921.28	5.32
924.14	5.34	944.45	5.37	959.05	5.39	965.44	5.39	969.71	5.4
989.77	5.57	995.8	5.62	1009.59	5.65	1018.22	5.67	1025.55	5.68
1045.43	5.7	1053.74	5.7	1060.2	5.69	1070.24	5.68	1077.97	5.67
1095.37	5.62	1097.9	5.62	1112.66	5.59	1142.05	5.46	1145.93	5.45
1146.42	5.45	1182.79	5.23	1186.2	5.19	1217.11	4.62	1221.62	4.54
1230.36	4.42	1235.54	4.35	1247.41	4.16	1265.78	3.88	1274.51	3.74
1295.56	3.35	1297.31	3.32	1318.66	3.01	1322.52	2.95	1348.41	2.55
1373.01	2.46	1411.29	2.16	1425.71	.82	1440.14	-.18	1452.57	-.23
1465	-.4	1514.71	-.59	1528.93	-.12	1543.14	.24	1545.33	.27
1557.36	.88	1571.57	1.83	1587.97	2.24	1599.12	2.25	1621.34	2.33
1622.22	2.33	1624.21	2.34	1654.7	2.44	1656.39	2.45	1679.63	2.46
1688.2	2.47	1698.46	2.51	1721.71	2.7	1741.12	2.52	1755.21	2.48
1772.08	2.49	1773.29	2.5	1774.53	2.5	1788.71	2.6	1802.61	2.7
1822.22	2.88	1845.69	2.96	1855.72	2.97	1864.1	3.02	1865.26	3.03
1878.99	3.11	1889.22	3.16	1919.3	3.45	1922.73	3.5	1944.68	3.61
1956.23	3.38	1957.25	3.39	1967.52	3.48	1984.45	3.65	1989.19	3.66
1996.74	3.66	2017.35	3.51	2021.88	3.46	2037.68	3.51	2049.24	3.47
2054.56	3.46	2081.44	3.59	2085.63	3.66	2087.25	3.6	2090.76	3.62
2090.9	3.62	2119.94	3.65	2141.22	3.81	2144.13	3.83	2152.62	3.87
2166.14	3.88	2185.31	3.91	2196.65	3.85	2197.36	3.85	2217.99	3.82
2233.21	3.91	2250.58	4.02	2250.68	4.02	2250.84	4.02	2274.31	4.09
2283.36	4.1	2297.89	4.12	2302.54	4.13	2316.05	4.14	2321.48	4.14
2325.18	4.14	2325.51	4.14	2342.09	4.14	2347.71	4.14	2349.32	4.13
2378.95	4.12	2397.78	4.12	2408.41	4.1	2410.2	4.09	2417.16	4.1
2423.32	4.1	2423.88	4.1	2441.44	4.1	2448.87	4.12	2472.68	4.08
2474.41	4.08	2475.03	4.09	2482.16	4.16	2503.93	4.37	2509.15	4.4
2514.3	4.44	2525.5	4.52	2535.17	4.62	2551.05	4.72	2566.41	4.76
2590.61	4.85	2597.66	4.88	2601.12	4.89	2622.22	4.95	2628.9	4.97
2630.82	4.97	2660.15	5.08	2667.8	5.1	2671.03	5.11	2691.39	5.18
2693.11	5.18	2711.25	5.24	2722.63	5.27	2749.11	5.35	2751.46	5.36
2753.88	5.36	2762.29	5.38	2785.08	5.45	2785.12	5.45	2806.5	5.49
2816.36	5.5	2831.95	5.51	2832.04	5.51	2847.61	5.46	2857.59	5.47
2877.07	5.49	2878.85	5.49	2902.36	5.54	2910.09	5.56	2912.31	5.57
2937.84	5.61	2941.33	5.62	2959.77	5.65	2969.05	5.66	2972.58	5.67
2992.74	5.7	3003.82	5.72	3032.95	5.63	3035.06	5.63	3042.42	5.61
3043.73	5.61	3061.04	5.57	3066.31	5.55	3073.17	5.59	3097.55	5.66
3113.38	5.71	3128.8	5.75	3149.62	5.77	3153.03	5.77	3153.59	5.77
3155.62	5.77	3160.04	5.78	3175.53	5.86	3182.49	5.9	3191.28	5.94
3193.81	5.94	3222.53	5.89	3234.02	5.88	3236.94	5.87	3245	5.87
3253.77	5.86	3274.23	5.85	3285.01	5.84	3314.45	5.82	3316.26	5.82
3318.24	5.82	3322.55	5.82	3336.98	5.81	3347.5	5.81	3354.66	5.8
3361.38	5.8	3378.74	5.8	3394.87	5.79	3409.99	5.78	3419.59	5.79
3428.97	5.78	3441.23	5.78	3462.62	5.8	3467.27	5.8	3472.47	5.8
3475.3	5.8	3503.72	5.82	3515.51	5.83	3520.94	5.83	3534.96	5.84
3555.73	5.85	3562.15	5.85	3566.2	5.85	3595.94	5.86	3597.45	5.86
3602.68	5.86	3612.93	5.86	3628.69	5.87	3636.16	5.87	3659.93	5.88

ExpandedLocal.rep

3676.37	5.88	3679.05	5.88	3691.18	5.89	3704.9	5.89	3716.58	5.9
3722.42	5.9	3724.77	5.9	3742.75	5.91	3753.66	5.92	3756.8	5.92
3784.91	5.93	3796.9	5.93	3797.01	5.93	3816.15	5.95	3837.22	6.01
3847.39	6.03	3876.03	6.12	3877.44	6.13	3878.64	6.13	3882.82	6.15
3888.87	6.17	3890.81	6.18	3909.88	6.26	3917.65	6.31	3941.12	6.44
3957.86	6.56	3972.37	6.67	3980.86	6.71	3992.61	6.75		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -648 .06 1411.29 .05 1571.57 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1411.29 1571.57 471 471 471 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -648 1045.43 5.7 F  
 3405.14 3992.61 7.35428 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 12951

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-729	5.37	-716.09	5.37	-707.09	5.36	-689.44	5.33	-660.31	5.33
-658.83	5.33	-657.72	5.33	-643.18	5.32	-610.58	5.23	-599.79	5.2
-573.11	5.15	-570.27	5.15	-566.24	5.15	-562.32	5.15	-535.51	5.17
-514.07	5.19	-510.13	5.19	-504.78	5.18	-497.36	5.17	-488.51	5.14
-465.82	5.08	-443.33	5.01	-441.74	5	-424.45	4.94	-420.47	4.93
-417.56	4.92	-412.6	4.91	-403.91	4.88	-381.87	4.8	-369.31	4.75
-351.53	4.69	-330.82	4.63	-323.37	4.62	-321.05	4.61	-319.3	4.61
-289.69	4.55	-278.62	4.53	-272.8	4.52	-241.16	4.46	-234.69	4.46
-228.23	4.45	-224.54	4.44	-213.42	4.49	-205.65	4.52	-197.51	4.58
-176.29	4.67	-150.09	4.71	-147.77	4.71	-132.16	4.72	-128.04	4.72
-98.76	4.64	-79.78	4.6	-78.99	4.6	-65.49	4.53	-62.42	4.51
-58.66	4.52	-31.53	4.33	-2.52	4.19	13.55	4.2	14.83	4.2
16.73	4.2	17.6	4.2	19.11	4.2	42.37	4.19	48.32	4.19
64.98	4.17	79.05	4.18	88.32	4.17	103.72	4.12	109.78	4.1
113.24	4.09	125.86	4.07	137.44	4.05	161.49	4.03	161.82	4.03
188.32	4	201.96	3.99	209.74	3.98	232.51	3.94	235.31	3.94
238.17	3.94	244.86	3.93	258	3.93	272.93	3.92	306.25	3.89
308.8	3.89	309.37	3.89	324.73	3.89	354.53	3.89	355.54	3.89

ExpandedLocal.rep

356.88	3.89	357.22	3.89	382.3	3.91	404.92	3.86	422.64	3.86
433.86	3.86	446.45	3.83	454.28	3.91	455.79	3.91	476.88	3.94
503.65	4.05	513.19	4.07	517.71	4.08	529.28	4.1	553.03	4.24
568.18	4.31	568.71	4.32	592.52	4.41	596	4.42	598.61	4.43
602.39	4.44	602.85	4.44	613.97	4.5	618.67	4.52	651.77	4.68
671.85	4.77	677.1	4.8	701.13	4.99	713.33	5.07	720.33	5.13
750.51	5.24	750.76	5.24	751.18	5.24	751.35	5.24	799.87	5.31
811.63	5.34	817.58	5.35	825.6	5.37	830.51	5.38	847.2	5.4
849.25	5.4	875.17	5.42	878.25	5.42	888.63	5.43	896.89	5.48
899.85	5.49	920.89	5.53	936.02	5.56	942.64	5.57	947.07	5.58
967.85	5.73	974.1	5.78	988.38	5.81	997.33	5.83	1004.92	5.84
1025.52	5.87	1034.13	5.87	1040.82	5.86	1051.22	5.86	1059.23	5.84
1077.26	5.81	1079.88	5.8	1095.17	5.77	1125.62	5.65	1129.64	5.64
1130.15	5.63	1167.83	5.41	1171.37	5.37	1203.39	4.81	1208.06	4.72
1217.12	4.6	1222.49	4.52	1234.79	4.31	1253.81	4.02	1262.86	3.87
1284.67	3.45	1286.49	3.41	1308.61	3.06	1312.6	3	1339.42	2.56
1364.91	2.47	1404.57	2.2	1419.93	.97	1435.29	.11	1448.98	.07
1462.67	-.1	1517.43	-.26	1532.61	.2	1547.79	.54	1550.12	.56
1562.96	1.05	1578.14	1.89	1593.28	2.23	1603.57	2.24	1624.09	2.31
1624.91	2.31	1626.74	2.31	1654.9	2.4	1656.45	2.4	1677.91	2.41
1685.82	2.42	1695.3	2.45	1716.76	2.62	1734.68	2.47	1747.69	2.43
1763.26	2.44	1764.38	2.44	1765.53	2.45	1778.62	2.55	1791.46	2.64
1809.56	2.81	1831.23	2.91	1840.49	2.92	1848.23	2.98	1849.3	2.98
1861.98	3.07	1871.42	3.12	1899.19	3.4	1902.36	3.44	1922.62	3.56
1933.29	3.38	1934.23	3.39	1943.71	3.47	1959.34	3.62	1963.72	3.64
1970.68	3.64	1989.72	3.53	1993.9	3.49	2008.49	3.52	2019.16	3.48
2024.08	3.47	2048.88	3.58	2052.76	3.64	2054.25	3.59	2057.49	3.6
2057.63	3.61	2084.43	3.64	2104.08	3.77	2106.77	3.79	2114.61	3.82
2127.09	3.83	2144.79	3.86	2155.26	3.8	2155.91	3.8	2174.96	3.78
2189.01	3.86	2205.05	3.95	2205.14	3.95	2205.29	3.95	2226.96	4.01
2235.32	4.01	2248.73	4.03	2253.02	4.04	2265.5	4.05	2270.51	4.05
2273.93	4.05	2274.23	4.05	2289.54	4.04	2294.73	4.04	2296.22	4.04
2323.57	4.03	2340.95	4.02	2350.77	4.01	2352.42	4	2358.84	4.01
2364.54	4.01	2365.05	4.01	2381.27	4.01	2388.12	4.02	2410.11	3.98
2411.71	3.99	2412.28	3.99	2418.86	4.05	2438.96	4.23	2443.78	4.26
2448.53	4.29	2458.88	4.36	2467.81	4.44	2482.46	4.52	2496.65	4.55
2518.99	4.63	2525.5	4.66	2528.69	4.66	2548.18	4.72	2554.34	4.73
2556.11	4.74	2583.19	4.83	2590.25	4.85	2593.24	4.86	2612.04	4.92
2613.63	4.92	2630.37	4.97	2640.88	5	2665.33	5.07	2667.5	5.08
2669.73	5.08	2677.5	5.11	2698.54	5.17	2698.57	5.17	2718.31	5.2
2727.42	5.21	2741.81	5.23	2741.9	5.23	2756.27	5.18	2765.48	5.19
2783.47	5.21	2785.11	5.21	2806.81	5.26	2813.96	5.28	2816.01	5.28
2839.58	5.32	2842.8	5.32	2859.82	5.35	2868.39	5.36	2871.65	5.36
2890.26	5.4	2900.5	5.41	2927.39	5.34	2929.34	5.33	2936.13	5.32
2937.34	5.32	2953.32	5.28	2958.19	5.27	2964.52	5.3	2987.03	5.36
3001.65	5.4	3015.88	5.44	3035.11	5.45	3038.26	5.45	3038.78	5.45
3040.65	5.46	3044.73	5.47	3059.03	5.53	3065.45	5.56	3073.57	5.6
3075.9	5.6	3102.42	5.56	3113.03	5.55	3115.73	5.55	3123.17	5.54

ExpandedLocal.rep

3131.26	5.54	3150.16	5.53	3160.11	5.53	3187.29	5.52	3188.96	5.52
3190.79	5.51	3194.77	5.51	3208.09	5.51	3217.8	5.51	3224.41	5.51
3230.62	5.51	3246.65	5.51	3261.54	5.51	3275.49	5.51	3284.36	5.51
3293.02	5.51	3304.34	5.51	3324.09	5.53	3328.39	5.53	3333.19	5.53
3335.8	5.53	3362.03	5.56	3372.93	5.56	3377.94	5.57	3390.88	5.58
3410.05	5.59	3415.99	5.59	3419.72	5.59	3447.18	5.6	3448.57	5.6
3453.41	5.61	3462.87	5.61	3477.42	5.62	3484.31	5.62	3506.26	5.63
3521.44	5.64	3523.92	5.64	3535.11	5.65	3547.78	5.65	3558.56	5.66
3563.95	5.66	3566.13	5.66	3582.72	5.67	3592.8	5.68	3595.69	5.68
3621.65	5.7	3632.72	5.7	3632.82	5.7	3650.49	5.72	3669.95	5.77
3679.34	5.79	3705.78	5.87	3707.08	5.88	3708.18	5.88	3712.04	5.9
3717.63	5.92	3719.43	5.93	3737.03	6	3744.2	6.04	3765.88	6.15
3781.33	6.26	3794.72	6.35	3802.57	6.38	3813.41	6.42		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -729 .06 1404.57 .05 1578.14 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1404.57 1578.14 471 471 471 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -729 1025.52 5.87 F  
 3640.53 3813.41 7.35357 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 12480

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-810	5.29	-796.64	5.29	-787.32	5.28	-769.07	5.26	-738.92	5.25
-737.38	5.25	-736.24	5.25	-721.19	5.24	-687.45	5.16	-676.29	5.13
-648.68	5.08	-645.74	5.08	-641.58	5.08	-637.51	5.08	-609.78	5.09
-587.58	5.09	-583.51	5.09	-577.98	5.08	-570.29	5.07	-561.13	5.05
-537.65	4.98	-514.39	4.92	-512.74	4.91	-494.84	4.85	-490.73	4.84
-487.71	4.83	-482.58	4.81	-473.59	4.78	-450.78	4.71	-437.78	4.65
-419.39	4.59	-397.95	4.53	-390.25	4.51	-387.85	4.5	-386.04	4.5
-355.39	4.43	-343.94	4.41	-337.92	4.4	-305.17	4.33	-298.48	4.32
-291.79	4.32	-287.98	4.3	-276.47	4.35	-268.43	4.38	-260	4.44
-238.05	4.51	-210.93	4.51	-208.53	4.52	-192.38	4.51	-188.12	4.51
-157.81	4.4	-138.18	4.35	-137.36	4.35	-123.39	4.26	-120.22	4.25

ExpandedLocal.rep

-116.32	4.25	-88.25	4.08	-58.23	3.95	-41.6	3.96	-40.27	3.96
-38.31	3.95	-37.41	3.95	-35.84	3.95	-11.77	3.94	-5.62	3.94
11.62	3.93	26.18	3.93	35.78	3.93	51.72	3.88	57.98	3.87
61.56	3.86	74.62	3.85	86.61	3.84	111.49	3.84	111.83	3.84
139.26	3.82	153.37	3.82	161.42	3.82	184.98	3.8	187.89	3.8
190.84	3.8	197.77	3.8	211.36	3.8	226.81	3.8	261.29	3.79
263.94	3.79	264.53	3.79	280.42	3.79	311.26	3.79	312.31	3.78
313.68	3.79	314.04	3.79	339.99	3.81	363.4	3.77	381.74	3.79
393.35	3.8	406.38	3.77	414.48	3.87	416.04	3.87	437.87	3.93
465.57	4.08	475.44	4.11	480.12	4.13	492.09	4.18	516.66	4.34
532.34	4.42	532.89	4.42	557.53	4.53	561.13	4.55	563.83	4.56
567.75	4.57	568.22	4.58	579.73	4.64	584.59	4.66	618.84	4.83
639.62	4.92	645.05	4.95	669.93	5.14	682.55	5.22	689.79	5.28
721.02	5.36	721.28	5.36	721.72	5.36	721.89	5.36	772.1	5.44
784.27	5.46	790.43	5.48	798.73	5.5	803.81	5.51	821.08	5.54
823.2	5.54	850.03	5.57	853.21	5.57	863.96	5.59	872.5	5.63
875.56	5.65	897.34	5.7	912.99	5.73	919.84	5.74	924.42	5.75
945.93	5.9	952.4	5.93	967.18	5.97	976.44	5.99	984.29	6.01
1005.61	6.03	1014.52	6.04	1021.44	6.03	1032.2	6.03	1040.49	6.02
1059.15	5.99	1061.86	5.99	1077.69	5.96	1109.2	5.84	1113.36	5.82
1113.89	5.82	1152.88	5.59	1156.54	5.56	1189.68	4.99	1194.51	4.91
1203.87	4.77	1209.44	4.69	1222.16	4.47	1241.85	4.15	1251.21	3.99
1273.79	3.55	1275.66	3.51	1298.55	3.12	1302.69	3.05	1330.44	2.57
1356.82	2.48	1397.86	2.24	1414.14	1.11	1430.43	.41	1445.38	.38
1460.33	.2	1520.14	.07	1536.29	.52	1552.43	.83	1554.91	.84
1568.57	1.22	1584.71	1.95	1598.6	2.23	1608.03	2.23	1626.84	2.28
1627.59	2.28	1629.27	2.29	1655.09	2.36	1656.52	2.36	1676.19	2.37
1683.45	2.37	1692.13	2.4	1711.81	2.53	1728.24	2.41	1740.17	2.38
1754.45	2.39	1755.48	2.39	1756.53	2.4	1768.53	2.49	1780.3	2.59
1796.9	2.75	1816.76	2.85	1825.26	2.88	1832.35	2.93	1833.33	2.94
1844.96	3.04	1853.62	3.09	1879.08	3.35	1881.98	3.39	1900.57	3.51
1910.34	3.38	1911.21	3.39	1919.9	3.46	1934.24	3.6	1938.25	3.61
1944.63	3.62	1962.08	3.55	1965.92	3.51	1979.29	3.53	1989.08	3.49
1993.59	3.49	2016.33	3.57	2019.89	3.62	2021.26	3.58	2024.22	3.59
2024.35	3.59	2048.93	3.62	2066.94	3.73	2069.41	3.75	2076.6	3.77
2088.04	3.78	2104.27	3.8	2113.86	3.76	2114.46	3.76	2131.94	3.74
2144.82	3.81	2159.52	3.88	2159.61	3.88	2159.74	3.88	2179.61	3.92
2187.28	3.93	2199.57	3.94	2203.5	3.94	2214.94	3.95	2219.54	3.96
2222.67	3.96	2222.95	3.96	2236.99	3.95	2241.75	3.95	2243.11	3.95
2268.2	3.93	2284.13	3.93	2293.13	3.91	2294.64	3.91	2300.53	3.91
2305.75	3.92	2306.23	3.92	2321.09	3.92	2327.38	3.93	2347.54	3.89
2349	3.9	2349.53	3.9	2355.56	3.95	2373.99	4.09	2378.41	4.11
2382.77	4.13	2392.25	4.19	2400.44	4.26	2413.88	4.32	2426.89	4.35
2447.37	4.41	2453.34	4.43	2456.27	4.44	2474.13	4.49	2479.79	4.5
2481.41	4.5	2506.23	4.59	2512.71	4.6	2515.45	4.61	2532.68	4.66
2534.14	4.66	2549.49	4.71	2559.13	4.73	2581.55	4.8	2583.53	4.8
2585.58	4.81	2592.7	4.83	2612	4.88	2612.03	4.88	2630.13	4.91
2638.48	4.92	2651.67	4.94	2651.75	4.94	2664.93	4.91	2673.38	4.92

ExpandedLocal.rep

2689.87	4.94	2691.38	4.94	2711.27	4.97	2717.82	4.99	2719.7	4.99
2741.31	5.02	2744.27	5.03	2759.88	5.05	2767.73	5.06	2770.72	5.06
2787.79	5.09	2797.17	5.1	2821.83	5.04	2823.62	5.04	2829.85	5.03
2830.95	5.03	2845.61	5	2850.07	4.99	2855.87	5.01	2876.52	5.06
2889.92	5.1	2902.96	5.13	2920.59	5.14	2923.48	5.14	2923.96	5.14
2925.68	5.14	2929.41	5.15	2942.53	5.21	2948.42	5.23	2955.86	5.26
2958	5.26	2982.31	5.23	2992.04	5.23	2994.51	5.23	3001.34	5.22
3008.76	5.22	3026.08	5.22	3035.21	5.22	3060.13	5.21	3061.66	5.21
3063.34	5.21	3066.99	5.21	3079.2	5.21	3088.11	5.22	3094.17	5.22
3099.86	5.22	3114.55	5.22	3128.21	5.22	3141	5.23	3149.13	5.23
3157.07	5.23	3167.45	5.24	3185.56	5.26	3189.5	5.26	3193.9	5.26
3196.3	5.27	3220.35	5.29	3230.34	5.3	3234.93	5.3	3246.8	5.31
3264.38	5.32	3269.82	5.33	3273.25	5.33	3298.42	5.35	3299.7	5.35
3304.13	5.35	3312.8	5.36	3326.14	5.37	3332.46	5.37	3352.59	5.39
3366.51	5.4	3368.78	5.4	3379.04	5.41	3390.66	5.41	3400.55	5.42
3405.49	5.43	3407.48	5.43	3422.7	5.44	3431.94	5.45	3434.59	5.45
3458.39	5.47	3468.54	5.47	3468.63	5.47	3484.84	5.49	3502.68	5.53
3511.28	5.56	3535.52	5.63	3536.72	5.63	3537.73	5.63	3541.27	5.65
3546.4	5.66	3548.04	5.67	3564.18	5.73	3570.76	5.76	3590.63	5.86
3604.8	5.95	3617.08	6.03	3624.27	6.05	3634.22	6.08		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-810	.06	1397.86	.05	1584.71	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1397.86	1584.71		471	471		.1	.3
Ineffective Flow	num=		1					
Sta L	Sta R	Elev	Permanent					
-810	1014.52	6.04	F					

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 12009

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-891	5.2	-877.19	5.21	-867.56	5.2	-848.69	5.18	-817.52	5.17
-815.94	5.17	-814.76	5.17	-799.2	5.16	-764.33	5.09	-752.79	5.06
-724.25	5.01	-721.21	5.01	-716.91	5.01	-712.71	5.01	-684.04	5
-661.1	4.99	-656.89	4.99	-651.17	4.98	-643.23	4.97	-633.76	4.95
-609.49	4.89	-585.44	4.82	-583.74	4.82	-565.24	4.76	-560.99	4.74

ExpandedLocal.rep

-557.87	4.74	-552.57	4.72	-543.27	4.69	-519.7	4.61	-506.26	4.55
-487.25	4.49	-465.09	4.42	-457.13	4.4	-454.64	4.39	-452.77	4.39
-421.1	4.32	-409.26	4.29	-403.03	4.28	-369.19	4.2	-362.27	4.19
-355.36	4.18	-351.41	4.16	-339.52	4.21	-331.21	4.25	-322.5	4.3
-299.8	4.35	-271.78	4.32	-269.29	4.32	-252.6	4.3	-248.19	4.3
-216.87	4.16	-196.57	4.1	-195.73	4.09	-181.29	4	-178.01	3.99
-173.98	3.99	-144.96	3.82	-113.94	3.71	-96.74	3.71	-95.37	3.71
-93.34	3.7	-92.41	3.71	-90.79	3.71	-65.91	3.7	-59.55	3.7
-41.73	3.68	-26.68	3.69	-16.76	3.68	-.29	3.64	6.19	3.64
9.89	3.63	23.39	3.63	35.77	3.63	61.5	3.64	61.85	3.64
90.2	3.65	104.79	3.65	113.11	3.66	137.46	3.66	140.46	3.66
143.52	3.66	150.67	3.66	164.73	3.67	180.7	3.68	216.34	3.68
219.07	3.68	219.68	3.68	236.11	3.68	267.98	3.68	269.07	3.68
270.49	3.68	270.86	3.68	297.68	3.7	321.88	3.68	340.84	3.71
352.84	3.73	366.3	3.72	374.68	3.83	376.29	3.83	398.85	3.92
427.49	4.12	437.69	4.16	442.53	4.19	454.91	4.25	480.3	4.43
496.51	4.53	497.07	4.53	522.54	4.65	526.27	4.67	529.06	4.69
533.1	4.71	533.59	4.71	545.49	4.77	550.51	4.8	585.92	4.98
607.4	5.08	613.01	5.11	638.72	5.3	651.77	5.38	659.25	5.43
691.53	5.48	691.81	5.48	692.25	5.48	692.43	5.49	744.34	5.56
756.91	5.59	763.28	5.6	771.85	5.62	777.11	5.64	794.96	5.67
797.15	5.67	824.88	5.72	828.17	5.73	839.28	5.75	848.11	5.79
851.28	5.81	873.78	5.86	889.96	5.9	897.04	5.92	901.78	5.93
924.01	6.06	930.7	6.09	945.97	6.13	955.54	6.15	963.67	6.17
985.7	6.2	994.91	6.21	1002.06	6.21	1013.18	6.2	1021.75	6.2
1041.04	6.18	1043.84	6.18	1060.2	6.15	1092.77	6.02	1097.07	6.01
1097.62	6.01	1137.92	5.77	1141.7	5.74	1175.96	5.18	1180.95	5.09
1190.63	4.95	1196.38	4.86	1209.54	4.62	1229.89	4.28	1239.56	4.12
1262.9	3.65	1264.84	3.61	1288.5	3.17	1292.77	3.1	1321.46	2.59
1348.72	2.5	1391.14	2.28	1408.36	1.26	1425.57	.71	1441.79	.68
1458	.5	1522.86	.4	1539.96	.84	1557.07	1.12	1559.7	1.13
1574.18	1.39	1591.29	2.01	1603.91	2.22	1612.49	2.22	1629.6	2.26
1630.28	2.26	1631.8	2.26	1655.28	2.32	1656.58	2.32	1674.47	2.32
1681.07	2.33	1688.97	2.34	1706.86	2.44	1721.81	2.35	1732.65	2.33
1745.64	2.33	1746.57	2.34	1747.53	2.34	1758.44	2.44	1769.14	2.53
1784.23	2.68	1802.3	2.8	1810.03	2.83	1816.48	2.88	1817.37	2.89
1827.94	3	1835.82	3.05	1858.97	3.3	1861.61	3.33	1878.51	3.46
1887.4	3.38	1888.19	3.39	1896.09	3.46	1909.13	3.57	1912.77	3.59
1918.58	3.6	1934.45	3.56	1937.94	3.53	1950.1	3.54	1959	3.5
1963.1	3.5	1983.78	3.56	1987.01	3.6	1988.26	3.57	1990.96	3.58
1991.07	3.58	2013.42	3.61	2029.8	3.7	2032.05	3.71	2038.58	3.72
2048.99	3.73	2063.74	3.75	2072.47	3.72	2073.02	3.71	2088.91	3.7
2100.62	3.75	2113.99	3.8	2114.07	3.81	2114.19	3.81	2132.26	3.84
2139.23	3.84	2150.41	3.85	2153.99	3.85	2164.39	3.86	2168.57	3.86
2171.42	3.86	2171.67	3.86	2184.44	3.85	2188.76	3.85	2190.01	3.85
2212.82	3.84	2227.3	3.83	2235.49	3.82	2236.87	3.82	2242.22	3.82
2246.97	3.82	2247.4	3.82	2260.92	3.82	2266.64	3.83	2284.97	3.8
2286.3	3.81	2286.77	3.81	2292.26	3.84	2309.02	3.95	2313.04	3.96



ExpandedLocal.rep

2317	3.98	2325.63	4.02	2333.07	4.07	2345.29	4.12	2357.12	4.14
2375.75	4.19	2381.18	4.21	2383.84	4.21	2400.09	4.25	2405.23	4.27
2406.7	4.27	2429.28	4.34	2435.17	4.35	2437.66	4.36	2453.33	4.4
2454.66	4.4	2468.62	4.44	2477.38	4.46	2497.77	4.52	2499.57	4.53
2501.43	4.53	2507.91	4.55	2525.46	4.59	2525.48	4.59	2541.94	4.62
2549.54	4.63	2561.54	4.65	2561.61	4.65	2573.59	4.63	2581.27	4.64
2596.27	4.66	2597.64	4.66	2615.73	4.69	2621.69	4.7	2623.4	4.7
2643.05	4.73	2645.74	4.73	2659.93	4.75	2667.07	4.76	2669.79	4.76
2685.31	4.78	2693.84	4.79	2716.27	4.75	2717.89	4.74	2723.56	4.74
2724.57	4.74	2737.89	4.72	2741.95	4.71	2747.23	4.73	2766	4.76
2778.18	4.79	2790.05	4.81	2806.08	4.82	2808.71	4.83	2809.14	4.83
2810.7	4.83	2814.1	4.83	2826.02	4.88	2831.38	4.9	2838.15	4.92
2840.1	4.92	2862.2	4.91	2871.05	4.9	2873.3	4.9	2879.51	4.9
2886.25	4.9	2902.01	4.9	2910.31	4.91	2932.97	4.91	2934.36	4.91
2935.89	4.91	2939.2	4.91	2950.31	4.92	2958.41	4.92	2963.92	4.93
2969.1	4.93	2982.46	4.94	2994.88	4.94	3006.51	4.95	3013.9	4.95
3021.12	4.96	3030.56	4.97	3047.03	4.99	3050.61	4.99	3054.61	5
3056.79	5	3078.67	5.02	3087.75	5.03	3091.93	5.04	3102.72	5.05
3118.71	5.06	3123.65	5.07	3126.77	5.07	3149.66	5.1	3150.82	5.1
3154.85	5.1	3162.74	5.11	3174.87	5.12	3180.62	5.13	3198.92	5.14
3211.57	5.15	3213.64	5.16	3222.97	5.16	3233.54	5.17	3242.53	5.18
3247.03	5.19	3248.84	5.19	3262.68	5.2	3271.08	5.21	3273.49	5.21
3295.13	5.23	3304.36	5.24	3304.45	5.24	3319.18	5.26	3335.4	5.3
3343.23	5.32	3365.27	5.38	3366.36	5.38	3367.28	5.38	3370.5	5.39
3375.16	5.41	3376.66	5.42	3391.33	5.47	3397.31	5.49	3415.38	5.57
3428.27	5.64	3439.44	5.71	3445.98	5.73	3455.02	5.75		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -891 .06 1391.14 .05 1591.29 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1391.14 1591.29 470 470 470 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 -891 994.91 6.21 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 11539

INPUT

Description: Interpolated Section  
 Station Elevation Data num= 394  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

ExpandedLocal.rep

```

*****
-972      5.12 -957.74      5.12 -947.8      5.12 -928.31      5.1 -896.13      5.09
-894.5    5.09 -893.27      5.09 -877.21      5.08 -841.21      5.01 -829.29      4.99
-799.83   4.95 -796.69      4.94 -792.24      4.94 -787.91      4.94 -758.3      4.92
-734.62   4.9 -730.27      4.9 -724.36      4.89 -716.16      4.87 -706.39      4.85
-681.33   4.79 -656.49      4.73 -654.73      4.72 -635.63      4.67 -631.25      4.65
-628.03   4.64 -622.55      4.63 -612.95      4.6 -588.61      4.51 -574.74      4.45
-555.11   4.39 -532.22      4.32 -524.01      4.29 -521.44      4.28 -519.51      4.28
-486.8    4.2 -474.58      4.18 -468.15      4.16 -433.2      4.07 -426.06      4.06
-418.92   4.04 -414.85      4.02 -402.57      4.07 -393.99      4.11 -384.99      4.16
-361.56   4.19 -332.62      4.13 -330.05      4.13 -312.82      4.09 -308.27      4.09
-275.93   3.93 -254.97      3.85 -254.1      3.84 -239.18      3.74 -235.8      3.73
-231.65   3.72 -201.68      3.57 -169.64      3.47 -151.89      3.46 -150.48      3.46
-148.38   3.45 -147.42      3.46 -145.74      3.46 -120.06      3.45 -113.49      3.45
-95.09    3.44 -79.55      3.44 -69.31      3.44 -52.3      3.41 -45.61      3.4
-41.79    3.4 -27.85      3.41 -15.06      3.42 11.5      3.44 11.86      3.44
41.14     3.47 56.2      3.49 64.79      3.5 89.94      3.52 93.03      3.52
96.19     3.52 103.58      3.53 118.09      3.55 134.58      3.55 171.38      3.58
174.21    3.58 174.83      3.58 191.79      3.58 224.71      3.58 225.83      3.58
227.3     3.58 227.68      3.58 255.38      3.6 280.36      3.58 299.94      3.64
312.32    3.67 326.23      3.66 334.88      3.78 336.54      3.79 359.84      3.91
389.4     4.15 399.94      4.21 404.93      4.24 417.72      4.33 443.94      4.53
460.67    4.63 461.26      4.63 487.56      4.78 491.4      4.8 494.28      4.82
498.46    4.84 498.96      4.84 511.25      4.91 516.44      4.94 552.99      5.13
575.17    5.23 580.97      5.27 607.51      5.45 620.99      5.53 628.72      5.58
662.04    5.6 662.33      5.61 662.79      5.61 662.98      5.61 716.57      5.68
729.55    5.71 736.13      5.73 744.98      5.75 750.4      5.77 768.83      5.8
771.1     5.8 799.73      5.87 803.13      5.88 814.6      5.91 823.72      5.95
826.99    5.96 850.23      6.03 866.94      6.07 874.25      6.09 879.14      6.11
902.09    6.22 908.99      6.25 924.77      6.29 934.65      6.31 943.04      6.33
965.78    6.37 975.29      6.38 982.68      6.38 994.17      6.38 1003.01      6.37
1022.93   6.36 1025.82      6.36 1042.71      6.34 1076.34      6.21 1080.78      6.19
1081.35   6.19 1122.96      5.95 1126.87      5.92 1162.24      5.36 1167.4      5.27
1177.39   5.12 1183.33      5.03 1196.91      4.78 1217.92      4.42 1227.92      4.24
1252.01   3.74 1254.01      3.7 1278.44      3.23 1282.85      3.15 1312.48      2.6
1340.63   2.51 1384.43      2.32 1402.57      1.41 1420.71      1.01 1438.19      .99
1455.67   .8 1525.57      .74 1543.64      1.16 1561.71      1.41 1564.49      1.41
1579.79   1.56 1597.86      2.08 1609.22      2.21 1616.95      2.21 1632.35      2.24
1632.96   2.24 1634.34      2.24 1655.47      2.27 1656.64      2.27 1672.75      2.28
1678.69   2.28 1685.8      2.29 1701.91      2.36 1715.37      2.29 1725.13      2.28
1736.82   2.28 1737.66      2.28 1738.52      2.29 1748.35      2.38 1757.99      2.47
1771.57   2.62 1787.84      2.74 1794.79      2.79 1800.6      2.84 1801.41      2.85
1810.92   2.96 1818.02      3.02 1838.86      3.25 1841.24      3.28 1856.45      3.41
1864.46   3.38 1865.16      3.39 1872.28      3.45 1884.02      3.55 1887.3      3.56
1892.53   3.58 1906.82      3.58 1909.96      3.56 1920.91      3.54 1928.92      3.51
1932.61   3.51 1951.23      3.55 1954.14      3.58 1955.26      3.56 1957.69      3.56
1957.8    3.56 1977.92      3.59 1992.67      3.66 1994.68      3.66 2000.57      3.68
2009.94   3.68 2023.22      3.69 2031.08      3.67 2031.57      3.67 2045.88      3.66

```

ExpandedLocal.rep

2056.42	3.7	2068.46	3.73	2068.53	3.73	2068.64	3.73	2084.91	3.75
2091.19	3.76	2101.25	3.76	2104.47	3.76	2113.84	3.76	2117.6	3.77
2120.17	3.77	2120.39	3.77	2131.89	3.76	2135.78	3.76	2136.9	3.76
2157.44	3.75	2170.48	3.74	2177.85	3.73	2179.09	3.73	2183.91	3.73
2188.19	3.73	2188.57	3.73	2200.74	3.73	2205.89	3.73	2222.4	3.71
2223.6	3.72	2224.02	3.72	2228.96	3.74	2244.05	3.8	2247.67	3.82
2251.24	3.83	2259.01	3.86	2265.71	3.89	2276.71	3.93	2287.36	3.94
2304.13	3.97	2309.01	3.99	2311.41	3.99	2326.04	4.02	2330.67	4.03
2332	4.04	2352.32	4.09	2357.63	4.1	2359.87	4.11	2373.98	4.14
2375.17	4.14	2387.74	4.18	2395.63	4.2	2413.98	4.24	2415.61	4.25
2417.28	4.25	2423.12	4.27	2438.91	4.31	2438.94	4.31	2453.76	4.33
2460.59	4.34	2471.4	4.36	2471.46	4.36	2482.25	4.35	2489.17	4.36
2502.67	4.38	2503.9	4.38	2520.19	4.4	2525.56	4.41	2527.09	4.41
2544.79	4.43	2547.21	4.44	2559.99	4.45	2566.42	4.46	2568.86	4.46
2582.84	4.48	2590.52	4.48	2610.71	4.45	2612.17	4.45	2617.27	4.44
2618.18	4.44	2630.17	4.43	2633.82	4.43	2638.58	4.44	2655.48	4.47
2666.45	4.49	2677.13	4.5	2691.57	4.51	2693.93	4.51	2694.32	4.51
2695.73	4.51	2698.79	4.52	2709.52	4.55	2714.35	4.56	2720.44	4.58
2722.19	4.58	2742.1	4.58	2750.06	4.58	2752.09	4.58	2757.67	4.58
2763.75	4.58	2777.93	4.59	2785.4	4.6	2805.8	4.61	2807.06	4.61
2808.43	4.61	2811.42	4.61	2821.42	4.62	2828.71	4.63	2833.68	4.63
2838.33	4.64	2850.37	4.65	2861.55	4.66	2872.02	4.67	2878.67	4.68
2885.18	4.68	2893.67	4.69	2908.5	4.72	2911.72	4.72	2915.33	4.73
2917.29	4.73	2936.98	4.76	2945.16	4.77	2948.92	4.77	2958.64	4.79
2973.03	4.8	2977.48	4.81	2980.29	4.81	3000.9	4.84	3001.94	4.84
3005.57	4.85	3012.68	4.86	3023.6	4.87	3028.77	4.88	3045.25	4.9
3056.64	4.91	3058.5	4.91	3066.91	4.92	3076.42	4.93	3084.51	4.94
3088.56	4.95	3090.19	4.95	3102.65	4.97	3110.21	4.98	3112.39	4.98
3131.87	5	3140.18	5.01	3140.26	5.01	3153.52	5.03	3168.13	5.06
3175.18	5.08	3195.02	5.13	3196	5.13	3196.83	5.13	3199.73	5.14
3203.92	5.16	3205.27	5.16	3218.48	5.2	3223.87	5.22	3240.14	5.28
3251.74	5.34	3261.79	5.38	3267.68	5.4	3275.82	5.42		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-972	.06	1384.43	.05	1597.86	.06

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1384.43	1597.86		471	471	.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
-972	975.29	6.38	F

CROSS SECTION

RIVER: Doublloon

REACH: to Marsh

RS: 11068

INPUT

Description: Interpolated Section

Station Elevation Data num= 394

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1053	5.04	-1038.29	5.04	-1028.03	5.04	-1007.93	5.03	-974.74	5.01
-973.05	5.01	-971.79	5.01	-955.23	4.99	-918.08	4.94	-905.79	4.92
-875.4	4.88	-872.16	4.87	-867.58	4.87	-863.1	4.86	-832.57	4.83
-808.13	4.8	-803.65	4.8	-797.56	4.79	-789.1	4.77	-779.01	4.75
-753.16	4.7	-727.55	4.64	-725.73	4.63	-706.03	4.57	-701.51	4.56
-698.18	4.55	-692.54	4.53	-682.63	4.5	-657.53	4.42	-643.21	4.35
-622.96	4.28	-599.36	4.21	-590.88	4.18	-588.23	4.17	-586.24	4.17
-552.51	4.09	-539.9	4.06	-533.26	4.04	-497.22	3.94	-489.85	3.92
-482.49	3.91	-478.28	3.88	-465.62	3.94	-456.76	3.97	-447.49	4.02
-423.31	4.03	-393.47	3.93	-390.82	3.93	-373.04	3.89	-368.34	3.88
-334.98	3.69	-313.36	3.59	-312.46	3.59	-297.08	3.48	-293.59	3.47
-289.31	3.46	-258.39	3.31	-225.35	3.24	-207.03	3.22	-205.58	3.21
-203.41	3.2	-202.42	3.21	-200.7	3.21	-174.2	3.21	-167.42	3.21
-148.44	3.19	-132.41	3.2	-121.85	3.19	-104.3	3.17	-97.4	3.17
-93.46	3.17	-79.08	3.19	-65.89	3.21	-38.49	3.24	-38.12	3.24
-7.92	3.3	7.62	3.32	16.48	3.34	42.42	3.37	45.61	3.38
48.87	3.38	56.49	3.39	71.46	3.42	88.47	3.43	126.43	3.47
129.34	3.47	129.99	3.47	147.48	3.48	181.43	3.47	182.59	3.47
184.11	3.47	184.5	3.47	213.07	3.49	238.84	3.49	259.03	3.56
271.81	3.61	286.15	3.6	295.08	3.74	296.8	3.75	320.82	3.9
351.32	4.19	362.19	4.26	367.34	4.3	380.53	4.4	407.57	4.62
424.84	4.74	425.44	4.74	452.57	4.9	456.53	4.93	459.51	4.95
463.81	4.97	464.33	4.97	477	5.04	482.36	5.07	520.07	5.28
542.95	5.39	548.93	5.42	576.31	5.61	590.21	5.68	598.18	5.73
632.56	5.73	632.85	5.73	633.32	5.73	633.52	5.73	688.8	5.8
702.19	5.83	708.98	5.85	718.11	5.88	723.7	5.9	742.71	5.93
745.05	5.94	774.59	6.02	778.09	6.03	789.92	6.07	799.33	6.11
802.7	6.12	826.67	6.2	843.91	6.25	851.45	6.27	856.49	6.28
880.17	6.38	887.29	6.41	903.56	6.45	913.76	6.47	922.41	6.49
945.87	6.54	955.68	6.55	963.3	6.55	975.15	6.55	984.27	6.55
1004.81	6.55	1007.8	6.55	1025.23	6.53	1059.92	6.4	1064.5	6.38
1065.08	6.38	1108	6.14	1112.03	6.11	1148.52	5.54	1153.84	5.46
1164.15	5.3	1170.27	5.2	1184.29	4.93	1205.96	4.55	1216.27	4.37
1241.12	3.84	1243.19	3.8	1268.39	3.28	1272.94	3.19	1303.49	2.61
1332.53	2.52	1377.71	2.36	1396.79	1.55	1415.86	1.3	1434.6	1.29
1453.33	1.1	1528.29	1.07	1547.32	1.48	1566.36	1.71	1569.29	1.7
1585.39	1.73	1604.43	2.14	1614.54	2.21	1621.41	2.21	1635.1	2.22
1635.65	2.22	1636.87	2.22	1655.67	2.23	1656.71	2.23	1671.03	2.23
1676.31	2.23	1682.64	2.24	1696.96	2.27	1708.93	2.24	1717.61	2.23
1728.01	2.23	1728.76	2.23	1729.52	2.24	1738.26	2.33	1746.83	2.42
1758.91	2.55	1773.38	2.69	1779.56	2.74	1784.73	2.79	1785.44	2.8

ExpandedLocal.rep

1793.91	2.92	1800.21	2.98	1818.75	3.2	1820.86	3.22	1834.39	3.36
1841.51	3.39	1842.14	3.39	1848.47	3.44	1858.91	3.52	1861.83	3.54
1866.48	3.56	1879.18	3.6	1881.97	3.58	1891.71	3.55	1898.84	3.52
1902.12	3.52	1918.68	3.54	1921.27	3.55	1922.27	3.54	1924.43	3.55
1924.52	3.55	1942.41	3.58	1955.53	3.62	1957.32	3.62	1962.56	3.63
1970.89	3.63	1982.7	3.64	1989.69	3.63	1990.13	3.63	2002.85	3.63
2012.23	3.65	2022.93	3.66	2022.99	3.66	2023.09	3.66	2037.56	3.67
2043.14	3.67	2052.09	3.67	2054.96	3.67	2063.29	3.67	2066.63	3.67
2068.91	3.67	2069.11	3.67	2079.34	3.67	2082.8	3.66	2083.79	3.66
2102.06	3.65	2113.66	3.65	2120.21	3.64	2121.31	3.64	2125.6	3.64
2129.4	3.64	2129.75	3.64	2140.57	3.64	2145.15	3.64	2159.83	3.62
2160.89	3.62	2161.27	3.62	2165.67	3.63	2179.08	3.66	2182.3	3.67
2185.47	3.67	2192.38	3.69	2198.34	3.71	2208.13	3.73	2217.6	3.74
2232.51	3.76	2236.85	3.76	2238.99	3.76	2251.99	3.79	2256.11	3.8
2257.29	3.8	2275.37	3.84	2280.08	3.85	2282.08	3.86	2294.62	3.88
2295.69	3.88	2306.86	3.91	2313.88	3.93	2330.2	3.97	2331.65	3.97
2333.14	3.98	2338.32	3.99	2352.37	4.02	2352.39	4.02	2365.57	4.05
2371.65	4.06	2381.26	4.07	2381.32	4.07	2390.91	4.07	2397.06	4.09
2409.07	4.1	2410.16	4.11	2424.65	4.12	2429.42	4.12	2430.79	4.13
2446.52	4.14	2448.68	4.14	2460.04	4.15	2465.76	4.16	2467.93	4.16
2480.36	4.17	2487.19	4.17	2505.15	4.16	2506.45	4.15	2510.98	4.15
2511.79	4.15	2522.46	4.15	2525.7	4.15	2529.93	4.15	2544.96	4.17
2554.72	4.18	2564.22	4.19	2577.05	4.2	2579.16	4.2	2579.5	4.2
2580.75	4.2	2583.47	4.2	2593.02	4.22	2597.31	4.23	2602.73	4.24
2604.29	4.24	2621.99	4.25	2629.07	4.25	2630.87	4.26	2635.84	4.26
2641.24	4.26	2653.86	4.28	2660.5	4.28	2678.64	4.3	2679.76	4.3
2680.98	4.31	2683.64	4.31	2692.53	4.32	2699.02	4.33	2703.43	4.34
2707.57	4.35	2718.27	4.36	2728.21	4.38	2737.53	4.39	2743.45	4.4
2749.23	4.41	2756.79	4.42	2769.97	4.45	2772.84	4.45	2776.04	4.46
2777.79	4.46	2795.3	4.49	2802.57	4.5	2805.92	4.51	2814.56	4.52
2827.36	4.54	2831.32	4.55	2833.81	4.55	2852.14	4.59	2853.07	4.59
2856.3	4.6	2862.61	4.61	2872.33	4.62	2876.93	4.63	2891.58	4.65
2901.71	4.67	2903.37	4.67	2910.84	4.68	2919.3	4.69	2926.5	4.71
2930.1	4.71	2931.55	4.71	2942.63	4.73	2949.35	4.74	2951.28	4.74
2968.61	4.77	2976	4.78	2976.07	4.78	2987.87	4.8	3000.85	4.83
3007.12	4.84	3024.77	4.88	3025.64	4.88	3026.38	4.89	3028.96	4.89
3032.69	4.9	3033.89	4.91	3045.64	4.94	3050.43	4.95	3064.89	4.99
3075.21	5.03	3084.15	5.06	3089.39	5.07	3096.63	5.09		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1053 .06 1377.71 .05 1604.43 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1377.71 1604.43 471 471 471 .1 .3

Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent

-1053 955.68 6.55 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh

RS: 10597

INPUT

Description:

Station Elevation Data		num= 171							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-1134	4.958	-1108.27	4.966	-1053.35	4.933	-1051.61	4.932	-1050.31	4.931
-994.96	4.867	-950.97	4.808	-942.91	4.798	-938.3	4.792	-906.83	4.746
-881.65	4.707	-870.75	4.689	-851.64	4.654	-825	4.601	-798.6	4.542
-768.34	4.458	-762.52	4.442	-752.31	4.409	-726.44	4.32	-711.69	4.253
-657.76	4.073	-655.03	4.063	-652.98	4.058	-618.21	3.974	-598.38	3.924
-553.64	3.79	-546.05	3.771	-541.72	3.741	-509.98	3.88	-485.07	3.871
-454.31	3.741	-428.42	3.665	-394.04	3.451	-371.76	3.339	-354.98	3.223
-315.11	3.057	-262.18	2.969	-258.45	2.955	-257.43	2.963	-255.65	2.964
-221.36	2.967	-201.8	2.948	-185.28	2.954	-156.31	2.932	-149.2	2.94
-145.14	2.945	-130.32	2.972	-88.49	3.047	-56.98	3.119	-40.97	3.157
-31.84	3.177	1.54	3.244	24.82	3.293	42.35	3.313	81.47	3.364
85.14	3.365	103.17	3.371	138.16	3.369	139.35	3.368	141.32	3.37
197.32	3.403	231.3	3.542	246.08	3.547	255.28	3.7	281.81	3.892
313.24	4.221	324.44	4.311	371.21	4.714	389	4.841	417.58	5.026
424.73	5.077	429.17	5.103	448.28	5.21	487.14	5.429	510.72	5.54
545.1	5.762	567.64	5.877	603.07	5.849	603.37	5.85	603.86	5.851
661.03	5.928	674.83	5.959	697	6.026	719	6.072	749.44	6.174
753.05	6.185	774.94	6.266	803.12	6.363	820.88	6.418	828.65	6.442
858.25	6.543	882.36	6.61	925.96	6.711	936.07	6.726	943.92	6.722
989.78	6.732	1007.74	6.716	1043.49	6.585	1048.81	6.566	1097.2	6.294
1134.8	5.729	1150.91	5.473	1157.22	5.368	1171.66	5.089	1204.62	4.495
1230.23	3.94	1258.33	3.336	1294.51	2.619	1371	2.4	1391	1.7
1411	1.6	1431	1.6	1451	1.4	1531	1.4	1551	1.8
1571	2	1591	1.9	1611	2.2	1719.85	2.175	1720.52	2.182
1769.48	2.754	1776.89	2.884	1819.12	3.394	1851.55	3.618	1868.76	3.527
1891.16	3.532	1918.39	3.582	1948.3	3.581	1968.03	3.593	2005.44	3.578
2017.66	3.577	2062.57	3.549	2067.29	3.547	2070.92	3.547	2098.52	3.532
2116.93	3.521	2119.71	3.521	2166.56	3.539	2202.54	3.601	2216.2	3.623
2246.42	3.693	2265.83	3.738	2291.12	3.781	2315.47	3.828	2348.26	3.844
2365.1	3.861	2405.4	3.86	2414.74	3.863	2462.54	3.882	2464.38	3.882
2465.78	3.883	2476.52	3.895	2509.66	3.932	2514.01	3.937	2553.53	4.003
2563.64	4.025	2576.81	4.057	2613.28	4.131	2633.95	4.186	2662.91	4.246
2685.15	4.289	2712.55	4.358	2748.23	4.427	2762.18	4.454	2772.9	4.477
2811.82	4.547	2854.52	4.634	2861.45	4.648	2862.5	4.65	2911.09	4.747
2917.43	4.757								

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1134 .06 1371 .05 1611 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1371 1611 97 97 97 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 -1134 988.78 6.732 F

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 10500

INPUT

Description:

Station Elevation Data num= 79  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 871 4.956 871.306 4.953 908.698 4.602 919.654 4.5 919.917 4.495  
 968.88 3.8661015.595 3.2431018.106 3.2031063.692 2.5421067.332 2.502  
 1111.788 2.2521116.558 2.2271159.885 2.008 1195.77 2.33 1209.87 1.8  
 1216.37 1.61 1232.14 1.56 1236.96 1.52 1247.72 1.48 1257.56 1.48  
 1263.31 1.42 1278.15 1.37 1354.31 1.37 1370.47 1.62 1374.71 1.7  
 1395.12 1.88 1412.49 1.8 1415.52 1.8 1435.92 2.141488.461 1.664  
 1496.984 1.6781528.893 1.741547.791 1.7761579.737 1.8521598.598 1.9  
 1609.756 1.9411649.405 2.0621650.188 2.0651653.237 2.0771690.619 2.219  
 1700.212 2.2451731.051 2.366 1751.02 2.4561771.483 2.5341801.827 2.583  
 1811.914 2.6151851.225 2.7321852.346 2.7351852.634 2.7361892.778 2.858  
 1903.441 2.8931933.209 2.971954.248 3.0321973.641 3.0712005.055 3.147  
 2014.072 3.1632049.213 3.2412054.504 3.2522055.862 3.2562058.157 3.263  
 2106.669 3.3982135.367 3.5032157.476 3.5882194.848 3.7672208.283 3.829  
 2216.231 3.8682247.202 4.034 2259.09 4.0992297.094 4.312309.897 4.379  
 2331.539 4.52360.704 4.6652377.957 4.7662411.511 4.9612418.389 5  
 2445.19 5.149 2458.82 5.2252462.318 5.2442464.514 5.257

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 871 .06 1195.77 .05 1435.92 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1195.77 1435.92 392 392 392 .1 .3

ExpandedLocal.rep

CROSS SECTION

RIVER: Doublon  
 REACH: to Marsh RS: 10108

INPUT

Description:

Station Elevation Data num= 79

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
871	4.956	871.306	4.953	908.698	4.602	919.654	4.5	919.917	4.495
968.88	3.866	1015.595	3.243	1018.106	3.203	1063.692	2.542	1067.332	2.502
1111.788	2.252	1116.558	2.227	1159.885	2.008	1195.77	2.33	1209.87	1.8
1216.37	1.61	1232.14	1.56	1236.96	1.52	1247.72	1.48	1257.56	1.48
1263.31	1.42	1278.15	1.27	1354.31	1.27	1370.47	1.62	1374.71	1.7
1395.12	1.88	1412.49	1.8	1415.52	1.8	1435.92	2.141	1488.461	1.664
1496.984	1.678	1528.893	1.741	1547.791	1.776	1579.737	1.852	1598.598	1.9
1609.756	1.941	1649.405	2.062	1650.188	2.065	1653.237	2.077	1690.619	2.219
1700.212	2.245	1731.051	2.366	1751.02	2.456	1771.483	2.534	1801.827	2.583
1811.914	2.615	1851.225	2.732	1852.346	2.735	1852.634	2.736	1892.778	2.858
1903.441	2.893	1933.209	2.971	1954.248	3.032	1973.641	3.071	2005.055	3.147
2014.072	3.163	2049.213	3.241	2054.504	3.252	2055.862	3.256	2058.157	3.263
2106.669	3.398	2135.367	3.503	2157.476	3.588	2194.848	3.767	2208.283	3.829
2216.231	3.868	2247.202	4.034	2259.09	4.099	2297.094	4.312	2309.897	4.379
2331.539	4.523	2360.704	4.665	2377.957	4.766	2411.511	4.961	2418.389	5
2445.19	5.149	2458.82	5.225	2462.318	5.244	2464.514	5.257		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
871	.06	1195.77	.05	1435.92	.06

Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	1195.77	1435.92	489	489	489	.1		.3

CROSS SECTION

RIVER: Doublon  
 REACH: to Marsh RS: 9619

INPUT

Description: Interpolated Section

Station Elevation Data num= 155

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
860.8	4.75	861.13	4.75	875.91	4.63	883.08	4.56	889.72	4.5



ExpandedLocal.rep

901.51	4.4	913.34	4.3	913.63	4.3	921.07	4.22	926.32	4.16
959.07	3.77	966.51	3.69	994.4	3.36	997.06	3.33	1016.96	3.08
1019.67	3.04	1033.89	2.85	1035.06	2.83	1036.13	2.82	1064.45	2.43
1068.9	2.39	1072.83	2.35	1120.84	2.17	1125.99	2.15	1172.79	1.99
1211.54	2.26	1226.05	1.68	1232.73	1.52	1248.96	1.5	1253.92	1.44
1264.99	1.36	1275.12	1.36	1281.03	1.3	1296.3	1.14	1368.62	1.14
1385.1	1.52	1389.42	1.6	1410.23	1.76	1427.95	1.69	1431.04	1.7
1451.84	2.07	1469.05	1.91	1476.31	1.86	1503.98	1.69	1510.74	1.64
1519	1.66	1520.3	1.66	1538.92	1.7	1556.07	1.72	1561.7	1.73
1573.85	1.75	1577.25	1.75	1604.4	1.81	1608.79	1.82	1613.06	1.82
1628.52	1.85	1634.21	1.86	1643.72	1.89	1646.72	1.91	1662.43	2
1670.14	2.05	1679.44	2.08	1691.16	2.17	1692.04	2.17	1695.46	2.2
1696.91	2.21	1716.07	2.34	1723.67	2.39	1737.37	2.48	1744.31	2.52
1748.12	2.55	1752.7	2.58	1777.21	2.73	1782.69	2.76	1789.33	2.8
1805.08	2.88	1815.59	2.93	1825.96	2.98	1828.01	2.98	1830.74	2.99
1843.73	3.02	1862.03	3.07	1862.59	3.07	1873.34	3.1	1873.59	3.11
1899.22	3.18	1917.41	3.24	1918.66	3.24	1918.99	3.24	1931.59	3.28
1935.85	3.29	1943.16	3.31	1963.99	3.37	1972.48	3.4	1975.94	3.41
1989.58	3.45	2009.11	3.5	2009.31	3.5	2032.9	3.57	2042.58	3.59
2045.74	3.59	2047.58	3.6	2054.64	3.61	2082.37	3.68	2089.85	3.7
2099.96	3.72	2105.58	3.73	2119	3.76	2125.19	3.78	2139.35	3.81
2142	3.81	2145.29	3.82	2146.81	3.82	2149.38	3.83	2155.63	3.84
2162.51	3.86	2201.09	3.95	2201.98	3.95	2203.76	3.96	2225.84	4.02
2235.93	4.05	2249.7	4.09	2250.59	4.1	2260.72	4.13	2298.31	4.27
2299.2	4.27	2302.61	4.28	2317.67	4.34	2326.58	4.37	2346.91	4.45
2347.81	4.46	2361.3	4.52	2374.63	4.57	2395.52	4.67	2396.41	4.67
2417.23	4.77	2431.58	4.83	2444.13	4.89	2444.58	4.89	2445.02	4.89
2455.85	4.94	2488.54	5.1	2492.74	5.12	2493.63	5.12	2507.88	5.18
2541.35	5.32	2542.24	5.32	2545.5	5.33	2553.21	5.36	2583.25	5.48
2589.95	5.51	2590.85	5.51	2598.53	5.54	2602.45	5.56	2604.91	5.57

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 860.8 .06 1211.54 .048 1451.84 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1211.54 1451.84 489 489 489 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 9130

INPUT  
 Description: Interpolated Section  
 Station Elevation Data num= 156

ExpandedLocal.rep

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
850.6	4.55	850.95	4.55	866.83	4.44	874.52	4.36	881.66	4.3
894.33	4.2	907.04	4.1	907.34	4.1	915.33	4.03	920.97	3.97
956.14	3.59	964.13	3.51	994.09	3.19	996.95	3.16	1018.32	2.91
1021.23	2.87	1036.51	2.69	1037.76	2.67	1038.91	2.66	1069.33	2.26
1074.11	2.23	1078.33	2.21	1129.9	2.09	1135.43	2.07	1185.69	1.97
1227.31	2.19	1242.23	1.56	1249.09	1.43	1249.1	1.43	1265.78	1.44
1270.88	1.37	1282.27	1.24	1292.68	1.23	1298.76	1.18	1314.46	1.02
1382.93	1.02	1399.73	1.43	1404.13	1.49	1425.34	1.64	1443.41	1.58
1446.56	1.6	1467.77	2.01	1486.83	1.81	1494.87	1.78	1525.53	1.65
1533.03	1.62	1542.18	1.64	1543.61	1.64	1564.24	1.68	1583.24	1.7
1589.49	1.71	1602.95	1.73	1606.71	1.73	1636.79	1.78	1641.65	1.79
1646.39	1.79	1663.52	1.82	1669.82	1.83	1680.36	1.85	1683.68	1.88
1701.09	2.02	1709.63	2.09	1719.94	2.14	1732.92	2.27	1733.89	2.28
1737.68	2.32	1739.28	2.33	1760.52	2.53	1768.94	2.61	1784.11	2.75
1791.8	2.81	1796.03	2.85	1801.1	2.9	1828.26	3.11	1834.33	3.16
1841.69	3.21	1859.13	3.31	1870.78	3.37	1882.27	3.43	1884.55	3.43
1887.57	3.44	1901.96	3.48	1922.23	3.55	1922.85	3.55	1934.76	3.59
1935.04	3.59	1963.44	3.68	1983.59	3.74	1984.98	3.75	1985.34	3.75
1999.3	3.79	2004.02	3.8	2012.12	3.82	2035.2	3.89	2044.6	3.92
2048.44	3.93	2063.55	3.97	2085.19	4.03	2085.41	4.03	2111.55	4.1
2122.27	4.13	2125.77	4.13	2127.81	4.14	2135.63	4.16	2166.35	4.24
2174.65	4.26	2185.85	4.28	2192.07	4.29	2206.94	4.33	2213.8	4.34
2229.49	4.37	2232.43	4.38	2236.07	4.38	2237.75	4.39	2240.6	4.39
2247.52	4.41	2255.15	4.42	2297.9	4.51	2298.88	4.51	2300.86	4.52
2325.32	4.57	2336.5	4.6	2351.75	4.64	2352.74	4.64	2363.96	4.67
2405.61	4.79	2406.59	4.79	2410.38	4.8	2427.06	4.84	2436.94	4.87
2459.46	4.94	2460.45	4.95	2475.4	5	2490.17	5.05	2513.32	5.13
2514.3	5.14	2537.37	5.22	2553.27	5.28	2567.17	5.33	2567.67	5.34
2568.16	5.34	2580.15	5.39	2616.38	5.53	2621.03	5.55	2622.02	5.55
2637.8	5.6	2674.88	5.69	2675.87	5.69	2679.48	5.7	2688.02	5.73
2721.31	5.82	2728.74	5.84	2729.73	5.84	2738.24	5.86	2742.58	5.87
2745.31	5.88								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
850.6	.06	1227.31	.046	1467.77	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1227.31	1467.77		489	489	.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 8641

ExpandedLocal.rep

INPUT

Description: Interpolated Section

Station Elevation Data

num= 157

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
840.4	4.35	840.78	4.35	857.75	4.24	865.97	4.16	873.6	4.09
887.14	4	900.73	3.91	901.05	3.9	909.6	3.84	915.62	3.78
953.22	3.4	961.76	3.32	993.78	3.03	996.84	3	1019.68	2.75
1022.8	2.71	1039.13	2.52	1040.46	2.51	1041.7	2.5	1074.21	2.09
1079.32	2.07	1083.83	2.06	1138.95	2	1144.87	2	1198.59	1.95
1243.08	2.11	1258.4	1.44	1265.46	1.33	1265.47	1.33	1282.61	1.39
1287.85	1.29	1299.54	1.13	1310.23	1.11	1316.48	1.05	1332.61	.89
1397.23	.89	1414.35	1.33	1418.85	1.39	1440.46	1.53	1440.47	1.53
1458.87	1.46	1462.08	1.49	1483.69	1.94	1504.61	1.72	1513.44	1.69
1547.09	1.62	1555.31	1.6	1565.35	1.62	1566.92	1.62	1589.56	1.66
1610.42	1.68	1617.27	1.69	1632.04	1.71	1636.18	1.71	1669.19	1.75
1674.52	1.76	1679.72	1.76	1698.51	1.78	1705.43	1.79	1716.99	1.81
1720.64	1.84	1739.75	2.04	1749.12	2.13	1760.43	2.19	1774.68	2.37
1775.75	2.39	1779.9	2.44	1781.66	2.46	1804.97	2.72	1814.21	2.83
1830.86	3.01	1839.3	3.1	1843.93	3.15	1849.5	3.22	1879.3	3.49
1885.97	3.55	1894.04	3.62	1913.19	3.74	1925.97	3.81	1938.58	3.87
1941.08	3.88	1944.4	3.89	1960.19	3.95	1982.44	4.03	1983.12	4.04
1996.19	4.08	1996.49	4.08	2027.66	4.18	2049.77	4.25	2051.3	4.25
2051.69	4.25	2067.01	4.3	2072.19	4.31	2081.08	4.33	2106.41	4.41
2116.73	4.44	2120.94	4.45	2137.53	4.49	2161.27	4.56	2161.52	4.56
2190.19	4.64	2201.97	4.66	2205.81	4.67	2208.05	4.68	2216.63	4.7
2250.34	4.79	2259.45	4.81	2271.74	4.84	2278.56	4.85	2294.88	4.89
2302.41	4.91	2319.64	4.94	2322.85	4.94	2326.85	4.95	2328.7	4.95
2331.83	4.96	2339.42	4.97	2347.79	4.99	2394.7	5.07	2395.79	5.07
2397.95	5.07	2424.79	5.12	2437.07	5.15	2453.8	5.18	2454.89	5.19
2467.2	5.21	2512.91	5.3	2513.99	5.31	2518.14	5.31	2536.46	5.35
2547.29	5.38	2572.01	5.43	2573.09	5.44	2589.5	5.48	2605.71	5.53
2631.11	5.6	2632.2	5.6	2657.51	5.68	2674.96	5.73	2690.21	5.78
2690.76	5.78	2691.3	5.78	2704.46	5.83	2744.21	5.96	2749.32	5.98
2750.4	5.98	2767.73	6.01	2808.42	6.07	2809.5	6.07	2813.46	6.08
2822.84	6.09	2859.37	6.15	2867.52	6.16	2868.61	6.16	2877.95	6.18
2882.72	6.18	2885.71	6.19						

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
840.4	.06	1243.08	.04	1483.69	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1243.08	1483.69		489	489		.1	.3

CROSS SECTION

ExpandedLocal.rep

RIVER: Doubloon  
 REACH: to Marsh RS: 8152

INPUT

Description: Interpolated Section

Station Elevation Data		num= 157									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
830.2	4.15	830.6	4.14	848.67	4.05	857.42	3.95	865.54	3.89		
879.96	3.8	894.42	3.71	894.76	3.71	903.86	3.65	910.27	3.59		
950.29	3.22	959.39	3.14	993.47	2.87	996.73	2.84	1021.04	2.58		
1024.36	2.55	1041.74	2.36	1043.16	2.35	1044.48	2.33	1079.09	1.92		
1084.53	1.91	1089.33	1.91	1148.01	1.92	1154.3	1.92	1211.49	1.93		
1258.85	2.04	1274.58	1.32	1281.82	1.24	1281.83	1.24	1299.43	1.33		
1304.81	1.22	1316.81	1.01	1327.79	.98	1334.21	.93	1350.77	.77		
1411.54	.77	1428.98	1.24	1433.56	1.28	1455.57	1.41	1455.58	1.41		
1474.33	1.35	1477.6	1.39	1499.62	1.88	1522.39	1.62	1532	1.61		
1568.64	1.59	1577.59	1.59	1588.53	1.6	1590.24	1.6	1614.89	1.65		
1637.59	1.66	1645.05	1.67	1661.14	1.69	1665.64	1.69	1701.58	1.72		
1707.38	1.73	1713.05	1.74	1733.51	1.75	1741.04	1.75	1753.63	1.76		
1757.6	1.81	1778.41	2.05	1788.61	2.17	1800.92	2.25	1816.44	2.47		
1817.6	2.49	1822.13	2.56	1824.04	2.59	1849.41	2.91	1859.48	3.04		
1877.6	3.27	1886.8	3.39	1891.84	3.46	1897.91	3.53	1930.35	3.87		
1937.61	3.95	1946.4	4.03	1967.24	4.16	1981.16	4.25	1994.89	4.32		
1997.61	4.33	2001.22	4.34	2018.42	4.41	2042.64	4.52	2043.38	4.52		
2057.61	4.57	2057.94	4.57	2091.87	4.68	2115.95	4.75	2117.62	4.76		
2118.04	4.76	2134.72	4.81	2140.37	4.82	2150.04	4.85	2177.62	4.92		
2188.86	4.95	2193.44	4.97	2211.5	5.02	2237.35	5.08	2237.62	5.09		
2268.84	5.17	2281.66	5.2	2285.84	5.21	2288.28	5.22	2297.62	5.24		
2334.33	5.34	2344.24	5.36	2357.63	5.39	2365.06	5.41	2382.83	5.45		
2391.03	5.47	2409.78	5.5	2413.28	5.51	2417.63	5.51	2419.64	5.52		
2423.05	5.52	2431.32	5.54	2440.43	5.55	2491.51	5.63	2492.69	5.63		
2495.04	5.63	2524.27	5.67	2537.63	5.7	2555.86	5.73	2557.04	5.73		
2570.45	5.75	2620.21	5.82	2621.39	5.82	2625.91	5.83	2645.85	5.86		
2657.64	5.88	2684.56	5.92	2685.74	5.92	2703.6	5.96	2721.25	6		
2748.91	6.06	2750.09	6.06	2777.65	6.14	2796.65	6.18	2813.26	6.23		
2813.85	6.23	2814.44	6.23	2828.76	6.27	2872.05	6.4	2877.6	6.41		
2878.79	6.42	2897.65	6.42	2941.95	6.44	2943.14	6.44	2947.45	6.45		
2957.65	6.46	2997.43	6.48	3006.3	6.49	3007.49	6.49	3017.66	6.49		
3022.85	6.49	3026.11	6.5								

Manning's n Values		num= 3			
Sta	n Val	Sta	n Val	Sta	n Val
830.2	.06	1258.85	.04	1499.62	.06

ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1258.85 1499.62 489 489 489 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 7663

INPUT

Description:

Station Elevation Data num= 94

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
820	3.945	839.588	3.853	848.873	3.751	857.479	3.683	898.121	3.456
904.924	3.4	947.369	3.034	993.167	2.703	996.617	2.674	1044.36	2.197
1045.865	2.184	1047.26	2.171	1083.968	1.751	1274.62	1.97	1290.76	1.2
1298.19	1.15	1316.25	1.27	1321.77	1.14	1334.09	.89	1345.35	.86
1351.93	.81	1368.92	.64	1425.85	.64	1443.61	1.14	1448.27	1.18
1470.69	1.29	1489.79	1.24	1493.12	1.29	1515.54	1.811	1540.172	1.53
1550.565	1.526	1590.191	1.552	1611.7	1.582	1640.211	1.634	1672.835	1.649
1690.23	1.666	1733.97	1.696	1740.249	1.706	1768.507	1.711	1790.268	1.722
1817.064	2.072	1828.094	2.214	1841.415	2.299	1866.42	2.714	1893.861	3.096
1904.746	3.262	1934.292	3.679	1946.307	3.853	1981.398	4.254	1998.753	4.444
2036.355	4.685	2051.199	4.773	2058.05	4.788	2076.646	4.873	2103.645	5.002
2119.395	5.063	2156.092	5.178	2202.435	5.315	2208.538	5.33	2219	5.357
2260.984	5.472	2285.474	5.541	2313.43	5.613	2361.354	5.741	2365.876	5.753
2368.514	5.762	2418.322	5.892	2451.554	5.972	2470.769	6.018	2479.637	6.034
2503.708	6.072	2523.215	6.105	2533.07	6.117	2588.312	6.188	2589.589	6.189
2623.749	6.225	2657.909	6.272	2659.186	6.273	2727.506	6.342	2728.783	6.341
2797.103	6.412	2798.38	6.413	2866.7	6.527	2867.977	6.529	2936.297	6.673
2936.935	6.675	2937.574	6.676	3005.894	6.846	3007.171	6.847	3075.491	6.82
3076.768	6.823	3145.088	6.816	3146.365	6.816	3166.505	6.805		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
820	.06	1274.62	.04	1515.54	.06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1274.62 1515.54 432 432 432 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 7231

ExpandedLocal.rep

INPUT

Description: Interpolated Section

Station Elevation Data

num= 127

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
828.6	4.34	840.11	4.29	848.36	4.25	855.67	4.17	857.73	4.15
866.41	4.08	871.23	4.06	889.29	3.96	907.35	3.83	907.41	3.83
914.27	3.78	922.91	3.7	938.48	3.57	957.09	3.39	974.59	3.23
1003.3	2.94	1005.72	2.92	1006.78	2.91	1041.84	2.49	1054.94	2.33
1056.46	2.32	1057.4	2.31	1057.87	2.3	1072.96	2.11	1091.02	1.88
1094.9	1.83	1109.08	1.79	1140.21	1.74	1176.32	1.71	1191.89	1.7
1207.45	1.69	1225.51	1.69	1287.23	1.91	1303.7	1.1	1311.28	1.08
1329.7	1.22	1335.34	1.08	1347.91	.8	1359.39	.76	1366.11	.71
1383.44	.54	1437.3	.54	1455.31	1.06	1460.04	1.1	1482.78	1.2
1502.15	1.15	1505.53	1.21	1528.28	1.76	1548.95	1.5	1557.68	1.49
1590.93	1.46	1608.99	1.45	1630.16	1.46	1632.92	1.46	1660.3	1.48
1674.9	1.49	1709.93	1.52	1711.61	1.52	1716.88	1.53	1740.6	1.54
1758.86	1.55	1781.35	1.84	1789.71	1.94	1790.61	1.95	1801.79	2.02
1822.78	2.36	1845.81	2.67	1854.95	2.8	1858.47	2.85	1879.75	3.13
1889.83	3.27	1919.28	3.59	1927.23	3.68	1933.85	3.75	1965.41	3.95
1977.87	4.03	1983.62	4.04	1999.23	4.11	2021.89	4.22	2035.11	4.28
2065.91	4.38	2086.79	4.45	2104.81	4.5	2109.93	4.52	2118.71	4.54
2153.95	4.65	2174.5	4.71	2197.97	4.77	2224.31	4.85	2238.19	4.9
2241.99	4.91	2244.2	4.92	2286.01	5.06	2313.9	5.15	2330.03	5.2
2337.47	5.22	2357.67	5.27	2374.05	5.31	2382.32	5.33	2383.87	5.33
2428.68	5.45	2429.76	5.45	2452.63	5.51	2458.43	5.52	2487.1	5.59
2488.17	5.59	2521.39	5.65	2545.51	5.68	2546.58	5.68	2601.17	5.77
2603.93	5.77	2605	5.77	2662.34	5.86	2663.41	5.87	2680.94	5.9
2720.76	5.98	2721.29	5.98	2721.83	5.98	2749.71	6.04	2779.17	6.11
2780.24	6.11	2818.46	6.1	2837.59	6.1	2838.66	6.1	2896	6.1
2897.07	6.1	2913.98	6.09						

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
828.6	.06	1287.23	.04	1528.28	.06

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1287.23	1528.28		431	431	431		.1	.3

CROSS SECTION

RIVER: Doubloon

REACH: to Marsh

RS: 6800

INPUT

Description: Interpolated Section

ExpandedLocal.rep

Station Elevation Data num= 127

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
837.2	4.73	848.81	4.68	857.13	4.64	864.51	4.57	866.58	4.55
875.34	4.49	880.21	4.45	898.42	4.37	916.64	4.21	916.7	4.21
923.62	4.15	932.34	4.07	948.04	3.95	966.82	3.74	984.47	3.55
1013.42	3.18	1015.87	3.15	1016.94	3.14	1052.3	2.65	1065.52	2.47
1067.05	2.45	1068	2.44	1068.47	2.43	1083.7	2.22	1101.92	1.97
1105.83	1.91	1120.13	1.82	1151.53	1.67	1187.97	1.57	1203.67	1.53
1219.36	1.51	1237.58	1.48	1299.85	1.85	1316.64	1.01	1324.37	1
1343.16	1.18	1348.91	1.02	1361.72	.7	1373.44	.66	1380.29	.62
1397.97	.44	1448.74	.44	1467.01	.98	1471.81	1.02	1494.87	1.1
1514.52	1.06	1517.95	1.13	1541.02	1.71	1557.73	1.48	1564.79	1.45
1591.68	1.36	1606.28	1.32	1623.39	1.29	1625.62	1.29	1647.76	1.31
1659.57	1.32	1687.9	1.35	1689.25	1.35	1693.52	1.36	1712.69	1.37
1727.46	1.38	1745.65	1.6	1752.4	1.68	1753.13	1.69	1762.17	1.74
1779.14	2	1797.76	2.23	1805.15	2.34	1808	2.37	1825.2	2.59
1833.36	2.69	1857.17	2.93	1863.6	3	1868.95	3.05	1894.47	3.22
1904.54	3.28	1909.19	3.29	1921.81	3.35	1940.13	3.45	1950.82	3.49
1975.73	3.58	1992.61	3.64	2007.18	3.69	2011.32	3.71	2018.42	3.73
2046.91	3.82	2063.53	3.88	2082.51	3.94	2103.8	4	2115.03	4.06
2118.1	4.07	2119.89	4.08	2153.69	4.23	2176.24	4.33	2189.28	4.38
2195.3	4.41	2211.64	4.46	2224.88	4.51	2231.57	4.53	2232.82	4.54
2269.06	4.72	2269.92	4.72	2288.42	4.81	2293.1	4.82	2316.29	4.9
2317.15	4.9	2344.01	4.98	2363.52	5.03	2364.39	5.03	2408.52	5.12
2410.75	5.12	2411.62	5.13	2457.98	5.2	2458.85	5.2	2473.02	5.23
2505.22	5.28	2505.65	5.28	2506.08	5.28	2528.62	5.32	2552.45	5.38
2553.31	5.38	2584.22	5.38	2599.68	5.38	2600.55	5.38	2646.91	5.38
2647.78	5.38	2661.45	5.37						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
837.2	.06	1299.85	.04	1541.02	.06

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1299.85	1541.02		432	432	432		.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 6368

INPUT

Description: Interpolated Section

Station Elevation Data num= 127

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-----	------	-----	------	-----	------	-----	------	-----	------

ExpandedLocal.rep

```
*****
 845.8   5.12  857.51   5.07  865.91   5.03  873.35   4.97  875.44   4.95
 884.27  4.89  889.18   4.85  907.55   4.78  925.93   4.59  925.99   4.59
 932.97  4.53  941.77   4.44  957.6    4.33  976.54   4.09  994.35   3.87
1023.55  3.42 1026.02   3.38 1027.1    3.37 1062.77   2.82 1076.1    2.61
1077.65  2.58 1078.61   2.57 1079.08   2.56 1094.44   2.34 1112.81   2.05
1116.76  1.99 1131.19   1.84 1162.86   1.61 1199.61   1.44 1215.45   1.37
1231.28  1.32 1249.65   1.27 1312.46   1.8   1329.58   .91 1337.46   .93
1356.62  1.13 1362.48   .96 1375.54   .61 1387.49   .57 1394.47   .52
1412.49  .34 1460.19   .34 1478.72   .91 1483.58   .93 1506.97   1.01
1526.89  .98 1530.36   1.04 1553.75   1.65 1566.51   1.45 1571.9    1.41
1592.42  1.27 1603.56   1.19 1616.63   1.12 1618.33   1.12 1635.23   1.14
1644.24  1.15 1665.86   1.18 1666.9    1.18 1670.15   1.19 1684.79   1.2
1696.06  1.22 1709.94   1.37 1715.1    1.42 1715.65   1.43 1722.55   1.47
 1735.5  1.64 1749.72   1.8 1755.35   1.87 1757.53   1.9 1770.66   2.04
1776.88  2.11 1795.06   2.27 1799.96   2.31 1804.05   2.36 1823.53   2.49
1831.21  2.53 1834.76   2.55 1844.39   2.6 1858.38   2.67 1866.54   2.71
1885.55  2.79 1898.43   2.84 1909.55   2.88 1912.71   2.89 1918.13   2.91
1939.88   3 1952.56   3.04 1967.04   3.1 1983.3    3.16 1991.87   3.21
1994.21  3.23 1995.58   3.24 2021.38   3.4 2038.59   3.5 2048.54   3.56
2053.14  3.59 2065.6    3.66 2075.71   3.72 2080.81   3.74 2081.77   3.75
2109.43  3.98 2110.09   3.99 2124.2    4.1 2127.78   4.12 2145.48   4.22
2146.14  4.22 2166.64   4.32 2181.53   4.37 2182.19   4.37 2215.87   4.48
2217.58  4.48 2218.24   4.48 2253.63   4.54 2254.29   4.54 2265.11   4.56
2289.68  4.58 2290.01   4.58 2290.34   4.58 2307.54   4.61 2325.73   4.65
2326.39  4.65 2349.97   4.65 2361.78   4.65 2362.44   4.65 2397.82   4.66
2398.49  4.66 2408.92   4.66
```

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
845.8	.06	1312.46	.04	1553.75	.06			

Bank	Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1312.46	1553.75		431	431	431		.1		.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 5937

INPUT

Description: Interpolated Section

Station Elevation Data num= 127

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
854.4	5.51	866.21	5.47	874.68	5.42	882.18	5.37	884.29	5.36



ExpandedLocal.rep

893.2	5.29	898.15	5.25	916.69	5.18	935.22	4.97	935.28	4.97
942.32	4.9	951.19	4.82	967.16	4.71	986.27	4.44	1004.23	4.2
1033.68	3.66	1036.17	3.62	1037.25	3.6	1073.24	2.98	1086.68	2.74
1088.24	2.72	1089.21	2.7	1089.69	2.69	1105.18	2.45	1123.71	2.14
1127.69	2.07	1142.24	1.87	1174.19	1.54	1211.25	1.3	1227.22	1.2
1243.2	1.14	1261.73	1.06	1325.08	1.74	1342.52	.82	1350.56	.85
1370.07	1.09	1376.05	.9	1389.36	.51	1401.53	.47	1408.65	.43
1427.02	.24	1471.63	.24	1490.42	.83	1495.35	.85	1519.06	.91
1539.25	.89	1542.78	.96	1566.49	1.6	1575.29	1.42	1579.01	1.37
1593.17	1.17	1600.85	1.07	1609.86	.95	1611.04	.95	1622.69	.97
1628.91	.98	1643.82	1.01	1644.54	1.01	1646.78	1.01	1656.88	1.03
1664.65	1.05	1674.23	1.13	1677.79	1.16	1678.17	1.17	1682.93	1.19
1691.86	1.28	1701.67	1.37	1705.56	1.41	1707.06	1.43	1716.11	1.5
1720.41	1.53	1732.95	1.61	1736.33	1.63	1739.15	1.66	1752.58	1.75
1757.89	1.79	1760.33	1.8	1766.98	1.84	1776.62	1.89	1782.25	1.92
1795.36	1.99	1804.25	2.03	1811.92	2.07	1814.1	2.08	1817.84	2.1
1832.84	2.17	1841.59	2.21	1851.58	2.26	1862.8	2.31	1868.71	2.37
1870.32	2.39	1871.26	2.4	1889.06	2.57	1900.93	2.68	1907.8	2.75
1910.97	2.78	1919.57	2.85	1926.54	2.92	1930.06	2.95	1930.72	2.96
1949.8	3.25	1950.25	3.25	1959.99	3.4	1962.46	3.42	1974.67	3.53
1975.12	3.53	1989.26	3.66	1999.53	3.71	1999.99	3.71	2023.22	3.84
2024.4	3.84	2024.86	3.84	2049.27	3.87	2049.72	3.87	2057.19	3.89
2074.14	3.89	2074.36	3.89	2074.59	3.89	2086.46	3.89	2099	3.92
2099.46	3.92	2115.73	3.93	2123.87	3.93	2124.33	3.93	2148.74	3.94
2149.19	3.94	2156.39	3.94						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
854.4	.06	1325.08	.04	1566.49	.06

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1325.08	1566.49		432	432	432		.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 5505

INPUT

Description:

Station Elevation Data num= 51

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
863	5.907	874.911	5.86	891.019	5.772	907.127	5.653	925.817	5.588
944.508	5.346	960.616	5.188	976.724	5.085	1014.105	4.517	1046.321	3.85
1083.702	3.141	1099.81	2.832	1115.918	2.562	1134.608	2.226	1153.299	1.89

ExpandedLocal.rep

1185.515	1.4741222.896	1.171239.004	1.0391255.112	.9521273.802	.848
1337.69	1.68 1355.47	.72 1363.65	.78 1383.53	1.04 1389.62	.84
1403.18	.42 1415.58	.37 1422.83	.33 1441.54	.14 1483.08	.14
1502.12	.75 1507.12	.77 1531.15	.82 1551.62	.8 1555.19	.88
1579.23	1.551603.097	.7761621.787	.8361640.477	.9031656.586	.951
1672.694	.9531710.074	1.2281742.291	1.4671779.671	2.165 1795.78	2.695
1811.888	2.9921830.578	3.1931849.268	3.2141865.377	3.1711881.485	3.205
1903.861	3.222				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
863	.06	1337.69	.04	1579.23	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1337.69	1579.23		797.67	422		.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 5083

INPUT

Description: Interpolated Section

Station Elevation Data		num= 162		Sta		Elev		Sta		Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
575.33	5.74	577.78	5.73	583.24	5.72	585.44	5.72	590.6	5.71		
594.86	5.7	613.3	5.65	621.26	5.62	630.17	5.58	643.36	5.52		
647.67	5.49	661.11	5.44	669.73	5.4	673.41	5.39	678.3	5.36		
690.81	5.26	703.47	5.15	708.94	5.1	731.62	4.94	733.52	4.93		
735.35	4.91	754.03	4.81	761.75	4.77	763.58	4.76	775.1	4.66		
793.64	4.51	802.13	4.44	823.03	4.28	823.69	4.27	839.71	4.12		
853.75	3.98	872.64	3.79	875.84	3.76	883.8	3.69	892.1	3.62		
913.86	3.42	922.61	3.34	937.11	3.21	943.15	3.16	943.91	3.15		
944.48	3.15	963.52	2.98	973.97	2.9	989.92	2.77	996.87	2.71		
1004.03	2.64	1013.66	2.55	1020.56	2.48	1027.98	2.41	1034.08	2.35		
1049.05	2.19	1051.2	2.17	1064.14	2.06	1070.12	2.01	1084.17	1.88		
1094.19	1.79	1101.64	1.72	1104.01	1.7	1124.25	1.55	1154.03	1.31		
1154.31	1.3	1154.42	1.3	1154.68	1.3	1165.29	1.2	1184.36	1.03		
1191.69	.98	1206.41	.91	1214.42	.88	1218.1	.87	1225.19	.85		
1238.71	.82	1244.47	.8	1248.73	.79	1258.8	.84	1274.53	.92		
1295.7	1.03	1301.93	1.06	1304.59	1.07	1311.19	1.11	1334.64	1.22		
1353.46	1.61	1371.64	.6	1380.02	.69	1400.35	.98	1406.58	.76		
1420.45	.3	1433.14	.25	1440.55	.21	1459.69	.01	1497.39	.01		
1516.75	.65	1521.83	.67	1546.26	.7	1567.08	.69	1570.71	.78		
1595.15	1.49	1603.15	1.08	1614.13	.97	1622.52	.88	1631.71	.78		

ExpandedLocal.rep

1642.76	.67	1643.74	.67	1649.29	.68	1653.53	.69	1666.87	.72
1680.04	.75	1684.33	.77	1684.53	.77	1685.18	.77	1715.54	.88
1717.31	.88	1724.92	.92	1737.18	.97	1746.55	1.02	1749.44	1.04
1765.51	1.1	1777.55	1.14	1781.57	1.16	1806.1	1.29	1807.49	1.3
1808.56	1.31	1825.07	1.38	1839.56	1.43	1846.69	1.46	1856.13	1.48
1870.57	1.53	1877.81	1.54	1887.28	1.56	1901.58	1.59	1920.39	1.63
1927.87	1.67	1932.58	1.7	1947.83	1.8	1963.59	1.9	1968.46	1.94
1994.6	2.14	1994.94	2.14	2009.05	2.34	2025.6	2.57	2027.07	2.59
2049.64	2.84	2053.59	2.89	2056.61	2.92	2059.2	2.95	2079.15	3.13
2087.62	3.21	2090.23	3.23	2096.48	3.28	2118.62	3.39	2130.82	3.42
2133.76	3.43	2141.48	3.44	2149.63	3.45	2159.06	3.46	2165.89	3.46
2171.41	3.47	2180.64	3.49	2198.02	3.52	2210.47	3.53	2211.64	3.53
2212	3.53	2242.65	3.54						

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
575.33	.06	1353.46	.04	1595.15	.06			

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1353.46	1595.15		797.67	422	357		.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 4661

INPUT

Description: Interpolated Section

Station Elevation Data num= 162

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
287.67	5.56	291.07	5.56	298.66	5.56	301.72	5.56	308.88	5.55
314.81	5.54	340.44	5.5	351.51	5.47	363.88	5.42	382.21	5.36
388.21	5.33	406.89	5.25	418.88	5.2	423.99	5.17	430.79	5.14
448.17	5.03	465.77	4.91	473.38	4.86	504.89	4.67	507.54	4.65
510.08	4.64	536.04	4.51	546.78	4.46	549.32	4.44	565.33	4.35
591.1	4.22	602.9	4.17	631.95	4.04	632.87	4.03	655.14	3.93
674.65	3.83	700.91	3.69	705.36	3.67	716.43	3.62	727.96	3.57
758.2	3.43	770.37	3.37	790.53	3.29	798.91	3.25	799.98	3.25
800.77	3.24	827.23	3.14	841.76	3.08	863.93	2.98	873.59	2.93
883.53	2.88	896.92	2.79	906.52	2.73	916.82	2.67	925.31	2.62
946.11	2.47	949.1	2.45	967.08	2.33	975.41	2.27	994.93	2.13
1008.86	2.03	1019.21	1.95	1022.51	1.92	1050.64	1.72	1092.03	1.39
1092.41	1.38	1092.57	1.38	1092.93	1.38	1107.68	1.24	1134.19	.98
1144.38	.93	1164.84	.82	1175.97	.8	1181.08	.79	1190.94	.77
1209.73	.75	1217.74	.74	1223.66	.73	1237.66	.75	1259.52	.78

ExpandedLocal.rep

1288.94	.83	1297.6	.85	1301.3	.85	1310.47	.87	1343.07	.91
1369.23	1.53	1387.82	.48	1396.38	.6	1417.17	.92	1423.54	.69
1437.73	.18	1450.7	.12	1458.28	.08	1477.85	-.11	1511.69	-.11
1531.37	.56	1536.54	.56	1561.38	.58	1582.54	.57	1586.23	.68
1611.08	1.42	1623.06	.75	1639.52	.7	1652.09	.66	1665.86	.61
1682.42	.57	1683.89	.57	1692.21	.58	1698.56	.59	1718.55	.62
1738.28	.67	1744.72	.69	1745.02	.69	1746	.69	1791.49	.85
1794.15	.87	1805.55	.92	1823.92	1.01	1837.96	1.1	1842.3	1.12
1866.38	1.24	1884.43	1.34	1890.45	1.36	1927.21	1.54	1929.3	1.55
1930.89	1.56	1955.64	1.64	1977.36	1.7	1988.04	1.72	2002.18	1.74
2023.83	1.77	2034.67	1.78	2048.87	1.78	2070.29	1.79	2098.48	1.79
2109.7	1.81	2116.76	1.82	2139.6	1.88	2163.23	1.93	2170.53	1.96
2209.7	2.12	2210.22	2.12	2231.36	2.29	2256.16	2.46	2258.37	2.48
2292.19	2.78	2298.11	2.84	2302.63	2.88	2306.52	2.91	2336.41	3.16
2349.1	3.27	2353.02	3.3	2362.38	3.37	2395.56	3.57	2413.85	3.62
2418.25	3.64	2429.83	3.67	2442.03	3.71	2456.17	3.73	2466.4	3.75
2474.68	3.77	2488.5	3.79	2514.55	3.83	2533.21	3.85	2534.97	3.85
2535.51	3.85	2581.43	3.87						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
287.67	.06	1369.23	.04	1611.08	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1369.23	1611.08		797.67	422	357	.1
							.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 4239

INPUT

Description:

Station Elevation Data num= 123

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5.392	4.357	5.395	14.08	5.398	17.991	5.398	27.167	5.392
67.577	5.354	97.6	5.266	121.074	5.205	152.669	5.066	168.025	4.995
174.571	4.962	205.534	4.793	228.068	4.67	278.172	4.399	281.565	4.381
318.059	4.2	335.062	4.132	355.568	4.046	388.559	3.939	403.674	3.894
442.056	3.797	470.571	3.736	495.553	3.678	529.176	3.597	549.049	3.557
563.814	3.523	602.546	3.439	618.127	3.406	654.679	3.342	656.043	3.34
657.057	3.339	709.54	3.263	750.3	3.149	763.037	3.112	780.181	3.04
805.669	2.935	816.534	2.888	843.178	2.749	870.031	2.599	880.686	2.541
905.683	2.38	923.528	2.267	936.786	2.173	977.025	1.899	1030.029	1.468
1030.522	1.465	1030.72	1.463	1031.186	1.457	1084.019	.936	1123.272	.74

ExpandedLocal.rep

1137.516	.7131156.688	.691180.754	.6831191.013	.6771216.515	.66
1244.51	.646 1282.19	.638 1293.28	.6381298.007	.6361309.758	.627
1351.504	.606 1385	1.46 1404	.36 1434	.86 1455	.06
1476	-.04 1496	-.24 1526	-.24 1546	.46 1598	.46
1627	1.361642.973	.4141664.905	.4221681.658	.4341700.014	.442
1724.043	.4671735.123	.4791743.586	.4931770.231	.5281805.113	.609
1805.514	.611806.814	.6151867.442	.8321886.182	.9171910.667	1.048
1929.371	1.171967.252	1.3871991.299	1.5292048.321	1.7922051.102	1.804
2053.227	1.8112086.211	1.9072115.155	1.9682129.391	1.9852177.083	2.013
2191.538	2.009 2210.46	1.9992239.011	1.981 2291.53	1.9482300.939	1.942
2331.382	1.9542362.868	1.965 2372.6	1.9882424.796	2.0962453.669	2.23
2486.724	2.3572534.739	2.7122542.627	2.7862548.652	2.8332593.666	3.196
2610.58	3.3332615.808	3.3752672.508	3.7512696.878	3.8272718.171	3.91
2734.436	3.965 2753.28	4.0122777.947	4.0642796.365	4.098 2855.95	4.171
2858.293	4.1742859.017	4.1752920.221	4.187		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	1385	.04	1627	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1385	1627		474	494	.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 3745

INPUT

Description: Interpolated Section

Station Elevation Data num= 244

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	4.88	3.89	4.88	7.54	4.88	12.57	4.89	16.06	4.89
24.26	4.88	33.15	4.87	60.34	4.86	87.15	4.79	108.11	4.75
133.21	4.65	136.32	4.64	136.88	4.64	150.03	4.58	154.25	4.56
155.87	4.55	183.52	4.4	203.64	4.3	248.38	4.06	251.41	4.05
258.89	4.01	283.99	3.9	299.18	3.84	317.49	3.78	344.36	3.7
346.94	3.69	360.44	3.65	384.56	3.6	394.71	3.56	420.17	3.48
442.48	3.4	448.1	3.39	472.5	3.32	490.24	3.28	503.43	3.24
510.23	3.23	538.01	3.15	551.84	3.11	551.92	3.11	579.69	3.04
584.56	3.02	585.78	3.02	586.68	3.02	633.55	2.9	641.52	2.87
669.94	2.77	681.31	2.73	685.91	2.71	696.62	2.66	719.38	2.56
729.08	2.52	752.87	2.39	772.36	2.28	776.85	2.26	777.24	2.26
779.74	2.24	786.36	2.21	787.53	2.2	808.68	2.07	824.62	1.97
836.45	1.89	872.38	1.65	917.96	1.29	919.71	1.28	920.15	1.27

ExpandedLocal.rep

920.33	1.27	920.74	1.27	967.92	.83	1002.97	.66	1015.68	.64
1032.8	.62	1041.53	.61	1054.29	.61	1056.18	.61	1063.45	.6
1071.65	.6	1086.22	.59	1111.22	.57	1144.86	.57	1154.77	.57
1158.99	.56	1169.48	.56	1194.4	.54	1206.75	.55	1236.66	1.31
1253.75	.32	1259.35	.38	1280.73	.74	1299.62	.1	1307	.08
1318.51	-.05	1336.5	-.34	1361.5	-.34	1367.78	-.06	1376.97	.05
1386.92	.34	1387.13	.34	1404.06	.37	1414.7	.34	1420.99	.34
1431.64	.37	1447.11	.39	1452.92	.31	1453.04	.31	1463.56	.52
1467.43	.7	1480.49	.82	1489.91	1.17	1501.44	.72	1509.93	.39
1516.47	.39	1528.72	.4	1537.42	.4	1543.04	.41	1557.46	.42
1558.41	.42	1569.61	.43	1581.42	.43	1591.6	.44	1596.18	.44
1599.53	.45	1611.54	.46	1622.74	.47	1625.43	.47	1636.04	.48
1645.54	.49	1649.31	.5	1654.47	.5	1669.43	.52	1675.88	.53
1691.55	.56	1702.45	.58	1713.16	.6	1713.66	.6	1715.29	.61
1717.35	.61	1729.02	.65	1737.56	.66	1755.58	.7	1762.9	.72
1780.22	.75	1781.58	.75	1782.15	.75	1783.57	.76	1791.28	.77
1808.72	.82	1814.77	.84	1829.57	.9	1835.29	.92	1843.1	.95
1845.46	.96	1847.76	.97	1860.91	1.03	1865.56	1.05	1868.9	1.06
1885.68	1.13	1895	1.17	1910.46	1.23	1916.38	1.26	1924.44	1.29
1935.24	1.33	1946.52	1.38	1953.88	1.4	1960.02	1.43	1983.32	1.52
1984.79	1.52	1992.65	1.55	2009.57	1.62	2012.76	1.63	2018	1.65
2021.48	1.67	2024.15	1.67	2029.01	1.69	2034.29	1.7	2039.78	1.72
2058.76	1.76	2063.83	1.78	2065.49	1.78	2083.24	1.79	2087.87	1.8
2101.77	1.85	2107.72	1.87	2111.92	1.87	2119.61	1.89	2132.19	1.9
2135.97	1.91	2156.67	1.95	2160.01	1.96	2179.39	1.99	2181.15	2
2184.06	2	2197.51	2.01	2205.62	2.02	2208.11	2.02	2221.22	2.02
2230.1	2.02	2232.15	2.02	2254.58	2.05	2256.2	2.05	2257.01	2.05
2279.05	2.08	2279.19	2.08	2281.18	2.08	2305.54	2.11	2322.84	2.13
2326.48	2.13	2332.04	2.14	2334.63	2.14	2339.86	2.15	2340.45	2.15
2357.82	2.18	2365.1	2.19	2372.79	2.2	2374.79	2.2	2383.11	2.21
2389.93	2.22	2408.07	2.23	2410.73	2.23	2412.25	2.24	2424.05	2.26
2424.45	2.26	2431.53	2.28	2433.02	2.28	2446.96	2.31	2489.88	2.4
2526.07	2.54	2567.5	2.68	2627.68	3.02	2637.57	3.09	2645.12	3.14
2701.54	3.49	2722.74	3.62	2729.29	3.66	2800.36	4.03	2830.91	4.11
2857.6	4.2	2877.98	4.26	2901.6	4.32	2932.52	4.39	2955.61	4.44
3030.29	4.56	3033.23	4.56	3034.14	4.56	3110.85	4.63		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 1236.66 .04 1489.91 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1236.66 1489.91 495 495 495 .1 .3

CROSS SECTION

ExpandedLocal.rep

RIVER: Doubloon  
REACH: to Marsh

RS: 3250

INPUT

Description: Interpolated Section

Station Elevation Data num= 244

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	4.37	3.42	4.37	6.64	4.37	11.06	4.37	14.14	4.37
21.35	4.37	29.17	4.37	53.1	4.36	76.69	4.32	95.14	4.29
117.23	4.22	119.97	4.21	120.47	4.21	132.03	4.16	135.75	4.14
137.18	4.14	161.51	4.01	179.21	3.92	218.59	3.73	221.25	3.71
227.83	3.68	249.93	3.6	263.29	3.56	279.4	3.51	303.06	3.45
305.33	3.44	317.2	3.41	338.43	3.37	347.36	3.32	369.77	3.22
389.4	3.13	394.35	3.11	415.82	3.04	431.44	3	443.04	2.96
449.03	2.95	473.48	2.86	485.64	2.82	485.72	2.82	510.15	2.72
514.44	2.7	515.51	2.7	516.31	2.69	557.55	2.54	564.57	2.51
589.58	2.4	599.59	2.35	603.64	2.33	613.06	2.28	633.09	2.19
641.63	2.15	662.56	2.04	679.72	1.94	683.66	1.92	684.01	1.91
686.21	1.9	692.04	1.87	693.07	1.87	711.68	1.75	725.7	1.67
736.12	1.6	767.74	1.4	807.85	1.1	809.39	1.09	809.78	1.08
809.93	1.08	810.3	1.08	851.81	.72	882.66	.58	893.85	.56
908.92	.54	916.59	.54	927.83	.53	929.49	.53	935.89	.53
943.1	.52	955.93	.51	977.93	.5	1007.54	.49	1016.25	.49
1019.97	.49	1029.2	.48	1051.13	.47	1062	.5	1088.32	1.16
1103.5	.28	1108.48	.3	1127.46	.62	1144.24	.14	1150.79	.13
1161.01	-.06	1176.99	-.44	1196.99	-.44	1204.62	-.06	1215.77	-.09
1227.85	.22	1228.1	.23	1248.64	.29	1261.56	.23	1269.19	.23
1282.1	.29	1300.89	.33	1307.93	.16	1308.07	.16	1320.84	.33
1325.54	.59	1341.39	.5	1352.81	.98	1366.67	.63	1376.88	.36
1384.75	.37	1399.48	.38	1409.93	.39	1416.69	.39	1434.03	.41
1435.17	.41	1448.63	.41	1462.83	.42	1475.06	.43	1480.57	.43
1484.6	.44	1499.04	.45	1512.51	.46	1515.73	.46	1528.49	.47
1539.91	.48	1544.45	.49	1550.65	.49	1568.64	.52	1576.39	.53
1595.22	.56	1608.33	.58	1621.2	.6	1621.8	.6	1623.76	.6
1626.24	.61	1640.27	.64	1650.53	.65	1672.21	.67	1681	.68
1701.82	.7	1703.46	.7	1704.15	.7	1705.84	.7	1715.12	.72
1736.08	.75	1743.36	.77	1761.15	.81	1768.02	.83	1777.41	.86
1780.25	.87	1783.01	.88	1798.82	.93	1804.42	.95	1808.43	.96
1828.61	1.02	1839.81	1.05	1858.4	1.1	1865.51	1.12	1875.2	1.15
1888.18	1.18	1901.75	1.22	1910.59	1.25	1917.97	1.28	1945.98	1.37
1947.76	1.37	1957.2	1.41	1977.54	1.48	1981.37	1.49	1987.67	1.51
1991.86	1.53	1995.06	1.54	2000.91	1.55	2007.25	1.57	2013.86	1.58
2036.68	1.64	2042.77	1.65	2044.77	1.65	2066.1	1.65	2071.68	1.66
2088.38	1.73	2095.53	1.76	2100.58	1.77	2109.83	1.79	2124.96	1.81
2129.49	1.83	2154.38	1.91	2158.4	1.92	2181.69	1.98	2183.81	1.98
2187.31	1.99	2203.48	2.01	2213.23	2.03	2216.22	2.04	2231.99	2.04
2242.66	2.05	2245.13	2.05	2272.08	2.12	2274.03	2.13	2275.01	2.13

ExpandedLocal.rep

2301.51	2.18	2301.67	2.18	2304.07	2.19	2333.35	2.26	2354.15	2.31
2358.53	2.32	2365.2	2.33	2368.33	2.34	2374.61	2.36	2375.32	2.36
2396.2	2.41	2404.95	2.43	2414.2	2.45	2416.6	2.45	2426.6	2.47
2434.8	2.47	2456.61	2.5	2459.81	2.5	2461.64	2.51	2475.82	2.54
2476.31	2.54	2484.81	2.56	2486.61	2.56	2503.36	2.59	2554.96	2.71
2598.46	2.85	2648.27	3	2720.62	3.34	2732.51	3.4	2741.59	3.44
2809.42	3.77	2834.9	3.9	2842.78	3.94	2928.22	4.3	2964.94	4.4
2997.02	4.5	3021.53	4.56	3049.93	4.63	3087.1	4.72	3114.85	4.77
3204.63	4.94	3208.17	4.95	3209.26	4.95	3301.48	5.08		

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
0	.06	1088.32	.04	1352.81	.06			

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1088.32	1352.81		494	494	494		.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 2756

INPUT  
 Description: Interpolated Section  
 Station Elevation Data num= 244

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	3.85	2.96	3.86	5.73	3.86	9.56	3.86	12.21	3.86
18.44	3.86	25.19	3.86	45.86	3.87	66.24	3.85	82.17	3.84
101.25	3.8	103.61	3.79	104.05	3.78	114.04	3.74	117.25	3.73
118.48	3.73	139.49	3.63	154.79	3.55	188.79	3.39	191.1	3.38
196.78	3.35	215.86	3.3	227.4	3.27	241.32	3.24	261.75	3.2
263.71	3.19	273.97	3.17	292.31	3.14	300.02	3.09	319.37	2.97
336.33	2.86	340.6	2.83	359.15	2.76	372.63	2.72	382.65	2.68
387.83	2.67	408.94	2.57	419.45	2.52	419.52	2.52	440.62	2.4
444.32	2.38	445.25	2.38	445.94	2.37	481.56	2.18	487.62	2.14
509.22	2.02	517.87	1.97	521.36	1.95	529.5	1.91	546.8	1.82
554.17	1.79	572.26	1.69	587.07	1.6	590.48	1.57	590.78	1.57
592.68	1.56	597.71	1.54	598.6	1.53	614.68	1.44	626.79	1.37
635.79	1.31	663.1	1.15	697.74	.9	699.07	.89	699.4	.89
699.54	.89	699.86	.89	735.71	.61	762.35	.5	772.02	.48
785.03	.47	791.66	.46	801.37	.45	802.8	.45	808.33	.45
814.56	.45	825.64	.44	844.64	.43	870.21	.42	877.74	.42
880.94	.42	888.92	.41	907.86	.4	917.25	.45	939.99	1.01
953.25	.23	957.6	.21	974.2	.5	988.86	.18	994.59	.19
1003.52	-.07	1017.49	-.54	1032.49	-.54	1041.46	-.05	1054.57	-.23



ExpandedLocal.rep

1068.77	.11	1069.07	.11	1093.23	.2	1108.41	.11	1117.38	.11
1132.57	.2	1154.66	.26	1162.94	.01	1163.11	.01	1178.12	.14
1183.65	.49	1202.28	.19	1215.72	.79	1231.91	.53	1243.83	.34
1253.03	.34	1270.23	.36	1282.44	.37	1290.34	.38	1310.59	.39
1311.93	.39	1327.65	.4	1344.24	.41	1358.53	.42	1364.96	.42
1369.67	.43	1386.54	.44	1402.27	.45	1406.04	.45	1420.94	.46
1434.28	.47	1439.58	.48	1446.83	.49	1467.84	.51	1476.89	.52
1498.89	.55	1514.2	.57	1529.24	.59	1529.95	.59	1532.23	.6
1535.13	.6	1551.52	.64	1563.51	.63	1588.83	.64	1599.1	.65
1623.43	.65	1625.33	.65	1626.14	.65	1628.12	.65	1638.95	.66
1663.45	.68	1671.94	.7	1692.73	.73	1700.76	.75	1711.73	.77
1715.04	.78	1718.27	.78	1736.74	.83	1743.27	.84	1747.97	.85
1771.53	.91	1784.62	.93	1806.33	.98	1814.65	.99	1825.96	1.02
1841.13	1.03	1856.97	1.07	1867.3	1.1	1875.92	1.13	1908.65	1.22
1910.72	1.22	1921.75	1.26	1945.52	1.34	1949.99	1.35	1957.35	1.38
1962.24	1.39	1965.98	1.4	1972.82	1.42	1980.22	1.44	1987.94	1.45
2014.6	1.51	2021.71	1.52	2024.04	1.52	2048.97	1.5	2055.48	1.52
2074.99	1.62	2083.35	1.66	2089.25	1.67	2100.05	1.69	2117.72	1.72
2123.02	1.75	2152.09	1.86	2156.79	1.88	2184	1.96	2186.47	1.96
2190.56	1.98	2209.45	2.02	2220.84	2.04	2224.33	2.05	2242.75	2.06
2255.22	2.07	2258.1	2.08	2289.59	2.19	2291.87	2.2	2293.01	2.2
2323.96	2.29	2324.15	2.29	2326.95	2.29	2361.16	2.42	2385.46	2.49
2390.57	2.5	2398.37	2.53	2402.02	2.54	2409.36	2.56	2410.19	2.56
2434.58	2.64	2444.8	2.66	2455.61	2.69	2458.42	2.7	2470.1	2.72
2479.68	2.73	2505.15	2.77	2508.89	2.77	2511.03	2.78	2527.59	2.81
2528.16	2.81	2538.09	2.83	2540.19	2.84	2559.76	2.88	2620.04	3.01
2670.86	3.17	2729.05	3.33	2813.57	3.65	2827.45	3.71	2838.06	3.75
2917.29	4.06	2947.06	4.18	2956.27	4.22	3056.07	4.57	3098.97	4.68
3136.45	4.79	3165.08	4.86	3198.25	4.94	3241.67	5.04	3274.09	5.11
3378.98	5.33	3383.1	5.33	3384.38	5.34	3492.11	5.52		

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 939.99 .04 1215.72 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 939.99 1215.72 494 494 494 .1 .3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 2262

INPUT  
 Description: Interpolated Section  
 Station Elevation Data num= 244

ExpandedLocal.rep

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	3.34	2.49	3.34	4.83	3.34	8.05	3.35	10.28	3.35
15.53	3.35	21.22	3.35	38.63	3.37	55.79	3.37	69.2	3.38
85.28	3.37	87.26	3.36	87.63	3.36	96.04	3.33	98.74	3.32
99.78	3.31	117.48	3.24	130.36	3.18	159	3.05	160.94	3.04
165.73	3.03	181.8	2.99	191.52	2.98	203.24	2.96	220.44	2.95
222.1	2.95	230.73	2.93	246.18	2.91	252.67	2.85	268.97	2.71
283.25	2.59	286.85	2.55	302.47	2.49	313.83	2.44	322.27	2.4
326.63	2.39	344.41	2.28	353.26	2.23	353.31	2.23	371.09	2.09
374.21	2.06	374.99	2.05	375.56	2.05	405.56	1.82	410.67	1.77
428.86	1.64	436.14	1.59	439.09	1.56	445.94	1.53	460.51	1.45
466.72	1.42	481.95	1.33	494.43	1.26	497.3	1.23	497.55	1.23
499.15	1.22	503.39	1.2	504.14	1.2	517.68	1.13	527.88	1.07
535.45	1.03	558.45	.9	587.63	.71	588.75	.7	589.03	.7
589.15	.7	589.41	.7	619.61	.5	642.05	.42	650.19	.41
661.15	.39	666.73	.39	674.9	.38	676.11	.38	680.77	.37
686.01	.37	695.34	.36	711.35	.36	732.88	.35	739.22	.35
741.92	.34	748.64	.34	764.59	.33	772.5	.4	791.65	.86
803	.19	806.72	.13	820.93	.38	833.48	.22	838.38	.25
846.03	-.09	857.98	-.64	867.98	-.64	878.3	-.05	893.37	-.36
909.69	-.01	910.04	-.01	937.81	.11	955.26	-.01	965.58	-.01
983.04	.11	1008.43	.19	1017.95	-.14	1018.14	-.14	1035.41	-.05
1041.75	.38	1063.18	-.13	1078.62	.6	1097.15	.44	1110.79	.31
1121.3	.32	1140.98	.34	1154.95	.35	1163.99	.36	1187.16	.38
1188.68	.38	1206.67	.39	1225.65	.4	1241.99	.41	1249.35	.41
1254.74	.42	1274.03	.43	1292.03	.43	1296.35	.44	1313.39	.45
1328.65	.47	1334.72	.47	1343.01	.48	1367.04	.5	1377.4	.51
1402.57	.55	1420.08	.57	1437.28	.58	1438.09	.59	1440.71	.59
1444.02	.59	1462.76	.63	1476.48	.61	1505.45	.61	1517.2	.61
1545.03	.59	1547.21	.59	1548.13	.59	1550.4	.59	1562.79	.6
1590.81	.61	1600.53	.62	1624.31	.65	1633.49	.66	1646.04	.68
1649.83	.68	1653.53	.69	1674.65	.73	1682.13	.74	1687.5	.75
1714.46	.79	1729.43	.81	1754.26	.85	1763.78	.86	1776.72	.88
1794.07	.88	1812.2	.92	1824.01	.94	1833.88	.99	1871.31	1.07
1873.68	1.08	1886.3	1.12	1913.49	1.2	1918.6	1.21	1927.02	1.24
1932.62	1.25	1936.9	1.27	1944.72	1.29	1953.19	1.31	1962.02	1.32
1992.51	1.38	2000.65	1.4	2003.32	1.39	2031.84	1.36	2039.28	1.38
2061.6	1.5	2071.16	1.55	2077.91	1.57	2090.27	1.59	2110.48	1.63
2116.55	1.66	2149.81	1.81	2155.18	1.83	2186.31	1.94	2189.13	1.95
2193.81	1.96	2215.41	2.02	2228.45	2.05	2232.44	2.07	2253.52	2.09
2267.77	2.1	2271.07	2.11	2307.1	2.26	2309.7	2.27	2311.01	2.27
2346.42	2.39	2346.64	2.39	2349.84	2.4	2388.97	2.57	2416.76	2.67
2422.62	2.69	2431.54	2.72	2435.71	2.74	2444.11	2.77	2445.05	2.77
2472.96	2.87	2484.65	2.9	2497.01	2.94	2500.23	2.95	2513.59	2.97
2524.55	2.99	2553.69	3.04	2557.96	3.04	2560.42	3.05	2579.36	3.09
2580.01	3.09	2591.38	3.11	2593.78	3.12	2616.17	3.16	2685.12	3.32
2743.26	3.48	2809.82	3.65	2906.51	3.96	2922.39	4.01	2934.52	4.05

ExpandedLocal.rep

3025.17	4.35	3059.23	4.46	3069.75	4.5	3183.93	4.85	3233	4.97
3275.88	5.08	3308.63	5.16	3346.58	5.25	3396.25	5.37	3433.34	5.45
3553.32	5.71	3558.04	5.72	3559.5	5.72	3682.74	5.97		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	791.65	.04	1078.62	.06

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	791.65	1078.62		495	495	495		.1	.3

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 1767

INPUT

Description: Interpolated Section

Station		Elevation Data		num= 244							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	2.83	2.02	2.83	3.92	2.83	6.54	2.83	8.36	2.84		
12.62	2.84	17.24	2.84	31.39	2.88	45.33	2.9	56.24	2.92		
69.3	2.94	70.91	2.93	71.21	2.93	78.04	2.91	80.24	2.91		
81.09	2.9	95.47	2.85	105.93	2.81	129.21	2.72	130.78	2.71		
134.67	2.7	147.73	2.69	155.63	2.69	165.16	2.69	179.14	2.7		
180.48	2.7	187.5	2.69	200.05	2.68	205.33	2.62	218.57	2.45		
230.18	2.31	233.1	2.28	245.79	2.21	255.02	2.16	261.88	2.12		
265.42	2.11	279.87	1.99	287.07	1.93	287.11	1.93	301.55	1.77		
304.09	1.74	304.72	1.73	305.19	1.73	329.57	1.46	333.72	1.41		
348.5	1.26	354.42	1.21	356.81	1.18	362.38	1.15	374.22	1.08		
379.27	1.05	391.64	.98	401.78	.91	404.11	.89	404.32	.89		
405.62	.89	409.06	.87	409.67	.87	420.67	.81	428.96	.77		
435.12	.74	453.81	.65	477.52	.51	478.43	.51	478.66	.51		
478.75	.51	478.97	.51	503.51	.39	521.74	.34	528.36	.33		
537.26	.32	541.8	.31	548.44	.3	549.42	.3	553.21	.3		
557.47	.3	565.05	.29	578.05	.28	595.56	.28	600.71	.27		
602.9	.27	608.36	.27	621.32	.26	627.75	.35	643.31	.71		
652.75	.15	655.85	.04	667.66	.26	678.1	.26	682.18	.3		
688.54	-.1	698.48	-.74	703.48	-.74	715.13	-.04	732.17	-.5		
750.61	-.13	751	-.12	782.39	.03	802.12	-.12	813.78	-.12		
833.5	.03	862.2	.13	872.96	-.29	873.18	-.29	892.69	-.25		
899.86	.27	924.07	-.44	941.53	.41	962.38	.34	977.74	.29		
989.58	.3	1011.74	.32	1027.46	.33	1037.63	.34	1063.72	.37		
1065.44	.37	1085.69	.38	1107.06	.39	1125.46	.4	1133.74	.4		
1139.8	.41	1161.53	.42	1181.8	.42	1186.65	.43	1205.84	.44		

ExpandedLocal.rep

1223.02	.46	1229.85	.46	1239.18	.47	1266.24	.5	1277.9	.51
1306.24	.54	1325.96	.56	1345.32	.58	1346.23	.58	1349.18	.58
1352.91	.59	1374.01	.63	1389.46	.6	1422.07	.58	1435.3	.58
1466.63	.54	1469.08	.54	1470.12	.54	1472.68	.54	1486.63	.54
1518.18	.54	1529.11	.55	1555.89	.57	1566.23	.57	1580.35	.59
1584.62	.59	1588.78	.6	1612.57	.63	1620.99	.63	1627.03	.64
1657.38	.68	1674.23	.69	1702.2	.72	1712.91	.73	1727.48	.74
1747.01	.73	1767.42	.76	1780.73	.79	1791.83	.84	1833.97	.93
1836.65	.93	1850.85	.97	1881.46	1.06	1887.22	1.07	1896.7	1.1
1903	1.12	1907.82	1.13	1916.62	1.15	1926.16	1.18	1936.1	1.19
1970.43	1.25	1979.59	1.27	1982.6	1.26	2014.7	1.22	2023.09	1.24
2048.22	1.38	2058.98	1.44	2066.58	1.46	2080.49	1.49	2103.25	1.54
2110.07	1.58	2147.52	1.76	2153.57	1.79	2188.61	1.92	2191.79	1.93
2197.06	1.95	2221.38	2.02	2236.06	2.06	2240.55	2.08	2264.28	2.11
2280.33	2.13	2284.05	2.14	2324.6	2.33	2327.54	2.34	2329.01	2.35
2368.88	2.5	2369.12	2.5	2372.72	2.51	2416.78	2.72	2448.07	2.85
2454.66	2.88	2464.71	2.92	2469.4	2.94	2478.86	2.97	2479.92	2.98
2511.35	3.1	2524.51	3.14	2538.42	3.18	2542.04	3.19	2557.08	3.23
2569.42	3.24	2602.23	3.31	2607.04	3.31	2609.8	3.32	2631.13	3.36
2631.87	3.36	2644.66	3.39	2647.37	3.4	2672.57	3.45	2750.2	3.63
2815.66	3.79	2890.6	3.97	2999.45	4.27	3017.33	4.32	3030.99	4.36
3133.04	4.64	3171.39	4.75	3183.24	4.78	3311.78	5.12	3367.03	5.25
3415.31	5.37	3452.18	5.46	3494.9	5.56	3550.82	5.69	3592.58	5.79
3727.66	6.1	3732.97	6.11	3734.62	6.11	3873.37	6.41		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	643.31	.04	941.53	.06

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
643.31	941.53	494	494	494	.1	.3	

CROSS SECTION

RIVER: Doubloon  
 REACH: to Marsh RS: 1273

INPUT

Description:

Station Elevation Data num= 126

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	2.3123	018066	2.31813	26685	2.33253	31787	2.5154	78784	2.504
61.73901	2.492103	6189	2.368137	8298	2.45153	9199	2.451179	3508	1.999
204.22	1.825220	8718	1.639	232.019	1.453256	7668	1.041274	5349	.801
309.136	.571311	0869	.549312	0889	.546	315.207	.535367	4109	.321

ExpandedLocal.rep

416.8679	.234422.7329	.224428.9238	.221478.0549	.19494.9709	.56
504.9709	-.04525.9709	.36538.9709	-.84551.9709	-.04570.9709	-.64
591.9709	-.24626.9709	-.06648.9709	-.24661.9709	-.24683.9709	-.06
715.9709	.06727.9709	-.44749.9709	-.44757.9709	.16784.9709	-.76
804.432	.222827.6189	.247857.8579	.273 882.491	.3 911.283	.327
940.287	.352 964.709	.3671008.926	.3881018.135	.3921024.873	.395
1071.56	.4141117.393	.4471124.986	.4511135.362	.461178.411	.502
1209.913	.541231.837	.561261.797	.5781285.263	.6221302.434	.579
1338.688	.5551353.405	.5421388.233	.4921390.961	.4881392.114	.487
1394.954	.4871445.539	.4711487.474	.4841498.965	.4881514.668	.499
1524.04	.506 1550.48	.5251559.842	.5311600.306	.5681619.041	.575
1650.131	.5951678.239	.6071699.957	.5761737.438	.6351749.782	.69
1796.637	.7791799.608	.7791815.402	.8271849.434	.921855.835	.934
1888.524	1.0171899.129	1.0471910.178	1.0581948.349	1.1241958.533	1.141
1997.569	1.0712006.889	1.099 2046.79	1.3382055.244	1.359 2096.01	1.45
2103.599	1.5012145.231	1.7162151.954	1.752194.451	1.9132200.309	1.939
2243.671	2.0762248.664	2.0962292.892	2.153 2297.02	2.1692342.112	2.401
2345.375	2.4142391.332	2.6012391.605	2.6022395.609	2.6212444.594	2.874
2486.71	3.0612497.878	3.1152513.615	3.1782514.792	3.1832549.727	3.327
2564.359	3.3722583.855	3.4422600.578	3.4842614.298	3.4992650.765	3.58
2656.121	3.5852682.901	3.6372697.943	3.6682700.952	3.6762728.971	3.73
4064	6.86				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06494.9709	.04	804.432	.06	

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	494.9709	804.432		0	0	0	.1		.3

CROSS SECTION

RIVER: Gum Bayou

REACH: Upper

RS: 16105

INPUT

Description: Data from Land Survey

Station Elevation Data		num=		300					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3358	15.646	-3341.8	15.49	-3340.75	15.483	-3339.85	15.471	-3277.59	14.308
-3252.91	13.748	-3247.73	13.658	-3241.77	13.569	-3224.47	13.211	-3209.44	13.365
-3201.22	13.451	-3167.81	14.195	-3134.72	14.815	-3122.5	14.757	-3108.2	14.589
-3091.73	14.671	-3079.03	14.564	-3041.72	13.552	-3023.6	13.037	-3007.13	12.965
-2992.1	12.885	-2968.66	12.536	-2948.63	12.43	-2941.7	12.44	-2905.16	12.905
-2895.42	13.097	-2891.68	13.191	-2848.98	14.142	-2841.67	14.268	-2818.22	14.615

ExpandedLocal.rep

-2805.87	14.76-2791.66	14.749-2782.62	14.739-2774.76	14.752-2741.65	14.31
-2736.1	14.159-2723.33	13.768-2666.34	11.875-2644.35	12.002-2641.62	12.069
-2600.88	13.196-2591.61	13.373-2557.41	13.958-2550.06	14.031-2513.95	14.216
-2507.17	14.22-2491.58	14.242 -2468	14.237-2441.57	14.261-2436.25	14.252
-2427.01	14.254 -2396.1	14.241-2387.23	14.237-2383.98	14.241-2338.63	14.204
-2317.19	14.178-2300.12	14.138-2285.94	13.942-2258.19	12.973-2223.79	11.657
-2216.26	11.538-2200.44	11.402-2180.57	11.419 -2177.1	11.436-2174.33	11.429
-2149.98	11.785 -2130.4	12.025-2127.89	12.066-2101.12	12.662-2090.47	12.753
-2060.35	13.221-2048.54	13.318-2037.01	13.415-2022.52	13.497-2006.61	13.571
-1969.83	13.667-1966.96	13.673-1964.67	13.672-1943.61	13.653-1891.62	13.439
-1873.57	13.424-1838.88	13.364-1831.17	13.352-1822.24	13.326-1811.78	13.305
-1765.98	13.203-1756.83	13.182-1755.02	13.182-1739.13	13.107-1711.19	12.984
-1706.41	12.964-1686.78	12.912-1671.16	12.874-1663.43	12.861-1624.27	13.001
-1601.04	13.039-1593.39	13.128 -1587.3	13.147-1570.04	13.163-1508.57	13.233
-1503.43	13.242-1499.99	13.248-1495.67	13.255 -1461.5	13.19-1429.95	13.212
-1404.1	13.231-1377.64	13.178 -1359.9	13.189-1337.62	13.248-1336.56	13.247
-1328.28	13.229-1293.78	13.148-1289.86	13.126-1284.93	13.101-1266.51	12.926
-1251.85	12.745-1207.45	12.588-1179.56	12.293-1173.12	12.324-1167.99	12.274
-1160.34	12.286-1103.07	11.546-1084.13	11.711-1079.72	11.848-1057.41	11.965
-1021.51	12.156-1009.68	12.179-1000.26	12.232-986.335	12.271-968.828	12.31
-962.987	12.308-958.337	12.305-917.429	12.145-916.406	12.141 -916.29	12.14
-915.7	12.136-905.893	12.055-874.817	11.809-845.006	11.527-798.973	11.251
-797.651	11.243 -797.2	11.241-796.837	11.24-762.717	11.061-734.493	10.989
-725.84	10.988-697.739	10.862-678.173	10.804-643.319	10.602-635.399	10.564
-609.805	10.312-604.736	10.279 -582.84	10.145-566.153	10.082-559.007	10.045
-547.461	10.003 -527.57	9.981-511.341	9.935-488.987	9.806-462.785	9.621
-439.841	9.453-411.821	9.217-392.175	8.708-373.238	8.909-368.341	8.985
-360.43	9.22-340.746	9.3-334.655	9.057-296.842	8.869-292.801	8.901
-257.489	8.945 -245.46	8.853-235.742	8.82-210.976	8.64-180.323	8.708
-177.676	8.702 -141.74	9.07-134.488	9.091-111.054	8.829-106.176	8.753
-103.157	8.735 -82.343	8.539 -64.574	8.275 -48.711	8.038 -34.676	7.789
0	7.6 26	7.8 51	6.9 72	6.6 95	6.2
100	6.1 105	6 111	6 118	6.7 141	7.3
164	7.4 195.011	6.307 202.829	6.308 205.508	6.309 237.313	6.315
263.008	6.323 271.796	6.327 282.674	6.335 306.28	6.361 325.352	6.414
359.84	6.588 370.489	6.646 387.696	6.769 394.322	6.819 398.423	7.007
418.155	7.389 437.006	8.516 441.989	8.868 475.589	12.513 489.655	14.676
514.172	16.33 528.482	16.947 552.755	17.989 574.728	18.626 591.338	19.018
608.821	19.218 637.071	19.474 668.504	19.965 699.415	19.928 704.154	19.967
707.087	20.076 727.987	21.083 745.67	21.342 751.821	21.506 761.759	21.586
784.253	21.657 799.487	21.571 822.836	21.477 837.868	21.539 861.419	21.807
867.333	21.81 875.262	21.89 886.447	21.831 909.746	21.376 938.585	21.753
942.486	21.802 948.79	21.847 970.462	22.017 977.168	22.073 999.927	22.347
1015.751	22.4941037.819	22.7941038.056	22.7951056.887	23.081074.431	23.307
1123.174	23.9531124.739	23.9691156.317	24.3451175.761	24.55 1189.46	24.689
1229.005	25.0171255.747	25.2071269.691	25.264 1314.51	25.3411322.033	25.355
1332.053	25.326 1388.32	25.2861414.642	25.2591421.463	25.2311443.632	25.103
1454.606	25.0211486.627	24.6841510.609	24.328 1546.62	23.9461554.036	23.867

ExpandedLocal.rep

1585.305	23.4111587.179	23.3881588.584	23.371598.388	23.2491617.574	23.015
1620.323	22.9861683.273	22.5581719.752	22.3421733.535	22.3011752.896	22.25
1778.73	22.2551788.961	22.2831819.182	22.2461819.889	22.2421829.749	22.217
1849.497	22.1861852.326	22.1851878.487	22.2131889.768	22.2461907.843	22.338
1943.318	22.5361951.755	22.5951965.458	22.8851984.899	22.9882001.871	23.955
2051.185	27.3182081.419	24.592084.328	24.339 2088.21	24.6552131.102	26.488

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3358	.1	26	.05	141	.1

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	26	141		858	858	.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 15247

INPUT

Description: Data from Land Survey

Station Elevation Data num= 350

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3667	14.223-3642.99	14.277-3636.97	14.271-3633.69	14.275-3607.27	14.294				
-3599.25	14.315-3577.57	14.245-3537.88	14.334-3530.37	14.386-3508.93	14.368				
-3495.93	14.353-3470.76	14.104-3461.49	14.042-3458.78	14.035-3441.74	13.928				
-3427.06	13.836 -3404.5	13.853-3392.62	13.864-3369.71	14.084-3333.82	14.81				
-3323.74	14.962-3300.07	14.235 -3289.3	14.068-3265.73	14.158-3254.86	14.097				
-3221.75	14.069-3219.39	14.066-3210.76	14.065-3151.55	14.082-3138.47	14.03				
-3117.99	13.922-3096.43	13.823-3082.67	13.774-3065.11	13.764-3048.23	13.745				
-3015.54	13.774-3012.89	13.774-3010.07	13.772-2953.88	13.762-2914.38	13.788				
-2910.48	13.791-2908.47	13.793-2902.16	13.825 -2841.6	14.057-2813.22	14.058				
-2805.2	14.056 -2804.1	14.056-2797.48	14.035 -2779.5	13.948-2762.56	13.806				
-2734.54	13.583-2705.69	13.42-2681.99	13.288-2645.35	13.192-2635.18	13.156				
-2631.89	13.153-2619.19	13.173-2589.08	13.283 -2571.4	13.312-2533.48	13.499				
-2516.35	13.576-2497.22	13.601-2479.99	13.627-2459.67	13.56-2443.62	13.567				
-2430.69	13.555-2417.17	13.538-2385.86	13.578-2356.35	13.322-2321.12	13.056				
-2298.16	12.895-2265.05	12.16-2261.79	12.116-2260.77	12.127-2190.73	13.493				
-2189.06	13.526-2189.04	13.526-2188.99	13.526-2164.44	13.568-2119.45	13.382				
-2116.33	13.368-2115.23	13.363-2112.93	13.358-2090.63	13.316-2079.97	13.313				
-2058.9	13.389-2027.63	13.456-2007.24	13.411-1998.28	13.411 -1960.8	13.293				
-1943.01	13.296-1934.51	13.294-1918.41	13.264-1884.74	13.219-1868.59	13.192				
-1862.27	13.183-1842.09	13.185-1828.51	13.169-1806.27	13.216-1794.76	13.233				
-1761.32	13.316-1760.55	13.315-1727.25	13.429-1715.58	13.435-1693.49	13.45				
-1685.47	13.398-1669.26	13.413-1625.98	13.388-1619.16	13.379-1592.23	13.324				

ExpandedLocal.rep

-1570.3	13.179-1558.47	13.097-1543.12	12.969-1524.72	12.643-1494.58	11.963
-1490.96	11.902-1487.27	11.938-1479.64	12.053 -1434.4	12.746-1423.45	12.911
-1407.22	12.969 -1389.7	13.086 -1361	13.074-1355.94	13.071-1352.86	13.062
-1340.11	13.037-1305.28	12.968-1288.44	12.929-1271.32	12.899-1254.68	12.88
-1227.42	12.869-1216.96	12.85-1187.17	12.737-1173.56	12.732-1146.05	12.726
-1119.66	12.663-1108.24	12.635-1085.91	12.54-1068.17	12.488-1052.15	12.426
-1026.71	12.4-1004.79	12.349-977.836	12.299-950.892	12.278-947.724	12.283
-921.528	12.273-890.813	12.272-883.383	12.271-863.634	12.284-849.628	12.377
-839.734	12.393 -782.23	12.453-782.119	12.453-782.106	12.453 -782	12.453
-754.916	12.476-754.356	12.477 -748.47	12.488-743.486	12.497-697.907	12.688
-682.16	12.706-656.677	12.679-638.714	12.67 -615.85	12.713 -599.9	12.71
-569.867	12.848-522.273	13.158-516.384	13.171-483.459	13.161-483.229	13.161
-481.882	13.153-450.074	12.965-444.645	12.921-416.919	12.652-396.248	12.441
-367.017	12.15-350.608	11.972-338.375	11.846-304.524	11.393-284.298	11.226
-262.207	11.026-251.731	10.932-251.105	10.926-250.706	10.921-248.905	10.903
-184.571	10.077-148.753	10.845-123.605	11.398 -109.3	11.527 -84.769	11.532
-57.243	11.6 -51.502	11.609 -23.841	11.53 -18.235	11.519 0	6.5
10	6.4 32	6.5 39	5.5 50	6.1 58	6.2
73	6.1 86	6.5 107	6.6 126	6.9 137	7.1
144	6.3 151	6.2 163	6.9 178	6.2 186	6.8
193	7.1 200	5.6 207	5.7 214	6.6 224	6.8
246	6.8 267.52	7.231 279.733	6.65 288.838	6.502 312.56	6.381
334.276	6.385 345.386	6.344 367.654	6.349 388.427	6.353 411.038	6.358
430.091	6.306 443.865	6.311 458.579	6.316 476.691	6.322 492.527	6.328
509.517	6.334 526.476	6.34 542.343	6.347 560.424	6.353 575.169	6.363
594.372	6.369 607.996	6.422 634.676	6.427 640.822	6.46 652.524	6.596
673.648	6.59 694.291	6.76 727.499	7.834 739.301	8.096 751.499	8.337
772.127	8.664 784.876	8.504 825.832	9.462 843.18	9.865 870.606	10.556
899.906	11.443 906.732	11.665 936.258	12.65 940.619	12.827 985.84	14.353
1032.991	16.6831034.737	16.7571065.612	17.6851067.563	17.7431068.588	17.792
1100.389	18.6431101.966	18.6871133.216	19.4441135.343	19.4791166.042	20.109
1168.721	20.1531198.868	20.6441228.035	21.0491232.371	21.0871237.857	21.123
1265.787	21.1371279.935	20.9791299.907	21.2451317.481	20.4681346.432	19.589
1384.434	19.6481402.265	20.2641414.291	20.6111436.385	20.9521450.188	21.12
1470.504	21.311476.729	21.3351498.531	21.4361524.127	21.5311538.743	21.623
1556.353	21.7561602.567	22.3131609.436	22.3891618.029	22.4611654.433	22.786
1668.076	22.8731698.076	23.123 1709.34	23.2221737.527	23.5931763.021	23.925
1777.579	24.0841795.225	24.289 1841.34	24.7041845.818	24.7421848.307	24.754
1857.025	24.8031879.938	24.9071889.094	24.9171914.057	24.921943.456	25.299
1954.472	25.3441976.523	25.2751981.014	25.271982.296	25.2571984.603	25.198
2016.415	24.573 2045.35	24.1622084.654	23.579 2113.72	22.822118.774	22.754
2140.261	22.5742152.893	22.5272162.365	22.4982187.013	22.4032205.502	22.346
2240.809	22.1382255.252	22.0552272.968	22.0512289.371	22.092305.962	22.166
2335.016	22.3772349.398	22.483 2357.61	22.5432379.133	22.598 2391.73	22.682
2405.674	22.782425.849	22.982436.268	23.0852474.216	23.4992494.088	23.726
2520.579	24.036 2533.93	24.1852562.327	24.3332574.012	24.3482591.464	24.37
2596.446	24.3622626.312	24.262659.885	24.1532664.685	24.1442675.162	24.628
2693.51	25.313 2724.17	26.7982748.675	25.9422767.044	24.852791.276	26.7



ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -3667 .1 193 .05 214 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 193 214 42 42 42 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -3667 18.28 10.5 F  
 215.362791.276 10.5 F

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 15205

INPUT

Description: Data from Land Survey

Station Elevation Data num= 347  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -3667 14.223-3642.99 14.277-3636.97 14.271-3633.69 14.275-3607.27 14.294  
 -3599.25 14.315-3577.57 14.245-3537.88 14.334-3530.37 14.386-3508.93 14.368  
 -3495.93 14.353-3470.76 14.104-3461.49 14.042-3458.78 14.035-3441.74 13.928  
 -3427.06 13.836 -3404.5 13.853-3392.62 13.864-3369.71 14.084-3333.82 14.81  
 -3323.74 14.962-3300.07 14.235 -3289.3 14.068-3265.73 14.158-3254.86 14.097  
 -3221.75 14.069-3219.39 14.066-3210.76 14.065-3151.55 14.082-3138.47 14.03  
 -3117.99 13.922-3096.43 13.823-3082.67 13.774-3065.11 13.764-3048.23 13.745  
 -3015.54 13.774-3012.89 13.774-3010.07 13.772-2953.88 13.762-2914.38 13.788  
 -2910.48 13.791-2908.47 13.793-2902.16 13.825 -2841.6 14.057-2813.22 14.058  
 -2805.2 14.056 -2804.1 14.056-2797.48 14.035 -2779.5 13.948-2762.56 13.806  
 -2734.54 13.583-2705.69 13.42-2681.99 13.288-2645.35 13.192-2635.18 13.156  
 -2631.89 13.153-2619.19 13.173-2589.08 13.283 -2571.4 13.312-2533.48 13.499  
 -2516.35 13.576-2497.22 13.601-2479.99 13.627-2459.67 13.56-2443.62 13.567  
 -2430.69 13.555-2417.17 13.538-2385.86 13.578-2356.35 13.322-2321.12 13.056  
 -2298.16 12.895-2265.05 12.16-2261.79 12.116-2260.77 12.127-2190.73 13.493  
 -2189.06 13.526-2189.04 13.526-2188.99 13.526-2164.44 13.568-2119.45 13.382  
 -2116.33 13.368-2115.23 13.363-2112.93 13.358-2090.63 13.316-2079.97 13.313  
 -2058.9 13.389-2027.63 13.456-2007.24 13.411-1998.28 13.411 -1960.8 13.293  
 -1943.01 13.296-1934.51 13.294-1918.41 13.264-1884.74 13.219-1868.59 13.192  
 -1862.27 13.183-1842.09 13.185-1828.51 13.169-1806.27 13.216-1794.76 13.233  
 -1761.32 13.316-1760.55 13.315-1727.25 13.429-1715.58 13.435-1693.49 13.45  
 -1685.47 13.398-1669.26 13.413-1625.98 13.388-1619.16 13.379-1592.23 13.324  
 -1570.3 13.179-1558.47 13.097-1543.12 12.969-1524.72 12.643-1494.58 11.963  
 -1490.96 11.902-1487.27 11.938-1479.64 12.053 -1434.4 12.746-1423.45 12.911

ExpandedLocal.rep

-1407.22	12.969	-1389.7	13.086	-1361	13.074-1355.94	13.071-1352.86	13.062		
-1340.11	13.037	-1305.28	12.968	-1288.44	12.929-1271.32	12.899-1254.68	12.88		
-1227.42	12.869	-1216.96	12.85	-1187.17	12.737-1173.56	12.732-1146.05	12.726		
-1119.66	12.663	-1108.24	12.635	-1085.91	12.54-1068.17	12.488-1052.15	12.426		
-1026.71	12.4	-1004.79	12.349	-977.836	12.299-950.892	12.278-947.724	12.283		
-921.528	12.273	-890.813	12.272	-883.383	12.271-863.634	12.284-849.628	12.377		
-839.734	12.393	-782.23	12.453	-782.119	12.453-782.106	12.453	-782	12.453	
-754.916	12.476	-754.356	12.477	-748.47	12.488-743.486	12.497-697.907	12.688		
-682.16	12.706	-656.677	12.679	-638.714	12.67	-615.85	12.713	-599.9	12.71
-569.867	12.848	-522.273	13.158	-516.384	13.171-483.459	13.161-483.229	13.161		
-481.882	13.153	-450.074	12.965	-444.645	12.921-416.919	12.652-396.248	12.441		
-367.017	12.15	-350.608	11.972	-338.375	11.846-304.524	11.393-284.298	11.226		
-262.207	11.026	-251.731	10.932	-251.105	10.926-250.706	10.921-248.905	10.903		
-184.571	10.077	-148.753	10.845	-123.605	11.398	-109.3	11.527	-84.769	11.532
-57.243	11.6	-51.502	11.609	-23.841	11.53	-18.235	11.519	0	8.9
29	9	53	8.7	74	8.4	81	6.8	84	6.5
91	5.5	99	6.4	103	7.6	127	8.7	148	8.8
164	7.9	169	6.4	174	6.3	180	3.3	188	6.6
190	7.1	198	8.4	220	8.9	226	8.7	286	8.6
288.838	6.502	312.56	6.381	334.276	6.385	345.386	6.344	367.654	6.349
388.427	6.353	411.038	6.358	430.091	6.306	443.865	6.311	458.579	6.316
476.691	6.322	492.527	6.328	509.517	6.334	526.476	6.34	542.343	6.347
560.424	6.353	575.169	6.363	594.372	6.369	607.996	6.422	634.676	6.427
640.822	6.46	652.524	6.596	673.648	6.59	694.291	6.76	727.499	7.834
739.301	8.096	751.499	8.337	772.127	8.664	784.876	8.504	825.832	9.462
843.18	9.865	870.606	10.556	899.906	11.443	906.732	11.665	936.258	12.65
940.619	12.827	985.84	14.353	1032.991	16.683	1034.737	16.757	1065.612	17.685
1067.563	17.743	1068.588	17.792	1100.389	18.643	1101.966	18.687	1133.216	19.444
1135.343	19.479	1166.042	20.109	1168.721	20.153	1198.868	20.644	1228.035	21.049
1232.371	21.087	1237.857	21.123	1265.787	21.137	1279.935	20.979	1299.907	21.245
1317.481	20.468	1346.432	19.589	1384.434	19.648	1402.265	20.264	1414.291	20.611
1436.385	20.952	1450.188	21.121	1470.504	21.311	1476.729	21.335	1498.531	21.436
1524.127	21.531	1538.743	21.623	1556.353	21.756	1602.567	22.313	1609.436	22.389
1618.029	22.461	1654.433	22.786	1668.076	22.873	1698.076	23.123	1709.34	23.222
1737.527	23.593	1763.021	23.925	1777.579	24.084	1795.225	24.289	1841.34	24.704
1845.818	24.742	1848.307	24.754	1857.025	24.803	1879.938	24.907	1889.094	24.917
1914.057	24.921	1943.456	25.299	1954.472	25.344	1976.523	25.275	1981.014	25.27
1982.296	25.257	1984.603	25.198	2016.415	24.573	2045.35	24.162	2084.654	23.579
2113.72	22.822	2118.774	22.754	2140.261	22.574	2152.893	22.527	2162.365	22.498
2187.013	22.403	2205.502	22.346	2240.809	22.138	2255.252	22.055	2272.968	22.051
2289.371	22.092	2305.962	22.166	2335.016	22.377	2349.398	22.483	2357.61	22.543
2379.133	22.598	2391.73	22.682	2405.674	22.782	2425.849	22.982	2436.268	23.085
2474.216	23.499	2494.088	23.726	2520.579	24.036	2533.93	24.185	2562.327	24.333
2574.012	24.348	2591.464	24.372	2596.446	24.362	2626.312	24.262	2659.885	24.153
2664.685	24.144	2675.162	24.628	2693.51	25.313	2724.17	26.798	2748.675	25.942
2767.044	24.852	2791.276	26.7						

Manning's n Values

num= 3

ExpandedLocal.rep

Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -3667 .1 74 .05 220 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
           74 220           46 46 46           .1 .3  
 Ineffective Flow num= 3  
   Sta L Sta R Elev Permanent  
 -217.61 77.46 10.5 F  
 102.51 163.46 10.5 F  
 190.54 869.39 10.5 F

CULVERT

RIVER: Gum Bayou  
 REACH: Upper RS: 15182

INPUT

Description: Gum #49  
 Distance from Upstream XS = 2.5  
 Deck/Roadway Width = 41  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 11  
   Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 -11.79 10.6 0 10.6 35 10.5  
   60 10.9 91 11.1 137 11.1  
   186 11.1 238 10.7 289 10.5  
   344 11 886.28 11

Upstream Bridge Cross Section Data

Station Elevation Data num= 347  
   Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -3667 14.223-3642.99 14.277-3636.97 14.271-3633.69 14.275-3607.27 14.294  
 -3599.25 14.315-3577.57 14.245-3537.88 14.334-3530.37 14.386-3508.93 14.368  
 -3495.93 14.353-3470.76 14.104-3461.49 14.042-3458.78 14.035-3441.74 13.928  
 -3427.06 13.836 -3404.5 13.853-3392.62 13.864-3369.71 14.084-3333.82 14.81  
 -3323.74 14.962-3300.07 14.235 -3289.3 14.068-3265.73 14.158-3254.86 14.097  
 -3221.75 14.069-3219.39 14.066-3210.76 14.065-3151.55 14.082-3138.47 14.03  
 -3117.99 13.922-3096.43 13.823-3082.67 13.774-3065.11 13.764-3048.23 13.745  
 -3015.54 13.774-3012.89 13.774-3010.07 13.772-2953.88 13.762-2914.38 13.788  
 -2910.48 13.791-2908.47 13.793-2902.16 13.825 -2841.6 14.057-2813.22 14.058  
 -2805.2 14.056 -2804.1 14.056-2797.48 14.035 -2779.5 13.948-2762.56 13.806  
 -2734.54 13.583-2705.69 13.42-2681.99 13.288-2645.35 13.192-2635.18 13.156  
 -2631.89 13.153-2619.19 13.173-2589.08 13.283 -2571.4 13.312-2533.48 13.499

ExpandedLocal.rep

-2516.35	13.576-2497.22	13.601-2479.99	13.627-2459.67	13.56-2443.62	13.567
-2430.69	13.555-2417.17	13.538-2385.86	13.578-2356.35	13.322-2321.12	13.056
-2298.16	12.895-2265.05	12.16-2261.79	12.116-2260.77	12.127-2190.73	13.493
-2189.06	13.526-2189.04	13.526-2188.99	13.526-2164.44	13.568-2119.45	13.382
-2116.33	13.368-2115.23	13.363-2112.93	13.358-2090.63	13.316-2079.97	13.313
-2058.9	13.389-2027.63	13.456-2007.24	13.411-1998.28	13.411 -1960.8	13.293
-1943.01	13.296-1934.51	13.294-1918.41	13.264-1884.74	13.219-1868.59	13.192
-1862.27	13.183-1842.09	13.185-1828.51	13.169-1806.27	13.216-1794.76	13.233
-1761.32	13.316-1760.55	13.315-1727.25	13.429-1715.58	13.435-1693.49	13.45
-1685.47	13.398-1669.26	13.413-1625.98	13.388-1619.16	13.379-1592.23	13.324
-1570.3	13.179-1558.47	13.097-1543.12	12.969-1524.72	12.643-1494.58	11.963
-1490.96	11.902-1487.27	11.938-1479.64	12.053 -1434.4	12.746-1423.45	12.911
-1407.22	12.969 -1389.7	13.086 -1361	13.074-1355.94	13.071-1352.86	13.062
-1340.11	13.037-1305.28	12.968-1288.44	12.929-1271.32	12.899-1254.68	12.88
-1227.42	12.869-1216.96	12.85-1187.17	12.737-1173.56	12.732-1146.05	12.726
-1119.66	12.663-1108.24	12.635-1085.91	12.54-1068.17	12.488-1052.15	12.426
-1026.71	12.4-1004.79	12.349-977.836	12.299-950.892	12.278-947.724	12.283
-921.528	12.273-890.813	12.272-883.383	12.271-863.634	12.284-849.628	12.377
-839.734	12.393 -782.23	12.453-782.119	12.453-782.106	12.453 -782	12.453
-754.916	12.476-754.356	12.477 -748.47	12.488-743.486	12.497-697.907	12.688
-682.16	12.706-656.677	12.679-638.714	12.67 -615.85	12.713 -599.9	12.71
-569.867	12.848-522.273	13.158-516.384	13.171-483.459	13.161-483.229	13.161
-481.882	13.153-450.074	12.965-444.645	12.921-416.919	12.652-396.248	12.441
-367.017	12.15-350.608	11.972-338.375	11.846-304.524	11.393-284.298	11.226
-262.207	11.026-251.731	10.932-251.105	10.926-250.706	10.921-248.905	10.903
-184.571	10.077-148.753	10.845-123.605	11.398 -109.3	11.527 -84.769	11.532
-57.243	11.6 -51.502	11.609 -23.841	11.53 -18.235	11.519 0	8.9
29	9 53	8.7 74	8.4 81	6.8 84	6.5
91	5.5 99	6.4 103	7.6 127	8.7 148	8.8
164	7.9 168	6.4 174	6.3 180	3.3 188	6.6
190	7.1 198	8.4 220	8.9 226	8.7 286	8.6
288.838	6.502 312.56	6.381 334.276	6.385 345.386	6.344 367.654	6.349
388.427	6.353 411.038	6.358 430.091	6.306 443.865	6.311 458.579	6.316
476.691	6.322 492.527	6.328 509.517	6.334 526.476	6.34 542.343	6.347
560.424	6.353 575.169	6.363 594.372	6.369 607.996	6.422 634.676	6.427
640.822	6.46 652.524	6.596 673.648	6.59 694.291	6.76 727.499	7.834
739.301	8.096 751.499	8.337 772.127	8.664 784.876	8.504 825.832	9.462
843.18	9.865 870.606	10.556 899.906	11.443 906.732	11.665 936.258	12.65
940.619	12.827 985.84	14.3531032.991	16.6831034.737	16.7571065.612	17.685
1067.563	17.7431068.588	17.7921100.389	18.6431101.966	18.6871133.216	19.444
1135.343	19.4791166.042	20.1091168.721	20.1531198.868	20.6441228.035	21.049
1232.371	21.0871237.857	21.1231265.787	21.1371279.935	20.9791299.907	21.245
1317.481	20.4681346.432	19.5891384.434	19.6481402.265	20.2641414.291	20.611
1436.385	20.9521450.188	21.121470.504	21.311476.729	21.3351498.531	21.436
1524.127	21.5311538.743	21.6231556.353	21.7561602.567	22.3131609.436	22.389
1618.029	22.4611654.433	22.7861668.076	22.8731698.076	23.123 1709.34	23.222
1737.527	23.5931763.021	23.9251777.579	24.0841795.225	24.289 1841.34	24.704
1845.818	24.7421848.307	24.7541857.025	24.8031879.938	24.9071889.094	24.917

ExpandedLocal.rep

1914.057	24.921943.456	25.2991954.472	25.3441976.523	25.2751981.014	25.27
1982.296	25.2571984.603	25.1982016.415	24.573 2045.35	24.1622084.654	23.579
2113.72	22.822118.774	22.7542140.261	22.5742152.893	22.5272162.365	22.498
2187.013	22.4032205.502	22.3462240.809	22.1382255.252	22.0552272.968	22.051
2289.371	22.092305.962	22.1662335.016	22.3772349.398	22.483 2357.61	22.543
2379.133	22.598 2391.73	22.6822405.674	22.782425.849	22.982436.268	23.085
2474.216	23.4992494.088	23.7262520.579	24.036 2533.93	24.1852562.327	24.333
2574.012	24.3482591.464	24.372596.446	24.3622626.312	24.262659.885	24.153
2664.685	24.1442675.162	24.628 2693.51	25.313 2724.17	26.7982748.675	25.942
2767.044	24.852791.276	26.7			

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3667	.1	148	.05	198	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	74	220		.1	.3

Ineffective Flow num= 3

Sta L	Sta R	Elev	Permanent
-217.61	77.46	10.5	F
102.51	163.46	10.5	F
190.54	869.39	10.5	F

Downstream Deck/Roadway Coordinates

num= 13

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-11.79		10.6			0		10.6			19		10.6		
42		10.6			68		10.5			93		10.7		
124		10.8			171		10.9			219		11.1		
271		10.7			323		10.5			378		11		
886.28		11												

Downstream Bridge Cross Section Data

Station Elevation Data num= 346

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3667	14.223-3642.99	14.277-3636.97	14.271-3633.69	14.275-3607.27	14.294				
-3599.25	14.315-3577.57	14.245-3537.88	14.334-3530.37	14.386-3508.93	14.368				
-3495.93	14.353-3470.76	14.104-3461.49	14.042-3458.78	14.035-3441.74	13.928				
-3427.06	13.836 -3404.5	13.853-3392.62	13.864-3369.71	14.084-3333.82	14.81				
-3323.74	14.962-3300.07	14.235 -3289.3	14.068-3265.73	14.158-3254.86	14.097				
-3221.75	14.069-3219.39	14.066-3210.76	14.065-3151.55	14.082-3138.47	14.03				
-3117.99	13.922-3096.43	13.823-3082.67	13.774-3065.11	13.764-3048.23	13.745				
-3015.54	13.774-3012.89	13.774-3010.07	13.772-2953.88	13.762-2914.38	13.788				
-2910.48	13.791-2908.47	13.793-2902.16	13.825 -2841.6	14.057-2813.22	14.058				
-2805.2	14.056 -2804.1	14.056-2797.48	14.035 -2779.5	13.948-2762.56	13.806				

ExpandedLocal.rep

-2734.54	13.583-2705.69	13.42-2681.99	13.288-2645.35	13.192-2635.18	13.156
-2631.89	13.153-2619.19	13.173-2589.08	13.283 -2571.4	13.312-2533.48	13.499
-2516.35	13.576-2497.22	13.601-2479.99	13.627-2459.67	13.56-2443.62	13.567
-2430.69	13.555-2417.17	13.538-2385.86	13.578-2356.35	13.322-2321.12	13.056
-2298.16	12.895-2265.05	12.16-2261.79	12.116-2260.77	12.127-2190.73	13.493
-2189.06	13.526-2189.04	13.526-2188.99	13.526-2164.44	13.568-2119.45	13.382
-2116.33	13.368-2115.23	13.363-2112.93	13.358-2090.63	13.316-2079.97	13.313
-2058.9	13.389-2027.63	13.456-2007.24	13.411-1998.28	13.411 -1960.8	13.293
-1943.01	13.296-1934.51	13.294-1918.41	13.264-1884.74	13.219-1868.59	13.192
-1862.27	13.183-1842.09	13.185-1828.51	13.169-1806.27	13.216-1794.76	13.233
-1761.32	13.316-1760.55	13.315-1727.25	13.429-1715.58	13.435-1693.49	13.45
-1685.47	13.398-1669.26	13.413-1625.98	13.388-1619.16	13.379-1592.23	13.324
-1570.3	13.179-1558.47	13.097-1543.12	12.969-1524.72	12.643-1494.58	11.963
-1490.96	11.902-1487.27	11.938-1479.64	12.053 -1434.4	12.746-1423.45	12.911
-1407.22	12.969 -1389.7	13.086 -1361	13.074-1355.94	13.071-1352.86	13.062
-1340.11	13.037-1305.28	12.968-1288.44	12.929-1271.32	12.899-1254.68	12.88
-1227.42	12.869-1216.96	12.85-1187.17	12.737-1173.56	12.732-1146.05	12.726
-1119.66	12.663-1108.24	12.635-1085.91	12.54-1068.17	12.488-1052.15	12.426
-1026.71	12.4-1004.79	12.349-977.836	12.299-950.892	12.278-947.724	12.283
-921.528	12.273-890.813	12.272-883.383	12.271-863.634	12.284-849.628	12.377
-839.734	12.393 -782.23	12.453-782.119	12.453-782.106	12.453 -782	12.453
-754.916	12.476-754.356	12.477 -748.47	12.488-743.486	12.497-697.907	12.688
-682.16	12.706-656.677	12.679-638.714	12.67 -615.85	12.713 -599.9	12.71
-569.867	12.848-522.273	13.158-516.384	13.171-483.459	13.161-483.229	13.161
-481.882	13.153-450.074	12.965-444.645	12.921-416.919	12.652-396.248	12.441
-367.017	12.15-350.608	11.972-338.375	11.846-304.524	11.393-284.298	11.226
-262.207	11.026-251.731	10.932-251.105	10.926-250.706	10.921-248.905	10.903
-184.571	10.077-148.753	10.845-123.605	11.398 -109.3	11.527 -84.769	11.532
-57.243	11.6 -51.502	11.609 -23.841	11.53 -18.235	11.519 0	9
28	8.6 56	8.8 82	8.7 110	7.3 111	6.4
116	5 122	5.1 130	5 133	6 135	7.8
160	8.9 185	9 202	7.8 204	5.8 214	5.2
222	6.2 228	8.1 240	8.3 268	8.8 301	8.7
312.56	6.381 334.276	6.385 345.386	6.344 367.654	6.349 388.427	6.353
411.038	6.358 430.091	6.306 443.865	6.311 458.579	6.316 476.691	6.322
492.527	6.328 509.517	6.334 526.476	6.34 542.343	6.347 560.424	6.353
575.169	6.363 594.372	6.369 607.996	6.422 634.676	6.427 640.822	6.46
652.524	6.596 673.648	6.59 694.291	6.76 727.499	7.834 739.301	8.096
751.499	8.337 772.127	8.664 784.876	8.504 825.832	9.462 843.18	9.865
870.606	10.556 899.906	11.443 906.732	11.665 936.258	12.65 940.619	12.827
985.84	14.3531032.991	16.6831034.737	16.7571065.612	17.6851067.563	17.743
1068.588	17.7921100.389	18.6431101.966	18.6871133.216	19.4441135.343	19.479
1166.042	20.1091168.721	20.1531198.868	20.6441228.035	21.0491232.371	21.087
1237.857	21.1231265.787	21.1371279.935	20.9791299.907	21.2451317.481	20.468
1346.432	19.5891384.434	19.6481402.265	20.2641414.291	20.6111436.385	20.952
1450.188	21.121470.504	21.311476.729	21.3351498.531	21.4361524.127	21.531
1538.743	21.6231556.353	21.7561602.567	22.3131609.436	22.3891618.029	22.461
1654.433	22.7861668.076	22.8731698.076	23.123 1709.34	23.2221737.527	23.593

ExpandedLocal.rep

1763.021	23.9251777.579	24.0841795.225	24.289	1841.34	24.7041845.818	24.742	
1848.307	24.7541857.025	24.8031879.938	24.907	1889.094	24.9171914.057	24.92	
1943.456	25.2991954.472	25.3441976.523	25.275	1981.014	25.271982.296	25.257	
1984.603	25.1982016.415	24.573	2045.35	24.1622084.654	23.579	2113.72	22.82
2118.774	22.7542140.261	22.5742152.893	22.527	2162.365	22.4982187.013	22.403	
2205.502	22.3462240.809	22.1382255.252	22.055	2272.968	22.0512289.371	22.09	
2305.962	22.1662335.016	22.3772349.398	22.483	2357.61	22.5432379.133	22.598	
2391.73	22.6822405.674	22.782425.849	22.982	2436.268	23.0852474.216	23.499	
2494.088	23.7262520.579	24.036	2533.93	24.1852562.327	24.3332574.012	24.348	
2591.464	24.372596.446	24.3622626.312	24.262	2659.885	24.1532664.685	24.144	
2675.162	24.628	2693.51	25.313	2724.17	26.7982748.675	25.9422767.044	24.85
2791.276	26.7						

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -3667 .1 82 .05 160 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 82 268 .1 .3

Ineffective Flow num= 3  
 Sta L Sta R Elev Permanent  
 -217.61 110.71 10.5 F  
 134.26 202.24 10.5 F  
 223.79 868.81 10.5 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 6

Culvert Name Shape Rise Span  
 Culvert #6 Pipe Arch 4.5 6.08  
 FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
 FHWA Scale # 1 - 90 Degree headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 1  
 2.5 41 .012 .012 0 .7  
 1  
 Upstream Elevation = 6.6  
 Centerline Station = 83  
 Downstream Elevation = 6.2

Centerline Station = 115

Culvert Name      Shape          Rise      Span  
 Culvert #5      Pipe Arch      4.5      6.08  
 FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
 FHWA Scale # 1 - 90 Degree headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n    Bottom n    Depth Blocked    Entrance Loss Coef  
 Exit Loss Coef

                 2.5      41      .012      .012      0                   .7  
 1

Upstream    Elevation = 6.1  
                  Centerline Station = 90.25  
 Downstream Elevation = 5.8  
                  Centerline Station = 123

Culvert Name      Shape          Rise      Span  
 Culvert #4      Pipe Arch      4.5      6.08  
 FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
 FHWA Scale # 1 - 90 Degree headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n    Bottom n    Depth Blocked    Entrance Loss Coef  
 Exit Loss Coef

                 2.5      41      .012      .012      0                   .7  
 1

Upstream    Elevation = 6.3  
                  Centerline Station = 97  
 Downstream Elevation = 6  
                  Centerline Station = 130

Culvert Name      Shape          Rise      Span  
 Culvert #3      Pipe Arch      4.5      6.08  
 FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
 FHWA Scale # 1 - 90 Degree headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n    Bottom n    Depth Blocked    Entrance Loss Coef  
 Exit Loss Coef

                 2.5      41      .012      .012      0                   .7  
 1

Upstream    Elevation = 6.4  
                  Centerline Station = 169  
 Downstream Elevation = 5.7  
                  Centerline Station = 206.5

Culvert Name      Shape          Rise      Span  
 Culvert #2      Pipe Arch      4.5      6.08  
 FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
 FHWA Scale # 1 - 90 Degree headwall



ExpandedLocal.rep

Solution Criteria = Highest U.S. EG

Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
Exit Loss Coef

2.5 41 .012 .012 0 .7

1

Upstream Elevation = 6.4  
Centerline Station = 177  
Downstream Elevation = 5.8  
Centerline Station = 213

Culvert Name Shape Rise Span  
Culvert #1 Pipe Arch 4.5 6.08  
FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
FHWA Scale # 1 - 90 Degree headwall

Solution Criteria = Highest U.S. EG

Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
Exit Loss Coef

2.5 41 .012 .012 0 .7

1

Upstream Elevation = 6.5  
Centerline Station = 185  
Downstream Elevation = 6  
Centerline Station = 219.5

CROSS SECTION

RIVER: Gum Bayou  
REACH: Upper RS: 15159

INPUT

Description: Data from Land Survey

Station Elevation Data num= 346

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3667	14.223	-3642.99	14.277	-3636.97	14.271	-3633.69	14.275	-3607.27	14.294
-3599.25	14.315	-3577.57	14.245	-3537.88	14.334	-3530.37	14.386	-3508.93	14.368
-3495.93	14.353	-3470.76	14.104	-3461.49	14.042	-3458.78	14.035	-3441.74	13.928
-3427.06	13.836	-3404.5	13.853	-3392.62	13.864	-3369.71	14.084	-3333.82	14.81
-3323.74	14.962	-3300.07	14.235	-3289.3	14.068	-3265.73	14.158	-3254.86	14.097
-3221.75	14.069	-3219.39	14.066	-3210.76	14.065	-3151.55	14.082	-3138.47	14.03
-3117.99	13.922	-3096.43	13.823	-3082.67	13.774	-3065.11	13.764	-3048.23	13.745
-3015.54	13.774	-3012.89	13.774	-3010.07	13.772	-2953.88	13.762	-2914.38	13.788
-2910.48	13.791	-2908.47	13.793	-2902.16	13.825	-2841.6	14.057	-2813.22	14.058
-2805.2	14.056	-2804.1	14.056	-2797.48	14.035	-2779.5	13.948	-2762.56	13.806
-2734.54	13.583	-2705.69	13.42	-2681.99	13.288	-2645.35	13.192	-2635.18	13.156
-2631.89	13.153	-2619.19	13.173	-2589.08	13.283	-2571.4	13.312	-2533.48	13.499
-2516.35	13.576	-2497.22	13.601	-2479.99	13.627	-2459.67	13.56	-2443.62	13.567

ExpandedLocal.rep

-2430.69	13.555-2417.17	13.538-2385.86	13.578-2356.35	13.322-2321.12	13.056
-2298.16	12.895-2265.05	12.16-2261.79	12.116-2260.77	12.127-2190.73	13.493
-2189.06	13.526-2189.04	13.526-2188.99	13.526-2164.44	13.568-2119.45	13.382
-2116.33	13.368-2115.23	13.363-2112.93	13.358-2090.63	13.316-2079.97	13.313
-2058.9	13.389-2027.63	13.456-2007.24	13.411-1998.28	13.411 -1960.8	13.293
-1943.01	13.296-1934.51	13.294-1918.41	13.264-1884.74	13.219-1868.59	13.192
-1862.27	13.183-1842.09	13.185-1828.51	13.169-1806.27	13.216-1794.76	13.233
-1761.32	13.316-1760.55	13.315-1727.25	13.429-1715.58	13.435-1693.49	13.45
-1685.47	13.398-1669.26	13.413-1625.98	13.388-1619.16	13.379-1592.23	13.324
-1570.3	13.179-1558.47	13.097-1543.12	12.969-1524.72	12.643-1494.58	11.963
-1490.96	11.902-1487.27	11.938-1479.64	12.053 -1434.4	12.746-1423.45	12.911
-1407.22	12.969 -1389.7	13.086 -1361	13.074-1355.94	13.071-1352.86	13.062
-1340.11	13.037-1305.28	12.968-1288.44	12.929-1271.32	12.899-1254.68	12.88
-1227.42	12.869-1216.96	12.85-1187.17	12.737-1173.56	12.732-1146.05	12.726
-1119.66	12.663-1108.24	12.635-1085.91	12.54-1068.17	12.488-1052.15	12.426
-1026.71	12.4-1004.79	12.349-977.836	12.299-950.892	12.278-947.724	12.283
-921.528	12.273-890.813	12.272-883.383	12.271-863.634	12.284-849.628	12.377
-839.734	12.393 -782.23	12.453-782.119	12.453-782.106	12.453 -782	12.453
-754.916	12.476-754.356	12.477 -748.47	12.488-743.486	12.497-697.907	12.688
-682.16	12.706-656.677	12.679-638.714	12.67 -615.85	12.713 -599.9	12.71
-569.867	12.848-522.273	13.158-516.384	13.171-483.459	13.161-483.229	13.161
-481.882	13.153-450.074	12.965-444.645	12.921-416.919	12.652-396.248	12.441
-367.017	12.15-350.608	11.972-338.375	11.846-304.524	11.393-284.298	11.226
-262.207	11.026-251.731	10.932-251.105	10.926-250.706	10.921-248.905	10.903
-184.571	10.077-148.753	10.845-123.605	11.398 -109.3	11.527 -84.769	11.532
-57.243	11.6 -51.502	11.609 -23.841	11.53 -18.235	11.519 0	9
28	8.6 56	8.8 82	8.7 110	7.3 111	6.4
116	5 122	5.1 130	5 133	6 135	7.8
160	8.9 185	9 202	7.8 207	6 214	5.2
221	6.2 228	8.1 240	8.3 268	8.8 301	8.7
312.56	6.381 334.276	6.385 345.386	6.344 367.654	6.349 388.427	6.353
411.038	6.358 430.091	6.306 443.865	6.311 458.579	6.316 476.691	6.322
492.527	6.328 509.517	6.334 526.476	6.34 542.343	6.347 560.424	6.353
575.169	6.363 594.372	6.369 607.996	6.422 634.676	6.427 640.822	6.46
652.524	6.596 673.648	6.59 694.291	6.76 727.499	7.834 739.301	8.096
751.499	8.337 772.127	8.664 784.876	8.504 825.832	9.462 843.18	9.865
870.606	10.556 899.906	11.443 906.732	11.665 936.258	12.65 940.619	12.827
985.84	14.3531032.991	16.6831034.737	16.7571065.612	17.6851067.563	17.743
1068.588	17.7921100.389	18.6431101.966	18.6871133.216	19.4441135.343	19.479
1166.042	20.1091168.721	20.1531198.868	20.6441228.035	21.0491232.371	21.087
1237.857	21.1231265.787	21.1371279.935	20.9791299.907	21.2451317.481	20.468
1346.432	19.5891384.434	19.6481402.265	20.2641414.291	20.6111436.385	20.952
1450.188	21.121470.504	21.311476.729	21.3351498.531	21.4361524.127	21.531
1538.743	21.6231556.353	21.7561602.567	22.3131609.436	22.3891618.029	22.461
1654.433	22.7861668.076	22.8731698.076	23.123 1709.34	23.2221737.527	23.593
1763.021	23.9251777.579	24.0841795.225	24.289 1841.34	24.7041845.818	24.742
1848.307	24.7541857.025	24.8031879.938	24.9071889.094	24.9171914.057	24.92
1943.456	25.2991954.472	25.3441976.523	25.2751981.014	25.271982.296	25.257

ExpandedLocal.rep

1984.603	25.1982016.415	24.573	2045.35	24.1622084.654	23.579	2113.72	22.82
2118.774	22.7542140.261	22.5742152.893		22.5272162.365	22.4982187.013		22.403
2205.502	22.3462240.809	22.1382255.252		22.0552272.968	22.0512289.371		22.09
2305.962	22.1662335.016	22.3772349.398		22.483 2357.61	22.5432379.133		22.598
2391.73	22.6822405.674	22.782425.849		22.982436.268	23.0852474.216		23.499
2494.088	23.7262520.579	24.036 2533.93		24.1852562.327	24.3332574.012		24.348
2591.464	24.372596.446	24.3622626.312		24.262659.885	24.1532664.685		24.144
2675.162	24.628 2693.51	25.313 2724.17		26.7982748.675	25.9422767.044		24.85
2791.276	26.7						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3667	.1	82	.05	268	.1

\*\*\*\*\*

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
82	268	43	43	43	.1	.3	

Ineffective Flow num= 3

Sta L	Sta R	Elev	Permanent
-217.61	110.71	10.5	F
134.26	202.24	10.5	F
223.79	868.81	10.5	F

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 15116

INPUT

Description: Data from Land Survey

Station Elevation Data num= 349

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3667	14.223	-3642.99	14.277	-3636.97	14.271	-3633.69	14.275	-3607.27	14.294
-3599.25	14.315	-3577.57	14.245	-3537.88	14.334	-3530.37	14.386	-3508.93	14.368
-3495.93	14.353	-3470.76	14.104	-3461.49	14.042	-3458.78	14.035	-3441.74	13.928
-3427.06	13.836	-3404.5	13.853	-3392.62	13.864	-3369.71	14.084	-3333.82	14.81
-3323.74	14.962	-3300.07	14.235	-3289.3	14.068	-3265.73	14.158	-3254.86	14.097
-3221.75	14.069	-3219.39	14.066	-3210.76	14.065	-3151.55	14.082	-3138.47	14.03
-3117.99	13.922	-3096.43	13.823	-3082.67	13.774	-3065.11	13.764	-3048.23	13.745
-3015.54	13.774	-3012.89	13.774	-3010.07	13.772	-2953.88	13.762	-2914.38	13.788
-2910.48	13.791	-2908.47	13.793	-2902.16	13.825	-2841.6	14.057	-2813.22	14.058
-2805.2	14.056	-2804.1	14.056	-2797.48	14.035	-2779.5	13.948	-2762.56	13.806
-2734.54	13.583	-2705.69	13.42	-2681.99	13.288	-2645.35	13.192	-2635.18	13.156
-2631.89	13.153	-2619.19	13.173	-2589.08	13.283	-2571.4	13.312	-2533.48	13.499
-2516.35	13.576	-2497.22	13.601	-2479.99	13.627	-2459.67	13.56	-2443.62	13.567
-2430.69	13.555	-2417.17	13.538	-2385.86	13.578	-2356.35	13.322	-2321.12	13.056

ExpandedLocal.rep

-2298.16	12.895-2265.05	12.16-2261.79	12.116-2260.77	12.127-2190.73	13.493
-2189.06	13.526-2189.04	13.526-2188.99	13.526-2164.44	13.568-2119.45	13.382
-2116.33	13.368-2115.23	13.363-2112.93	13.358-2090.63	13.316-2079.97	13.313
-2058.9	13.389-2027.63	13.456-2007.24	13.411-1998.28	13.411 -1960.8	13.293
-1943.01	13.296-1934.51	13.294-1918.41	13.264-1884.74	13.219-1868.59	13.192
-1862.27	13.183-1842.09	13.185-1828.51	13.169-1806.27	13.216-1794.76	13.233
-1761.32	13.316-1760.55	13.315-1727.25	13.429-1715.58	13.435-1693.49	13.45
-1685.47	13.398-1669.26	13.413-1625.98	13.388-1619.16	13.379-1592.23	13.324
-1570.3	13.179-1558.47	13.097-1543.12	12.969-1524.72	12.643-1494.58	11.963
-1490.96	11.902-1487.27	11.938-1479.64	12.053 -1434.4	12.746-1423.45	12.911
-1407.22	12.969 -1389.7	13.086 -1361	13.074-1355.94	13.071-1352.86	13.062
-1340.11	13.037-1305.28	12.968-1288.44	12.929-1271.32	12.899-1254.68	12.88
-1227.42	12.869-1216.96	12.85-1187.17	12.737-1173.56	12.732-1146.05	12.726
-1119.66	12.663-1108.24	12.635-1085.91	12.54-1068.17	12.488-1052.15	12.426
-1026.71	12.4-1004.79	12.349-977.836	12.299-950.892	12.278-947.724	12.283
-921.528	12.273-890.813	12.272-883.383	12.271-863.634	12.284-849.628	12.377
-839.734	12.393 -782.23	12.453-782.119	12.453-782.106	12.453 -782	12.453
-754.916	12.476-754.356	12.477 -748.47	12.488-743.486	12.497-697.907	12.688
-682.16	12.706-656.677	12.679-638.714	12.67 -615.85	12.713 -599.9	12.71
-569.867	12.848-522.273	13.158-516.384	13.171-483.459	13.161-483.229	13.161
-481.882	13.153-450.074	12.965-444.645	12.921-416.919	12.652-396.248	12.441
-367.017	12.15-350.608	11.972-338.375	11.846-304.524	11.393-284.298	11.226
-262.207	11.026-251.731	10.932-251.105	10.926-250.706	10.921-248.905	10.903
-184.571	10.077-148.753	10.845-123.605	11.398 -109.3	11.527 -84.769	11.532
-57.243	11.6 -51.502	11.609 -23.841	11.53 -18.235	11.519 0	6.8
14	7 24	6.8 39	5.9 46	5.9 51	6.8
56	6.1 62	6.3 72	6.9 88	6.8 103	6.7
137	6.6 146	6.5 153	5.6 158	6.5 163	6.8
168	6.4 179	6 183	6.6 218	7 238	6.3
267.52	7.231 279.733	6.65 288.838	6.502 312.56	6.381 334.276	6.385
345.386	6.344 367.654	6.349 388.427	6.353 411.038	6.358 430.091	6.306
443.865	6.311 458.579	6.316 476.691	6.322 492.527	6.328 509.517	6.334
526.476	6.34 542.343	6.347 560.424	6.353 575.169	6.363 594.372	6.369
607.996	6.422 634.676	6.427 640.822	6.46 652.524	6.596 673.648	6.59
694.291	6.76 727.499	7.834 739.301	8.096 751.499	8.337 772.127	8.664
784.876	8.504 825.832	9.462 843.18	9.865 870.606	10.556 899.906	11.443
906.732	11.665 936.258	12.65 940.619	12.827 985.84	14.3531032.991	16.683
1034.737	16.7571065.612	17.6851067.563	17.7431068.588	17.7921100.389	18.643
1101.966	18.6871133.216	19.4441135.343	19.4791166.042	20.1091168.721	20.153
1198.868	20.6441228.035	21.0491232.371	21.0871237.857	21.1231265.787	21.137
1279.935	20.9791299.907	21.2451317.481	20.4681346.432	19.5891384.434	19.648
1402.265	20.2641414.291	20.6111436.385	20.9521450.188	21.121470.504	21.31
1476.729	21.3351498.531	21.4361524.127	21.5311538.743	21.6231556.353	21.756
1602.567	22.3131609.436	22.3891618.029	22.4611654.433	22.7861668.076	22.873
1698.076	23.123 1709.34	23.2221737.527	23.5931763.021	23.9251777.579	24.084
1795.225	24.289 1841.34	24.7041845.818	24.7421848.307	24.7541857.025	24.803
1879.938	24.9071889.094	24.9171914.057	24.921943.456	25.2991954.472	25.344
1976.523	25.2751981.014	25.271982.296	25.2571984.603	25.1982016.415	24.573

ExpandedLocal.rep

2045.35	24.1622084.654	23.579	2113.72	22.822118.774	22.7542140.261	22.574
2152.893	22.5272162.365	22.4982187.013	22.4032205.502	22.3462240.809	22.138	
2255.252	22.0552272.968	22.0512289.371	22.092305.962	22.1662335.016	22.377	
2349.398	22.483 2357.61	22.5432379.133	22.598 2391.73	22.6822405.674	22.78	
2425.849	22.982436.268	23.0852474.216	23.4992494.088	23.7262520.579	24.036	
2533.93	24.1852562.327	24.3332574.012	24.3482591.464	24.372596.446	24.362	
2626.312	24.262659.885	24.1532664.685	24.1442675.162	24.628 2693.51	25.313	
2724.17	26.7982748.675	25.9422767.044	24.852791.276	26.7		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3667	.1	137	.05	163	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	137	163		197	197	.1	.3
Ineffective Flow	num= 2						
Sta L	Sta R	Elev	Permanent				
-3667	35.47	10.5	F				
191.552791.276		10.5	F				

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 14919

INPUT

Description: Data from COE 2.8255\*

Station Elevation Data num= 347

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3667	14.223-3642.99	14.277-3636.97	14.271-3633.69	14.275-3607.27	14.294				
-3599.25	14.315-3577.57	14.245-3537.88	14.334-3530.37	14.386-3508.93	14.368				
-3495.93	14.353-3470.76	14.104-3461.49	14.042-3458.78	14.035-3441.74	13.928				
-3427.06	13.836 -3404.5	13.853-3392.62	13.864-3369.71	14.084-3333.82	14.81				
-3323.74	14.962-3300.07	14.235 -3289.3	14.068-3265.73	14.158-3254.86	14.097				
-3221.75	14.069-3219.39	14.066-3210.76	14.065-3151.55	14.082-3138.47	14.03				
-3117.99	13.922-3096.43	13.823-3082.67	13.774-3065.11	13.764-3048.23	13.745				
-3015.54	13.774-3012.89	13.774-3010.07	13.772-2953.88	13.762-2914.38	13.788				
-2910.48	13.791-2908.47	13.793-2902.16	13.825 -2841.6	14.057-2813.22	14.058				
-2805.2	14.056 -2804.1	14.056-2797.48	14.035 -2779.5	13.948-2762.56	13.806				
-2734.54	13.583-2705.69	13.42-2681.99	13.288-2645.35	13.192-2635.18	13.156				
-2631.89	13.153-2619.19	13.173-2589.08	13.283 -2571.4	13.312-2533.48	13.499				
-2516.35	13.576-2497.22	13.601-2479.99	13.627-2459.67	13.56-2443.62	13.567				
-2430.69	13.555-2417.17	13.538-2385.86	13.578-2356.35	13.322-2321.12	13.056				
-2298.16	12.895-2265.05	12.16-2261.79	12.116-2260.77	12.127-2190.73	13.493				
-2189.06	13.526-2189.04	13.526-2188.99	13.526-2164.44	13.568-2119.45	13.382				

ExpandedLocal.rep

-2116.33	13.368-2115.23	13.363-2112.93	13.358-2090.63	13.316-2079.97	13.313
-2058.9	13.389-2027.63	13.456-2007.24	13.411-1998.28	13.411 -1960.8	13.293
-1943.01	13.296-1934.51	13.294-1918.41	13.264-1884.74	13.219-1868.59	13.192
-1862.27	13.183-1842.09	13.185-1828.51	13.169-1806.27	13.216-1794.76	13.233
-1761.32	13.316-1760.55	13.315-1727.25	13.429-1715.58	13.435-1693.49	13.45
-1685.47	13.398-1669.26	13.413-1625.98	13.388-1619.16	13.379-1592.23	13.324
-1570.3	13.179-1558.47	13.097-1543.12	12.969-1524.72	12.643-1494.58	11.963
-1490.96	11.902-1487.27	11.938-1479.64	12.053 -1434.4	12.746-1423.45	12.911
-1407.22	12.969 -1389.7	13.086 -1361	13.074-1355.94	13.071-1352.86	13.062
-1340.11	13.037-1305.28	12.968-1288.44	12.929-1271.32	12.899-1254.68	12.88
-1227.42	12.869-1216.96	12.85-1187.17	12.737-1173.56	12.732-1146.05	12.726
-1119.66	12.663-1108.24	12.635-1085.91	12.54-1068.17	12.488-1052.15	12.426
-1026.71	12.4-1004.79	12.349-977.836	12.299-950.892	12.278-947.724	12.283
-921.528	12.273-890.813	12.272-883.383	12.271-863.634	12.284-849.628	12.377
-839.734	12.393 -782.23	12.453-782.119	12.453-782.106	12.453 -782	12.453
-754.916	12.476-754.356	12.477 -748.47	12.488-743.486	12.497-697.907	12.688
-682.16	12.706-656.677	12.679-638.714	12.67 -615.85	12.713 -599.9	12.71
-569.867	12.848-522.273	13.158-516.384	13.171-483.459	13.161-483.229	13.161
-481.882	13.153-450.074	12.965-444.645	12.921-416.919	12.652-396.248	12.441
-367.017	12.15-350.608	11.972-338.375	11.846-304.524	11.393-284.298	11.226
-262.207	11.026-251.731	10.932-251.105	10.926-250.706	10.921-248.905	10.903
-184.571	10.077-148.753	10.845-123.605	11.398 -109.3	11.527 -84.769	11.532
-57.243	11.6 -51.502	11.609 -23.841	11.53 -18.235	11.519 1.474	11.426
39.81	11.219 61.618	11.184 81.567	11.066 109.562	10.845 114.834	10.819
118.59	10.775 166.911	9.936 172.793	9.842 181.255	9.716 194.671	9.467
214.081	9.386 233.539	8.226 267.52	7.231 279.733	6.65 288.838	6.502
299.98	10.66 328.33	10.3 333.43	8.62 338.53	8.16 343.64	8.64
347.04	10.39 411.01	10.28 431.51	10.3 435.93	6.9 437.35	6.38
445.39	5.81 446.44	5.81 451.46	6.45 455.23	8.04 458.95	8.1
476.16	10.25 492.527	6.328 509.517	6.334 526.476	6.34 542.343	6.347
560.424	6.353 575.169	6.363 594.372	6.369 607.996	6.422 634.676	6.427
640.822	6.46 652.524	6.596 673.648	6.59 694.291	6.76 727.499	7.834
739.301	8.096 751.499	8.337 772.127	8.664 784.876	8.504 825.832	9.462
843.18	9.865 870.606	10.556 899.906	11.443 906.732	11.665 936.258	12.65
940.619	12.827 985.84	14.3531032.991	16.6831034.737	16.7571065.612	17.685
1067.563	17.7431068.588	17.7921100.389	18.6431101.966	18.6871133.216	19.444
1135.343	19.4791166.042	20.1091168.721	20.1531198.868	20.6441228.035	21.049
1232.371	21.0871237.857	21.1231265.787	21.1371279.935	20.9791299.907	21.245
1317.481	20.4681346.432	19.5891384.434	19.6481402.265	20.2641414.291	20.611
1436.385	20.9521450.188	21.121470.504	21.311476.729	21.3351498.531	21.436
1524.127	21.5311538.743	21.6231556.353	21.7561602.567	22.3131609.436	22.389
1618.029	22.4611654.433	22.7861668.076	22.8731698.076	23.123 1709.34	23.222
1737.527	23.5931763.021	23.9251777.579	24.0841795.225	24.289 1841.34	24.704
1845.818	24.7421848.307	24.7541857.025	24.8031879.938	24.9071889.094	24.917
1914.057	24.921943.456	25.2991954.472	25.3441976.523	25.2751981.014	25.27
1982.296	25.2571984.603	25.1982016.415	24.573 2045.35	24.1622084.654	23.579
2113.72	22.822118.774	22.7542140.261	22.5742152.893	22.5272162.365	22.498
2187.013	22.4032205.502	22.3462240.809	22.1382255.252	22.0552272.968	22.051

ExpandedLocal.rep

2289.371	22.092305.962	22.1662335.016	22.3772349.398	22.483	2357.61	22.543
2379.133	22.598	2391.73	22.6822405.674	22.782425.849	22.982436.268	23.085
2474.216	23.4992494.088	23.7262520.579	24.036	2533.93	24.1852562.327	24.333
2574.012	24.3482591.464	24.372596.446	24.3622626.312	24.262659.885	24.153	
2664.685	24.1442675.162	24.628	2693.51	25.313	2724.17	26.7982748.675
2767.044	24.852791.276	26.7				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3667	.08	431.51	.05	476.16	.08

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	431.51	476.16		386	386	.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 14533

INPUT

Description: Data from COE 2.7525\*

Station Elevation Data num= 345

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3667	14.223-3642.99	14.277-3636.97	14.271-3633.69	14.275-3607.27	14.294				
-3599.25	14.315-3577.57	14.245-3537.88	14.334-3530.37	14.386-3508.93	14.368				
-3495.93	14.353-3470.76	14.104-3461.49	14.042-3458.78	14.035-3441.74	13.928				
-3427.06	13.836 -3404.5	13.853-3392.62	13.864-3369.71	14.084-3333.82	14.81				
-3323.74	14.962-3300.07	14.235 -3289.3	14.068-3265.73	14.158-3254.86	14.097				
-3221.75	14.069-3219.39	14.066-3210.76	14.065-3151.55	14.082-3138.47	14.03				
-3117.99	13.922-3096.43	13.823-3082.67	13.774-3065.11	13.764-3048.23	13.745				
-3015.54	13.774-3012.89	13.774-3010.07	13.772-2953.88	13.762-2914.38	13.788				
-2910.48	13.791-2908.47	13.793-2902.16	13.825 -2841.6	14.057-2813.22	14.058				
-2805.2	14.056 -2804.1	14.056-2797.48	14.035 -2779.5	13.948-2762.56	13.806				
-2734.54	13.583-2705.69	13.42-2681.99	13.288-2645.35	13.192-2635.18	13.156				
-2631.89	13.153-2619.19	13.173-2589.08	13.283 -2571.4	13.312-2533.48	13.499				
-2516.35	13.576-2497.22	13.601-2479.99	13.627-2459.67	13.56-2443.62	13.567				
-2430.69	13.555-2417.17	13.538-2385.86	13.578-2356.35	13.322-2321.12	13.056				
-2298.16	12.895-2265.05	12.16-2261.79	12.116-2260.77	12.127-2190.73	13.493				
-2189.06	13.526-2189.04	13.526-2188.99	13.526-2164.44	13.568-2119.45	13.382				
-2116.33	13.368-2115.23	13.363-2112.93	13.358-2090.63	13.316-2079.97	13.313				
-2058.9	13.389-2027.63	13.456-2007.24	13.411-1998.28	13.411 -1960.8	13.293				
-1943.01	13.296-1934.51	13.294-1918.41	13.264-1884.74	13.219-1868.59	13.192				
-1862.27	13.183-1842.09	13.185-1828.51	13.169-1806.27	13.216-1794.76	13.233				
-1761.32	13.316-1760.55	13.315-1727.25	13.429-1715.58	13.435-1693.49	13.45				
-1685.47	13.398-1669.26	13.413-1625.98	13.388-1619.16	13.379-1592.23	13.324				

ExpandedLocal.rep

-1570.3	13.179-1558.47	13.097-1543.12	12.969-1524.72	12.643-1494.58	11.963
-1490.96	11.902-1487.27	11.938-1479.64	12.053 -1434.4	12.746-1423.45	12.911
-1407.22	12.969 -1389.7	13.086 -1361	13.074-1355.94	13.071-1352.86	13.062
-1340.11	13.037-1305.28	12.968-1288.44	12.929-1271.32	12.899-1254.68	12.88
-1227.42	12.869-1216.96	12.85-1187.17	12.737-1173.56	12.732-1146.05	12.726
-1119.66	12.663-1108.24	12.635-1085.91	12.54-1068.17	12.488-1052.15	12.426
-1026.71	12.4-1004.79	12.349-977.836	12.299-950.892	12.278-947.724	12.283
-921.528	12.273-890.813	12.272-883.383	12.271-863.634	12.284-849.628	12.377
-839.734	12.393 -782.23	12.453-782.119	12.453-782.106	12.453 -782	12.453
-754.916	12.476-754.356	12.477 -748.47	12.488-743.486	12.497-697.907	12.688
-682.16	12.706-656.677	12.679-638.714	12.67 -615.85	12.713 -599.9	12.71
-569.867	12.848-522.273	13.158-516.384	13.171-483.459	13.161-483.229	13.161
-481.882	13.153-450.074	12.965-444.645	12.921-416.919	12.652-396.248	12.441
-367.017	12.15-350.608	11.972-338.375	11.846-304.524	11.393-284.298	11.226
-262.207	11.026-251.731	10.932-251.105	10.926-250.706	10.921-248.905	10.903
-184.571	10.077-148.753	10.845-123.605	11.398 -109.3	11.527 -84.769	11.532
-57.243	11.6 -51.502	11.609 -23.841	11.53 -18.235	11.519 1.474	11.426
39.81	11.219 61.618	11.184 81.567	11.066 109.562	10.845 114.834	10.819
118.59	10.775 166.911	9.936 172.793	9.842 181.255	9.716 194.671	9.467
214.081	9.386 233.539	8.226 267.52	7.231 279.733	6.65 288.838	6.502
308.92	10.44 314.2	9 319.47	8.61 324.75	9.01 328.26	10.49
394.39	10.31 415.59	10.32 420.4	6.66 421.96	6.22 430.71	5.72
432.06	5.72 436.81	6.26 440.37	7.61 443.88	7.66 460.14	10.31
516.78	10.1 526.476	6.34 542.343	6.347 560.424	6.353 575.169	6.363
594.372	6.369 607.996	6.422 634.676	6.427 640.822	6.46 652.524	6.596
673.648	6.59 694.291	6.76 727.499	7.834 739.301	8.096 751.499	8.337
772.127	8.664 784.876	8.504 825.832	9.462 843.18	9.865 870.606	10.556
899.906	11.443 906.732	11.665 936.258	12.65 940.619	12.827 985.84	14.353
1032.991	16.6831034.737	16.7571065.612	17.6851067.563	17.7431068.588	17.792
1100.389	18.6431101.966	18.6871133.216	19.4441135.343	19.4791166.042	20.109
1168.721	20.1531198.868	20.6441228.035	21.0491232.371	21.0871237.857	21.123
1265.787	21.1371279.935	20.9791299.907	21.2451317.481	20.4681346.432	19.589
1384.434	19.6481402.265	20.2641414.291	20.6111436.385	20.9521450.188	21.12
1470.504	21.311476.729	21.3351498.531	21.4361524.127	21.5311538.743	21.623
1556.353	21.7561602.567	22.3131609.436	22.3891618.029	22.4611654.433	22.786
1668.076	22.8731698.076	23.123 1709.34	23.2221737.527	23.5931763.021	23.925
1777.579	24.0841795.225	24.289 1841.34	24.7041845.818	24.7421848.307	24.754
1857.025	24.8031879.938	24.9071889.094	24.9171914.057	24.921943.456	25.299
1954.472	25.3441976.523	25.2751981.014	25.271982.296	25.2571984.603	25.198
2016.415	24.573 2045.35	24.1622084.654	23.579 2113.72	22.822118.774	22.754
2140.261	22.5742152.893	22.5272162.365	22.4982187.013	22.4032205.502	22.346
2240.809	22.1382255.252	22.0552272.968	22.0512289.371	22.092305.962	22.166
2335.016	22.3772349.398	22.483 2357.61	22.5432379.133	22.598 2391.73	22.682
2405.674	22.782425.849	22.982436.268	23.0852474.216	23.4992494.088	23.726
2520.579	24.036 2533.93	24.1852562.327	24.3332574.012	24.3482591.464	24.37
2596.446	24.3622626.312	24.262659.885	24.1532664.685	24.1442675.162	24.628
2693.51	25.313 2724.17	26.7982748.675	25.9422767.044	24.852791.276	26.7



ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -3667 .08 415.59 .05 460.14 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 415.59 460.14 385 385 385 .1 .3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 14148

INPUT

Description: Copy of COE 2.6795\*

Station Elevation Data num= 422  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -5426 15.143 -5419.5 15.136-5412.59 15.122-5381.93 15.045-5357.19 14.971  
 -5343.55 14.936-5327.53 14.879-5309.03 14.842-5289.44 14.79-5245.09 14.623  
 -5240 14.602-5238.53 14.595-5229.53 14.552-5205.48 14.453-5179.19 14.379  
 -5159.51 14.309-5136.44 14.266-5118.24 14.232-5081.35 14.238 -5067.4 14.224  
 -5045.69 14.218-5032.89 14.193-5003.32 14.108-4994.44 14.105-4960.39 14.096  
 -4932.54 14.075-4929.33 14.007-4927.02 14.079-4922.84 14.033-4912.91 13.994  
 -4873.26 13.34-4834.72 13.878-4825.78 13.895-4823.19 13.885-4807.37 13.988  
 -4795.23 14.027-4791.26 14.041-4769.22 14.077-4732.13 14.172-4722.22 14.195  
 -4717.19 14.199 -4687.7 14.18-4651.55 14.275-4618.66 14.317-4596.29 14.359  
 -4586.4 14.365-4584.23 14.369-4558.71 14.312-4550.96 14.305-4540.11 14.242  
 -4517.7 14.082 -4501.7 13.923-4460.25 13.599-4451.18 13.514-4439.85 13.488  
 -4405.95 13.48 -4369.6 13.44-4351.39 13.432-4330.69 13.358-4300.51 13.145  
 -4284.86 12.984-4278.85 12.917-4219.38 12.694-4218.33 12.687-4216.69 12.678  
 -4206.83 12.656-4165.59 12.535-4151.81 12.516-4140.77 12.507 -4110 12.431  
 -4056.06 12.427-4052.02 12.43-4045.68 12.435-4007.72 12.237-3991.06 12.159  
 -3987.21 12.138-3985.49 12.126-3956.51 11.975 -3941.1 11.765-3918.97 11.667  
 -3903.17 11.687 -3885.7 11.742-3874.67 11.804-3852.44 11.973-3833.71 12.098  
 -3791.6 12.383-3785.92 12.435-3741.73 12.568-3719.39 12.668-3718.54 12.667  
 -3704.54 12.658-3686.57 12.661-3677.59 12.641-3653.76 12.565-3644.78 12.523  
 -3620.95 12.414-3611.97 12.355-3588.14 12.314-3570.18 11.936-3540.49 11.728  
 -3522.53 11.912-3507.69 11.929-3471.75 11.839-3456.91 11.798-3431.52 11.75  
 -3424.1 11.742-3398.72 11.615-3391.29 11.603-3376.45 11.612-3358.49 11.7  
 -3328.8 11.768-3292.87 11.894 -3274.9 11.936-3260.06 11.98-3242.09 12.053  
 -3212.41 12.185-3176.48 12.307-3161.64 12.318 -3125.7 12.32-3103.44 12.303  
 -3081.18 12.369-3063.21 12.447-3045.24 12.413-3040.54 12.402-3030.35 12.374  
 -2990.7 12.352-2964.42 12.278-2954.81 12.163-2902.98 10.915-2898.48 10.825  
 -2866.41 11.827-2864.78 11.85-2857.34 11.914-2832.55 12.11-2804.76 12.302  
 -2796.59 12.382-2766.62 12.535 -2756.7 12.586-2714.73 12.805-2700.68 12.822  
 -2671.4 12.692-2634.75 12.63 -2580.1 12.724 -2571.2 12.735-2564.69 12.744

ExpandedLocal.rep

-2535.84	12.799-2519.18	12.78-2474.66	12.668-2472.39	12.66-2469.91	12.647
-2439.67	12.607-2432.49	12.613-2427.56	12.614-2403.98	12.627-2380.48	12.61
-2362.43	12.566-2338.04	12.486-2331.01	12.449-2305.07	12.285 -2294.6	12.222
-2244.7	11.883-2239.14	11.865-2234.58	11.865-2206.17	11.864-2148.15	12.121
-2140.24	12.181-2134.99	12.202-2107.27	12.256-2095.36	12.249 -2074.3	12.258
-2071.87	12.259-2063.47	12.257-2041.47	12.189-2030.19	12.164-1987.71	11.946
-1963.61	11.796-1943.01	11.746-1922.97	11.689-1883.51	11.446-1877.37	11.408
-1820.48	10.349-1811.72	10.258-1750.94	11.462-1746.08	11.517-1714.67	11.669
-1713.26	11.673-1680.91	11.602-1680.44	11.6-1679.57	11.596 -1614.8	11.389
-1555.26	11.051-1549.15	11-1545.84	11.008-1516.33	11.006-1512.07	11.021
-1456.51	11.306-1450.69	11.333-1424.58	11.263-1417.87	11.259-1403.25	11.17
-1352.23	10.396-1333.71	10.463-1286.58	11.065-1264.95	11.065-1253.76	11.058
-1250.54	11.019-1244.37	10.956-1216.87	10.924 -1204.2	10.731-1179.53	10.76
-1174.84	10.852-1168.09	10.863-1157.55	10.853 -1132.3	10.819-1116.11	10.7
-1078.61	11.005-1067.52	11.062-1050.83	11.115-1030.18	11.172-1026.63	11.162
-1020.1	11.152 -998.67	11.034-992.849	11.081-982.685	11.04-929.862	10.853
-918.174	10.976-905.668	11.042-882.648	11.24-881.224	11.252-878.682	11.279
-843.499	11.648-813.921	11.939-808.893	11.981-806.162	12.002-796.933	12.052
-777.122	12.169-769.827	12.188-736.699	12.036-711.904	11.897-689.451	11.887
-652.033	11.997-638.525	11.998-602.803	11.695-562.284	11.368-540.048	11.192
-516.317	10.918-507.222	10.814-448.458	9.981-441.571	9.878-435.117	9.845
-408.745	9.054-407.927	9.074-396.423	9.43-373.643	9.39-366.943	9.386
-338.483	9.348-337.463	9.337-332.168	9.34-311.346	9.308-303.323	9.249
-285.239	9.078-268.163	8.836-263.763	8.861-240.927	8.701-235.207	8.652
-216.595	8.557-197.843	8.421-191.493	8.377-131.103	8.085-127.523	8.07
-113.628	8.1 -82.928	8.069 -58.445	8.373 -57.203	8.355 -32.169	6.502
-22.043	6.444 -6.789	6.286 13.117	6.091 18.591	6.056 32.796	6.03
43.971	6.005 48.277	6.004 69.351	6.002 83.437	6.002 115.187	6.002
120.11	6.002 124.037	6.002 145.49	6.002 153.757	6.002 170.87	6.002
188.917	6.002 196.25	6.002 215.277	6.002 221.63	6.002 224.077	6.002
247.009	6.002 259.26	10.89 289.52	10.57 294.96	9.39 300.41	9.06
305.86	9.38 309.49	10.59 377.78	10.35 399.66	10.35 404.87	6.42
406.56	6.05 416.04	5.62 417.69	5.62 422.15	6.07 425.5	7.18
428.81	7.22 444.11	10.36 495	10.07 500.493	6.002 505.768	6.002
525.374	6.002 541.629	6.002 569.803	6.003 575.136	6.003 577.489	6.003
600.017	6.005 613.35	6.006 624.898	6.008 649.211	6.014 649.779	6.014
651.067	6.015 674.66	6.03 685.072	6.039 699.541	6.062 720.932	6.103
724.423	6.117 732.332	6.148 749.304	6.218 756.793	6.264 774.185	6.412
792.654	6.502 802.472	7.317 813.596	8.62 864.375	13.915 873.709	13.78
894.86	15.312 936.097	17.614 948.352	18.438 971.958	19.967 976.125	20.217
1007.819	22.0171032.851	22.5211047.877	22.8631057.389	22.9711072.758	23.151
1079.54	23.1921138.653	23.1251147.401	23.1031151.262	23.0741172.282	22.867
1187.122	22.7021202.497	22.4951219.918	22.2821240.595	21.9931258.844	21.812
1301.182	21.644 1316.79	21.5751330.565	21.6271369.051	21.3051392.077	21.028
1402.505	20.941432.437	20.8511442.878	20.8891494.443	21.077 1498.23	21.085
1525.088	21.171531.127	21.1671555.734	21.1591564.023	21.1171573.627	21.037
1617.026	20.8021629.817	20.4661647.671	19.2291680.141	14.537 1695.61	11.225
1708.963	10.9021728.507	10.768 1750.12	10.7581786.655	10.608 1794.3	10.602

ExpandedLocal.rep

1822.159	10.5291831.546	10.4571860.094	10.4061893.168	10.4161940.508	10.412
1954.129	10.4041958.784	10.4041984.774	10.4041991.681	10.404 2015.42	10.404
2024.577	10.4042046.066	10.4052057.474	10.4052076.712	10.4062090.371	10.407
2107.357	10.4112123.268	10.414 2141.7	10.4222156.164	10.4382162.628	10.452
2189.061	10.4862199.295	10.5112221.958	10.5982248.214	10.8412254.854	10.898
2260.586	10.9022287.751	11.5782302.887	12.2692352.523	20.4692353.545	20.662
2354.728	20.7652386.441	23.032390.232	22.8042444.461	24.0212452.235	24.949
2471.799	24.2442502.095	23.259			

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-5426	.08	399.66	.05	444.11	.08

\*\*\*\*\*

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
399.66	444.11	295	295	295	.1	.3	
Ineffective Flow	num=	1					
Sta L	Sta R	Elev	Permanent				
1525.09	2452.24	21.17	F				

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 13853

INPUT

Description: Data from Land Survey

Station Elevation Data num= 421

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-5426	15.143	-5419.5	15.136	-5412.59	15.122	-5381.93	15.045	-5357.19	14.971
-5343.55	14.936	-5327.53	14.879	-5309.03	14.842	-5289.44	14.79	-5245.09	14.623
-5240	14.602	-5238.53	14.595	-5229.53	14.552	-5205.48	14.453	-5179.19	14.379
-5159.51	14.309	-5136.44	14.266	-5118.24	14.232	-5081.35	14.238	-5067.4	14.224
-5045.69	14.218	-5032.89	14.193	-5003.32	14.108	-4994.44	14.105	-4960.39	14.096
-4932.54	14.075	-4929.33	14.007	-4927.02	14.079	-4922.84	14.033	-4912.91	13.994
-4873.26	13.34	-4834.72	13.878	-4825.78	13.895	-4823.19	13.885	-4807.37	13.988
-4795.23	14.027	-4791.26	14.041	-4769.22	14.077	-4732.13	14.172	-4722.22	14.195
-4717.19	14.199	-4687.7	14.18	-4651.55	14.275	-4618.66	14.317	-4596.29	14.359
-4586.4	14.365	-4584.23	14.369	-4558.71	14.312	-4550.96	14.305	-4540.11	14.242
-4517.7	14.082	-4501.7	13.923	-4460.25	13.599	-4451.18	13.514	-4439.85	13.488
-4405.95	13.48	-4369.6	13.44	-4351.39	13.432	-4330.69	13.358	-4300.51	13.145
-4284.86	12.984	-4278.85	12.917	-4219.38	12.694	-4218.33	12.687	-4216.69	12.678
-4206.83	12.656	-4165.59	12.535	-4151.81	12.516	-4140.77	12.507	-4110	12.431
-4056.06	12.427	-4052.02	12.43	-4045.68	12.435	-4007.72	12.237	-3991.06	12.159
-3987.21	12.138	-3985.49	12.126	-3956.51	11.975	-3941.1	11.765	-3918.97	11.667
-3903.17	11.687	-3885.7	11.742	-3874.67	11.804	-3852.44	11.973	-3833.71	12.098

ExpandedLocal.rep

-3791.6	12.383-3785.92	12.435-3741.73	12.568-3719.39	12.668-3718.54	12.667
-3704.54	12.658-3686.57	12.661-3677.59	12.641-3653.76	12.565-3644.78	12.523
-3620.95	12.414-3611.97	12.355-3588.14	12.314-3570.18	11.936-3540.49	11.728
-3522.53	11.912-3507.69	11.929-3471.75	11.839-3456.91	11.798-3431.52	11.75
-3424.1	11.742-3398.72	11.615-3391.29	11.603-3376.45	11.612-3358.49	11.7
-3328.8	11.768-3292.87	11.894 -3274.9	11.936-3260.06	11.98-3242.09	12.053
-3212.41	12.185-3176.48	12.307-3161.64	12.318 -3125.7	12.32-3103.44	12.303
-3081.18	12.369-3063.21	12.447-3045.24	12.413-3040.54	12.402-3030.35	12.374
-2990.7	12.352-2964.42	12.278-2954.81	12.163-2902.98	10.915-2898.48	10.825
-2866.41	11.827-2864.78	11.85-2857.34	11.914-2832.55	12.11-2804.76	12.302
-2796.59	12.382-2766.62	12.535 -2756.7	12.586-2714.73	12.805-2700.68	12.822
-2671.4	12.692-2634.75	12.63 -2580.1	12.724 -2571.2	12.735-2564.69	12.744
-2535.84	12.799-2519.18	12.78-2474.66	12.668-2472.39	12.66-2469.91	12.647
-2439.67	12.607-2432.49	12.613-2427.56	12.614-2403.98	12.627-2380.48	12.61
-2362.43	12.566-2338.04	12.486-2331.01	12.449-2305.07	12.285 -2294.6	12.222
-2244.7	11.883-2239.14	11.865-2234.58	11.865-2206.17	11.864-2148.15	12.121
-2140.24	12.181-2134.99	12.202-2107.27	12.256-2095.36	12.249 -2074.3	12.258
-2071.87	12.259-2063.47	12.257-2041.47	12.189-2030.19	12.164-1987.71	11.946
-1963.61	11.796-1943.01	11.746-1922.97	11.689-1883.51	11.446-1877.37	11.408
-1820.48	10.349-1811.72	10.258-1750.94	11.462-1746.08	11.517-1714.67	11.669
-1713.26	11.673-1680.91	11.602-1680.44	11.6-1679.57	11.596 -1614.8	11.389
-1555.26	11.051-1549.15	11-1545.84	11.008-1516.33	11.006-1512.07	11.021
-1456.51	11.306-1450.69	11.333-1424.58	11.263-1417.87	11.259-1403.25	11.17
-1352.23	10.396-1333.71	10.463-1286.58	11.065-1264.95	11.065-1253.76	11.058
-1250.54	11.019-1244.37	10.956-1216.87	10.924 -1204.2	10.731-1179.53	10.76
-1174.84	10.852-1168.09	10.863-1157.55	10.853 -1132.3	10.819-1116.11	10.7
-1078.61	11.005-1067.52	11.062-1050.83	11.115-1030.18	11.172-1026.63	11.162
-1020.1	11.152 -998.67	11.034-992.849	11.081-982.685	11.04-929.862	10.853
-918.174	10.976-905.668	11.042-882.648	11.24-881.224	11.252-878.682	11.279
-843.499	11.648-813.921	11.939-808.893	11.981-806.162	12.002-796.933	12.052
-777.122	12.169-769.827	12.188-736.699	12.036-711.904	11.897-689.451	11.887
-652.033	11.997-638.525	11.998-602.803	11.695-562.284	11.368-540.048	11.192
-516.317	10.918-507.222	10.814-448.458	9.981-441.571	9.878-435.117	9.845
-408.745	9.054-407.927	9.074-396.423	9.43-373.643	9.39-366.943	9.386
-338.483	9.348-337.463	9.337-332.168	9.34-311.346	9.308-303.323	9.249
-285.239	9.078-268.163	8.836-263.763	8.861-240.927	8.701-235.207	8.652
-216.595	8.557-197.843	8.421-191.493	8.377-131.103	8.085-127.523	8.07
-113.628	8.1 -82.928	8.069 -58.445	8.373 -57.203	8.355 -32.169	6.502
-22.043	6.444 -6.789	6.286 0	6 29	5.1 56	5
67	4.4 79	5.8 109	5.8 152	6.1 153.757	6.002
170.87	6.002 188.917	6.002 196.25	6.002 215.277	6.002 221.63	6.002
224.077	6.002 247.009	6.002 259.238	6.002 272.389	6.002 294.398	6.002
297.769	6.002 306.518	6.002 323.149	6.002 329.558	6.002 344.002	6.002
364.718	6.002 373.909	6.002 397.759	6.002 399.288	6.002 399.878	6.002
401.206	6.002 435.038	6.002 450.048	6.002 470.198	6.002 475.428	6.002
484.782	6.002 488.539	6.002 500.493	6.002 505.768	6.002 525.374	6.002
541.629	6.002 569.803	6.003 575.136	6.003 577.489	6.003 600.017	6.005
613.35	6.006 624.898	6.008 649.211	6.014 649.779	6.014 651.067	6.015

ExpandedLocal.rep

674.66	6.03	685.072	6.039	699.541	6.062	720.932	6.103	724.423	6.117
732.332	6.148	749.304	6.218	756.793	6.264	774.185	6.412	792.654	6.502
802.472	7.317	813.596	8.62	864.375	13.915	873.709	13.78	894.86	15.312
936.097	17.614	948.352	18.438	971.958	19.967	976.125	20.217	1007.819	22.017
1032.851	22.521	1047.877	22.863	1057.389	22.971	1072.758	23.151	1079.54	23.192
1138.653	23.125	1147.401	23.103	1151.262	23.074	1172.282	22.867	1187.122	22.702
1202.497	22.495	1219.918	22.282	1240.595	21.993	1258.844	21.812	1301.182	21.644
1316.79	21.575	1330.565	21.627	1369.051	21.305	1392.077	21.028	1402.505	20.94
1432.437	20.851	1442.878	20.889	1494.443	21.077	1498.23	21.085	1525.088	21.17
1531.127	21.167	1555.734	21.159	1564.023	21.117	1573.627	21.037	1617.026	20.802
1629.817	20.466	1647.671	19.229	1680.141	14.537	1695.61	11.225	1708.963	10.902
1728.507	10.768	1750.12	10.758	1786.655	10.608	1794.3	10.602	1822.159	10.529
1831.546	10.457	1860.094	10.406	1893.168	10.416	1940.508	10.412	1954.129	10.404
1958.784	10.404	1984.774	10.404	1991.681	10.404	2015.42	10.404	2024.577	10.404
2046.066	10.405	2057.474	10.405	2076.712	10.406	2090.371	10.407	2107.357	10.411
2123.268	10.414	2141.7	10.422	2156.164	10.438	2162.628	10.452	2189.061	10.486
2199.295	10.511	2221.958	10.598	2248.214	10.841	2254.854	10.898	2260.586	10.902
2287.751	11.578	2302.887	12.269	2352.523	20.469	2353.545	20.662	2354.728	20.765
2386.441	23.032	2390.232	22.804	2444.461	24.021	2452.235	24.949	2471.799	24.244
2502.095	23.259								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-5426	.08	0	.05	79	.08

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	0	79		656	656	.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
1525.09	2452.24	21.17	F

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 13197

INPUT

Description: Data from Land Survey

Station Elevation Data num= 428

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-5426	15.143	-5419.5	15.136	-5412.59	15.122	-5381.93	15.045	-5357.19	14.971
-5343.55	14.936	-5327.53	14.879	-5309.03	14.842	-5289.44	14.79	-5245.09	14.623
-5240	14.602	-5238.53	14.595	-5229.53	14.552	-5205.48	14.453	-5179.19	14.379
-5159.51	14.309	-5136.44	14.266	-5118.24	14.232	-5081.35	14.238	-5067.4	14.224
-5045.69	14.218	-5032.89	14.193	-5003.32	14.108	-4994.44	14.105	-4960.39	14.096

ExpandedLocal.rep

-4932.54	14.075-4929.33	14.007-4927.02	14.079-4922.84	14.033-4912.91	13.994
-4873.26	13.34-4834.72	13.878-4825.78	13.895-4823.19	13.885-4807.37	13.988
-4795.23	14.027-4791.26	14.041-4769.22	14.077-4732.13	14.172-4722.22	14.195
-4717.19	14.199 -4687.7	14.18-4651.55	14.275-4618.66	14.317-4596.29	14.359
-4586.4	14.365-4584.23	14.369-4558.71	14.312-4550.96	14.305-4540.11	14.242
-4517.7	14.082 -4501.7	13.923-4460.25	13.599-4451.18	13.514-4439.85	13.488
-4405.95	13.48 -4369.6	13.44-4351.39	13.432-4330.69	13.358-4300.51	13.145
-4284.86	12.984-4278.85	12.917-4219.38	12.694-4218.33	12.687-4216.69	12.678
-4206.83	12.656-4165.59	12.535-4151.81	12.516-4140.77	12.507 -4110	12.431
-4056.06	12.427-4052.02	12.43-4045.68	12.435-4007.72	12.237-3991.06	12.159
-3987.21	12.138-3985.49	12.126-3956.51	11.975 -3941.1	11.765-3918.97	11.667
-3903.17	11.687 -3885.7	11.742-3874.67	11.804-3852.44	11.973-3833.71	12.098
-3791.6	12.383-3785.92	12.435-3741.73	12.568-3719.39	12.668-3718.54	12.667
-3704.54	12.658-3686.57	12.661-3677.59	12.641-3653.76	12.565-3644.78	12.523
-3620.95	12.414-3611.97	12.355-3588.14	12.314-3570.18	11.936-3540.49	11.728
-3522.53	11.912-3507.69	11.929-3471.75	11.839-3456.91	11.798-3431.52	11.75
-3424.1	11.742-3398.72	11.615-3391.29	11.603-3376.45	11.612-3358.49	11.7
-3328.8	11.768-3292.87	11.894 -3274.9	11.936-3260.06	11.98-3242.09	12.053
-3212.41	12.185-3176.48	12.307-3161.64	12.318 -3125.7	12.32-3103.44	12.303
-3081.18	12.369-3063.21	12.447-3045.24	12.413-3040.54	12.402-3030.35	12.374
-2990.7	12.352-2964.42	12.278-2954.81	12.163-2902.98	10.915-2898.48	10.825
-2866.41	11.827-2864.78	11.85-2857.34	11.914-2832.55	12.11-2804.76	12.302
-2796.59	12.382-2766.62	12.535 -2756.7	12.586-2714.73	12.805-2700.68	12.822
-2671.4	12.692-2634.75	12.63 -2580.1	12.724 -2571.2	12.735-2564.69	12.744
-2535.84	12.799-2519.18	12.78-2474.66	12.668-2472.39	12.66-2469.91	12.647
-2439.67	12.607-2432.49	12.613-2427.56	12.614-2403.98	12.627-2380.48	12.61
-2362.43	12.566-2338.04	12.486-2331.01	12.449-2305.07	12.285 -2294.6	12.222
-2244.7	11.883-2239.14	11.865-2234.58	11.865-2206.17	11.864-2148.15	12.121
-2140.24	12.181-2134.99	12.202-2107.27	12.256-2095.36	12.249 -2074.3	12.258
-2071.87	12.259-2063.47	12.257-2041.47	12.189-2030.19	12.164-1987.71	11.946
-1963.61	11.796-1943.01	11.746-1922.97	11.689-1883.51	11.446-1877.37	11.408
-1820.48	10.349-1811.72	10.258-1750.94	11.462-1746.08	11.517-1714.67	11.669
-1713.26	11.673-1680.91	11.602-1680.44	11.6-1679.57	11.596 -1614.8	11.389
-1555.26	11.051-1549.15	11-1545.84	11.008-1516.33	11.006-1512.07	11.021
-1456.51	11.306-1450.69	11.333-1424.58	11.263-1417.87	11.259-1403.25	11.17
-1352.23	10.396-1333.71	10.463-1286.58	11.065-1264.95	11.065-1253.76	11.058
-1250.54	11.019-1244.37	10.956-1216.87	10.924 -1204.2	10.731-1179.53	10.76
-1174.84	10.852-1168.09	10.863-1157.55	10.853 -1132.3	10.819-1116.11	10.7
-1078.61	11.005-1067.52	11.062-1050.83	11.115-1030.18	11.172-1026.63	11.162
-1020.1	11.152 -998.67	11.034-992.849	11.081-982.685	11.04-929.862	10.853
-918.174	10.976-905.668	11.042-882.648	11.24-881.224	11.252-878.682	11.279
-843.499	11.648-813.921	11.939-808.893	11.981-806.162	12.002-796.933	12.052
-777.122	12.169-769.827	12.188-736.699	12.036-711.904	11.897-689.451	11.887
-652.033	11.997-638.525	11.998-602.803	11.695-562.284	11.368-540.048	11.192
-516.317	10.918-507.222	10.814-448.458	9.981-441.571	9.878-435.117	9.845
-408.745	9.054-407.927	9.074-396.423	9.43-373.643	9.39-366.943	9.386
-338.483	9.348-337.463	9.337-332.168	9.34-311.346	9.308-303.323	9.249
-285.239	9.078-268.163	8.836-263.763	8.861-240.927	8.701-235.207	8.652

ExpandedLocal.rep

-216.595	8.557	-197.843	8.421	-191.493	8.377	-131.103	8.085	-127.523	8.07
-113.628	8.1	-82.928	8.069	-58.445	8.373	-57.203	8.355	-32.169	6.502
-22.043	6.444	-6.789	6.286	0	6.1	19	6	34	6
36	4.6	41	3.8	44	4.5	48	5.4	59	5.8
71	6	83.437	6.002	115.187	6.002	120.11	6.002	124.037	6.002
145.49	6.002	153.757	6.002	170.87	6.002	188.917	6.002	196.25	6.002
215.277	6.002	221.63	6.002	224.077	6.002	247.009	6.002	259.238	6.002
272.389	6.002	294.398	6.002	297.769	6.002	306.518	6.002	323.149	6.002
329.558	6.002	344.002	6.002	364.718	6.002	373.909	6.002	397.759	6.002
399.288	6.002	399.878	6.002	401.206	6.002	435.038	6.002	450.048	6.002
470.198	6.002	475.428	6.002	484.782	6.002	488.539	6.002	500.493	6.002
505.768	6.002	525.374	6.002	541.629	6.002	569.803	6.003	575.136	6.003
577.489	6.003	600.017	6.005	613.35	6.006	624.898	6.008	649.211	6.014
649.779	6.014	651.067	6.015	674.66	6.03	685.072	6.039	699.541	6.062
720.932	6.103	724.423	6.117	732.332	6.148	749.304	6.218	756.793	6.264
774.185	6.412	792.654	6.502	802.472	7.317	813.596	8.62	864.375	13.915
873.709	13.78	894.86	15.312	936.097	17.614	948.352	18.438	971.958	19.967
976.125	20.217	1007.819	22.017	1032.851	22.521	1047.877	22.863	1057.389	22.971
1072.758	23.151	1079.54	23.192	1138.653	23.125	1147.401	23.103	1151.262	23.074
1172.282	22.867	1187.122	22.702	1202.497	22.495	1219.918	22.282	1240.595	21.993
1258.844	21.812	1301.182	21.644	1316.79	21.575	1330.565	21.627	1369.051	21.305
1392.077	21.028	1402.505	20.941	1432.437	20.851	1442.878	20.889	1494.443	21.077
1498.23	21.085	1525.088	21.171	1531.127	21.167	1555.734	21.159	1564.023	21.117
1573.627	21.037	1617.026	20.802	1629.817	20.466	1647.671	19.229	1680.141	14.537
1695.61	11.225	1708.963	10.902	1728.507	10.768	1750.12	10.758	1786.655	10.608
1794.3	10.602	1822.159	10.529	1831.546	10.457	1860.094	10.406	1893.168	10.416
1940.508	10.412	1954.129	10.404	1958.784	10.404	1984.774	10.404	1991.681	10.404
2015.42	10.404	2024.577	10.404	2046.066	10.405	2057.474	10.405	2076.712	10.406
2090.371	10.407	2107.357	10.411	2123.268	10.414	2141.7	10.422	2156.164	10.438
2162.628	10.452	2189.061	10.486	2199.295	10.511	2221.958	10.598	2248.214	10.841
2254.854	10.898	2260.586	10.902	2287.751	11.578	2302.887	12.269	2352.523	20.469
2353.545	20.662	2354.728	20.765	2386.441	23.032	2390.232	22.804	2444.461	24.021
2452.235	24.949	2471.799	24.244	2502.095	23.259				

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -5426 .08 34 .05 48 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 34 48 398 398 398 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 1525.09 2452.24 21.17 F

CROSS SECTION

ExpandedLocal.rep

RIVER: Gum Bayou  
REACH: Upper

RS: 12799

INPUT

Description: Copy of COE 2.424\*

Station Elevation Data num= 424

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-5426	15.143	-5419.5	15.136	-5412.59	15.122	-5381.93	15.045	-5357.19	14.971
-5343.55	14.936	-5327.53	14.879	-5309.03	14.842	-5289.44	14.79	-5245.09	14.623
-5240	14.602	-5238.53	14.595	-5229.53	14.552	-5205.48	14.453	-5179.19	14.379
-5159.51	14.309	-5136.44	14.266	-5118.24	14.232	-5081.35	14.238	-5067.4	14.224
-5045.69	14.218	-5032.89	14.193	-5003.32	14.108	-4994.44	14.105	-4960.39	14.096
-4932.54	14.075	-4929.33	14.007	-4927.02	14.079	-4922.84	14.033	-4912.91	13.994
-4873.26	13.34	-4834.72	13.878	-4825.78	13.895	-4823.19	13.885	-4807.37	13.988
-4795.23	14.027	-4791.26	14.041	-4769.22	14.077	-4732.13	14.172	-4722.22	14.195
-4717.19	14.199	-4687.7	14.18	-4651.55	14.275	-4618.66	14.317	-4596.29	14.359
-4586.4	14.365	-4584.23	14.369	-4558.71	14.312	-4550.96	14.305	-4540.11	14.242
-4517.7	14.082	-4501.7	13.923	-4460.25	13.599	-4451.18	13.514	-4439.85	13.488
-4405.95	13.48	-4369.6	13.44	-4351.39	13.432	-4330.69	13.358	-4300.51	13.145
-4284.86	12.984	-4278.85	12.917	-4219.38	12.694	-4218.33	12.687	-4216.69	12.678
-4206.83	12.656	-4165.59	12.535	-4151.81	12.516	-4140.77	12.507	-4110	12.431
-4056.06	12.427	-4052.02	12.43	-4045.68	12.435	-4007.72	12.237	-3991.06	12.159
-3987.21	12.138	-3985.49	12.126	-3956.51	11.975	-3941.1	11.765	-3918.97	11.667
-3903.17	11.687	-3885.7	11.742	-3874.67	11.804	-3852.44	11.973	-3833.71	12.098
-3791.6	12.383	-3785.92	12.435	-3741.73	12.568	-3719.39	12.668	-3718.54	12.667
-3704.54	12.658	-3686.57	12.661	-3677.59	12.641	-3653.76	12.565	-3644.78	12.523
-3620.95	12.414	-3611.97	12.355	-3588.14	12.314	-3570.18	11.936	-3540.49	11.728
-3522.53	11.912	-3507.69	11.929	-3471.75	11.839	-3456.91	11.798	-3431.52	11.75
-3424.1	11.742	-3398.72	11.615	-3391.29	11.603	-3376.45	11.612	-3358.49	11.7
-3328.8	11.768	-3292.87	11.894	-3274.9	11.936	-3260.06	11.98	-3242.09	12.053
-3212.41	12.185	-3176.48	12.307	-3161.64	12.318	-3125.7	12.32	-3103.44	12.303
-3081.18	12.369	-3063.21	12.447	-3045.24	12.413	-3040.54	12.402	-3030.35	12.374
-2990.7	12.352	-2964.42	12.278	-2954.81	12.163	-2902.98	10.915	-2898.48	10.825
-2866.41	11.827	-2864.78	11.85	-2857.34	11.914	-2832.55	12.11	-2804.76	12.302
-2796.59	12.382	-2766.62	12.535	-2756.7	12.586	-2714.73	12.805	-2700.68	12.822
-2671.4	12.692	-2634.75	12.63	-2580.1	12.724	-2571.2	12.735	-2564.69	12.744
-2535.84	12.799	-2519.18	12.78	-2474.66	12.668	-2472.39	12.66	-2469.91	12.647
-2439.67	12.607	-2432.49	12.613	-2427.56	12.614	-2403.98	12.627	-2380.48	12.61
-2362.43	12.566	-2338.04	12.486	-2331.01	12.449	-2305.07	12.285	-2294.6	12.222
-2244.7	11.883	-2239.14	11.865	-2234.58	11.865	-2206.17	11.864	-2148.15	12.121
-2140.24	12.181	-2134.99	12.202	-2107.27	12.256	-2095.36	12.249	-2074.3	12.258
-2071.87	12.259	-2063.47	12.257	-2041.47	12.189	-2030.19	12.164	-1987.71	11.946
-1963.61	11.796	-1943.01	11.746	-1922.97	11.689	-1883.51	11.446	-1877.37	11.408
-1820.48	10.349	-1811.72	10.258	-1750.94	11.462	-1746.08	11.517	-1714.67	11.669
-1713.26	11.673	-1680.91	11.602	-1680.44	11.6	-1679.57	11.596	-1614.8	11.389
-1555.26	11.051	-1549.15	11.15	-1545.84	11.008	-1516.33	11.006	-1512.07	11.021
-1456.51	11.306	-1450.69	11.333	-1424.58	11.263	-1417.87	11.259	-1403.25	11.17



ExpandedLocal.rep

-1352.23	10.396-1333.71	10.463-1286.58	11.065-1264.95	11.065-1253.76	11.058
-1250.54	11.019-1244.37	10.956-1216.87	10.924 -1204.2	10.731-1179.53	10.76
-1174.84	10.852-1168.09	10.863-1157.55	10.853 -1132.3	10.819-1116.11	10.7
-1078.61	11.005-1067.52	11.062-1050.83	11.115-1030.18	11.172-1026.63	11.162
-1020.1	11.152 -998.67	11.034-992.849	11.081-982.685	11.04-929.862	10.853
-918.174	10.976-905.668	11.042-882.648	11.24-881.224	11.252-878.682	11.279
-843.499	11.648-813.921	11.939-808.893	11.981-806.162	12.002-796.933	12.052
-777.122	12.169-769.827	12.188-736.699	12.036-711.904	11.897-689.451	11.887
-652.033	11.997-638.525	11.998-602.803	11.695-562.284	11.368-540.048	11.192
-516.317	10.918-507.222	10.814-448.458	9.981-441.571	9.878-435.117	9.845
-408.745	9.054-407.927	9.074-396.423	9.43-373.643	9.39-366.943	9.386
-338.483	9.348-337.463	9.337-332.168	9.34-311.346	9.308-303.323	9.249
-285.239	9.078-268.163	8.836-263.763	8.861-240.927	8.701-235.207	8.652
-216.595	8.557-197.843	8.421-191.493	8.377-131.103	8.085-127.523	8.07
-113.628	8.1 -82.928	8.069 -58.445	8.373 -57.203	8.355 -32.169	6.502
-22.043	6.444 -6.789	6.286 13.117	6.091 18.591	6.056 32.796	6.03
43.971	6.005 48.277	6.004 69.351	6.002 83.437	6.002 115.187	6.002
120.11	6.002 124.037	6.002 145.49	6.002 153.757	6.002 170.87	6.002
188.917	6.002 196.25	6.002 215.277	6.002 221.6	11.03 227.65	10.74
233.7	10.63 239.75	10.67 243.78	10.92 319.62	10.47 343.92	10.46
350.53	5.57 352.66	5.48 364.67	5.29 367.38	5.29 370.87	5.41
373.48	5.66 376.07	5.68 388.02	10.56 418.78	9.97 435.038	6.002
450.048	6.002 470.198	6.002 475.428	6.002 484.782	6.002 488.539	6.002
500.493	6.002 505.768	6.002 525.374	6.002 541.629	6.002 569.803	6.003
575.136	6.003 577.489	6.003 600.017	6.005 613.35	6.006 624.898	6.008
649.211	6.014 649.779	6.014 651.067	6.015 674.66	6.03 685.072	6.039
699.541	6.062 720.932	6.103 724.423	6.117 732.332	6.148 749.304	6.218
756.793	6.264 774.185	6.412 792.654	6.502 802.472	7.317 813.596	8.62
864.375	13.915 873.709	13.78 894.86	15.312 936.097	17.614 948.352	18.438
971.958	19.967 976.125	20.2171007.819	22.0171032.851	22.5211047.877	22.863
1057.389	22.9711072.758	23.151 1079.54	23.1921138.653	23.1251147.401	23.103
1151.262	23.0741172.282	22.8671187.122	22.7021202.497	22.4951219.918	22.282
1240.595	21.9931258.844	21.8121301.182	21.644 1316.79	21.5751330.565	21.627
1369.051	21.3051392.077	21.0281402.505	20.941432.437	20.8511442.878	20.889
1494.443	21.077 1498.23	21.0851525.088	21.171531.127	21.1671555.734	21.159
1564.023	21.1171573.627	21.0371617.026	20.8021629.817	20.4661647.671	19.229
1680.141	14.537 1695.61	11.2251708.963	10.9021728.507	10.768 1750.12	10.758
1786.655	10.608 1794.3	10.6021822.159	10.5291831.546	10.4571860.094	10.406
1893.168	10.4161940.508	10.4121954.129	10.4041958.784	10.4041984.774	10.404
1991.681	10.404 2015.42	10.4042024.577	10.4042046.066	10.4052057.474	10.405
2076.712	10.4062090.371	10.4072107.357	10.4112123.268	10.414 2141.7	10.422
2156.164	10.4382162.628	10.4522189.061	10.4862199.295	10.5112221.958	10.598
2248.214	10.8412254.854	10.8982260.586	10.9022287.751	11.5782302.887	12.269
2352.523	20.4692353.545	20.6622354.728	20.7652386.441	23.032390.232	22.804
2444.461	24.0212452.235	24.9492471.799	24.2442502.095	23.259	

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val

ExpandedLocal.rep

\*\*\*\*\*

-5426 .06 343.92 .05 388.02 .07

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	343.92	388.02		386	386	386		.1	.3
Ineffective Flow			num=	1					
	Sta L	Sta R	Elev	Permanent					
	1525.09	2452.24	21.17	F					

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 12413

INPUT

Description: Copy of COE 2.351

Station Elevation Data num= 411

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-----	------	-----	------	-----	------	-----	------	-----	------

\*\*\*\*\*

-4099	13.228	-4089.15	13.215	-4082.64	13.201	-4056.11	13.115	-4050.62	13.102
-3970.18	13.026	-3957.01	13.114	-3934.83	13.178	-3923.98	13.19	-3905.27	13.143
-3872.81	12.934	-3857.91	12.831	-3835.38	12.265	-3820.5	11.99	-3809.86	11.777
-3773.7	11.655	-3758.81	11.629	-3742.49	12.02	-3702.86	11.88	-3695.69	11.804
-3692.74	11.789	-3685.66	11.769	-3659.71	11.782	-3639.21	11.743	-3610.8	12.006
-3593.64	12.101	-3580.08	12.077	-3535.95	12.357	-3527.57	12.366	-3520.96	12.389
-3494.54	13.103	-3491.4	13.141	-3464.64	13.168	-3461.83	13.144	-3461.5	13.146
-3459.8	13.133	-3386.23	11.794	-3362.4	11.743	-3343.58	11.851	-3311.37	12.199
-3296.34	12.223	-3284.44	12.188	-3273.41	12.152	-3230.61	11.923	-3218.99	11.939
-3181.64	11.905	-3168.91	11.894	-3157.42	11.785	-3132.13	11.712	-3112.7	11.834
-3099.3	11.761	-3085.44	11.697	-3066.47	11.76	-3048.13	11.804	-3003.16	11.846
-2998.63	11.846	-2935.23	11.595	-2935.17	11.595	-2933.44	11.561	-2903.35	10.981
-2902.34	10.941	-2901.26	10.956	-2869.51	11.45	-2867.29	11.449	-2836.68	11.407
-2822.14	11.439	-2781.26	11.616	-2771.03	11.725	-2765.38	11.52	-2712.79	11.37
-2705.38	11.483	-2697.44	11.424	-2649.28	11.498	-2639.72	11.763	-2634.7	11.629
-2618.55	11.732	-2574.07	11.756	-2570.03	11.75	-2545.5	11.718	-2513.57	11.677
-2508.24	11.664	-2500.78	11.642	-2481.59	11.511	-2442.4	11.392	-2417.47	10.464
-2409.47	10.403	-2402.71	10.392	-2376.55	11.278	-2361.78	11.148	-2343.63	11.131
-2311.52	9.858	-2309.76	9.866	-2250.73	9.778	-2244.87	9.561	-2237.95	9.489
-2211.95	10.558	-2189.93	10.483	-2179.03	10.892	-2153.09	10.979	-2130.23	11.009
-2113.18	11.026	-2084.68	10.719	-2080.26	10.699	-2058.14	10.663	-2026.66	10.47
-2014.42	10.305	-1986.62	10.462	-1977.16	10.459	-1948.58	10.575	-1924.99	10.561
-1885.97	10.573	-1878.9	10.348	-1849.81	10.308	-1825.18	9.443	-1807.09	9.596
-1783.97	10.198	-1771.19	10.634	-1733.99	10.322	-1718.13	10.392	-1709.16	10.372
-1663.16	10.811	-1652.28	10.839	-1627.57	11.212	-1619.36	11.37	-1612.41	11.383
-1567.59	11.39	-1557.87	11.38	-1553.47	11.378	-1528.38	11.347	-1520.42	11.308
-1510.29	11.391	-1454.33	11.467	-1435.16	11.54	-1421.29	11.551	-1410.39	11.498
-1360.04	10.893	-1351.4	10.81	-1322.15	10.544	-1304.72	10.106	-1262.91	10.367

ExpandedLocal.rep

-1256.06	10.486-1251.98	10.487-1223.02	10.133-1209.78	9.909-1174.42	9.632
-1156.93	9.676 -1135	9.657-1097.09	8.455-1090.84	8.451-1085.93	8.356
-1057.79	9.417 -1045.1	9.467-1024.75	9.571-1021.97	9.566-967.946	9.473
-958.664	9.432-953.132	9.415-925.619	9.315 -909.28	9.29-892.574	9.26
-872.622	9.26-871.725	9.26-859.541	9.271-830.281	9.315-823.168	9.319
-763.618	9.099-760.809	9.092-760.492	9.09-760.095	9.09-727.476	8.92
-722.885	8.952 -694.46	9.112-682.522	9.166-653.297	9.539-628.428	9.85
-559.364	9.896 -529.38	10.004-523.435	9.843-480.403	9.584-452.982	10.284
-440.375	10.464-422.031	11.073-412.448	11.159-402.296	11.08 -389.24	10.43
-354.5	10.286-342.822	10.523-331.799	10.554-315.394	10.441-277.778	10.071
-258.908	9.913-226.779	9.629-211.112	9.541-196.452	9.412-180.362	9.275
-151.336	8.982-133.945	8.885 -106.22	8.503 -81.054	8.344 -47.902	8.026
-34.186	7.913 -19.928	7.747 13.399	7.43 29.128	7.197 44.049	6.97
59.549	6.521 75.664	6.403 98.142	6.217 119.36	6.096 123.46	6.075
144.559	6.05 164.475	6.047 190.977	6.009 209.591	6.005 214.185	6.003
219.052	6.002 237.394	6.002 254.707	6.002 260.602	6.002 266.848	6.002
299.823	6.002 303	10.5 328	10.49 335	5.33 350	5.2
353	5.2 361	5.24 372	10.62 397	9.94 399.854	6.002
410.236	6.002 423.063	6.002 429.855	6.002 434.517	6.002 446.573	6.003
464.457	6.003 470.207	6.003 474.083	6.003 493.842	6.005 513.65	6.006
517.476	6.006 523.153	6.007 541.111	6.011 553.216	6.013 581.848	6.02
588.38	6.025 592.783	6.028 612.014	6.043 632.349	6.06 635.649	6.062
640.544	6.067 659.283	6.111 671.916	6.143 682.918	6.171 699.239	6.219
730.187	6.401 751.049	6.497 757.934	6.556 777.456	8.294 790.615	9.533
801.09	10.494 816.63	13.017 848.359	15.215 869.748	17.331 872.95	17.45
915.543	18.574 934.02	19.112 948.881	19.27 979.62	19.76 988.448	19.895
992.716	19.8751037.435	19.771051.411	19.5371107.147	18.3771110.106	18.305
1131.973	17.7611132.947	17.74 1149.14	17.181157.368	16.9161179.223	16.309
1247.222	14.0171274.596	14.221281.355	14.2151298.144	14.8621349.621	16.858
1370.344	17.6571383.754	18.121417.065	18.8961417.704	18.9081418.218	18.92
1452.02	19.5121466.092	19.6851486.153	19.9191513.965	20.171535.987	20.357
1554.419	20.471561.839	20.5721588.552	20.7841609.713	20.9541622.685	21.034
1654.908	21.2091656.818	21.2141657.587	21.2181690.951	21.3161705.461	21.445
1735.955	21.621759.217	21.8371773.829	21.968 1793.35	22.0751796.621	22.071
1827.483	21.9571849.082	21.9241861.616	21.8671892.751	21.541895.749	21.495
1921.601	20.8881936.104	20.5122024.765	18.9842027.685	18.932032.281	18.958
2060.055	19.412100.547	19.9122107.248	20.0822130.593	20.6822168.813	21.852
2220.32	22.1712234.995	22.3112237.079	22.3142239.852	22.422271.212	23.286
2292.894	23.2692305.345	23.3172368.436	23.1432383.478	23.1092403.401	23.052
2407.1	23.0262416.615	22.9362440.327	22.7182456.186	22.5012473.554	22.254
2528.438	21.4012540.009	21.2182564.525	21.0592572.033	21.012573.236	20.993
2574.899	20.9982618.732	21.0772646.602	21.0872672.918	21.1152724.073	20.92
2739.372	20.8692743.851	20.8842771.789	20.401 2772.6	20.392772.982	20.394
2839.054	21.0482873.044	21.0862895.586	21.1692905.509	21.2352931.039	21.345
2938.736	21.388 2970.61	21.4222972.943	21.4222979.053	21.395 3005.19	21.28
3010.181	21.1733038.418	20.9533058.852	20.2743089.323	15.1963116.125	10.902
3168.465	10.6663171.327	10.6633186.317	10.763202.034	10.8713208.036	10.871
3237.781	10.8273259.307	10.7963271.009	10.7793286.868	10.756 3287.26	10.755

ExpandedLocal.rep

3304.837	10.7073337.302	10.6173339.215	10.6113343.415	10.5993373.593	10.558
3392.581	10.5243407.971	10.5033437.386	10.463444.946	10.4453476.727	10.451
3497.312	10.4493511.106	10.4493523.494	10.4653562.598	10.4873602.042	10.513
3614.24	10.5263637.553	10.6023648.618	10.6373672.901	10.8213682.996	10.902
3699.894	13.2253746.004	20.1293751.752	20.689 3782.73	22.786 3786.13	23.053
3811.502	22.0783820.508	21.753837.721	23.4173854.886	25.1443892.558	23.909
3922.909	22.907				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****					
-4099	.06	328	.05	372	.07

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	328	372		137	137	137		.1	.3
Ineffective Flow	num=		1						
Sta L	Sta R	Elev	Permanent						
2970.61	3854.89	21.42	F						

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 12276

INPUT

Description: Copy of COE 2.325

Station Elevation Data num= 411

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-4099	13.228	-4089.15	13.215	-4082.64	13.201	-4056.11	13.115	-4050.62	13.102
-3970.18	13.026	-3957.01	13.114	-3934.83	13.178	-3923.98	13.19	-3905.27	13.143
-3872.81	12.934	-3857.91	12.831	-3835.38	12.265	-3820.5	11.99	-3809.86	11.777
-3773.7	11.655	-3758.81	11.629	-3742.49	12.02	-3702.86	11.88	-3695.69	11.804
-3692.74	11.789	-3685.66	11.769	-3659.71	11.782	-3639.21	11.743	-3610.8	12.006
-3593.64	12.101	-3580.08	12.077	-3535.95	12.357	-3527.57	12.366	-3520.96	12.389
-3494.54	13.103	-3491.4	13.141	-3464.64	13.168	-3461.83	13.144	-3461.5	13.146
-3459.8	13.133	-3386.23	11.794	-3362.4	11.743	-3343.58	11.851	-3311.37	12.199
-3296.34	12.223	-3284.44	12.188	-3273.41	12.152	-3230.61	11.923	-3218.99	11.939
-3181.64	11.905	-3168.91	11.894	-3157.42	11.785	-3132.13	11.712	-3112.7	11.834
-3099.3	11.761	-3085.44	11.697	-3066.47	11.76	-3048.13	11.804	-3003.16	11.846
-2998.63	11.846	-2935.23	11.595	-2935.17	11.595	-2933.44	11.561	-2903.35	10.981
-2902.34	10.941	-2901.26	10.956	-2869.51	11.45	-2867.29	11.449	-2836.68	11.407
-2822.14	11.439	-2781.26	11.616	-2771.03	11.725	-2765.38	11.52	-2712.79	11.37
-2705.38	11.483	-2697.44	11.424	-2649.28	11.498	-2639.72	11.763	-2634.7	11.629
-2618.55	11.732	-2574.07	11.756	-2570.03	11.75	-2545.5	11.718	-2513.57	11.677
-2508.24	11.664	-2500.78	11.642	-2481.59	11.511	-2442.4	11.392	-2417.47	10.464
-2409.47	10.403	-2402.71	10.392	-2376.55	11.278	-2361.78	11.148	-2343.63	11.131

ExpandedLocal.rep

-2311.52	9.858-2309.76	9.866-2250.73	9.778-2244.87	9.561-2237.95	9.489
-2211.95	10.558-2189.93	10.483-2179.03	10.892-2153.09	10.979-2130.23	11.009
-2113.18	11.026-2084.68	10.719-2080.26	10.699-2058.14	10.663-2026.66	10.47
-2014.42	10.305-1986.62	10.462-1977.16	10.459-1948.58	10.575-1924.99	10.561
-1885.97	10.573 -1878.9	10.348-1849.81	10.308-1825.18	9.443-1807.09	9.596
-1783.97	10.198-1771.19	10.634-1733.99	10.322-1718.13	10.392-1709.16	10.372
-1663.16	10.811-1652.28	10.839-1627.57	11.212-1619.36	11.37-1612.41	11.383
-1567.59	11.39-1557.87	11.38-1553.47	11.378-1528.38	11.347-1520.42	11.308
-1510.29	11.391-1454.33	11.467-1435.16	11.54-1421.29	11.551-1410.39	11.498
-1360.04	10.893 -1351.4	10.81-1322.15	10.544-1304.72	10.106-1262.91	10.367
-1256.06	10.486-1251.98	10.487-1223.02	10.133-1209.78	9.909-1174.42	9.632
-1156.93	9.676 -1135	9.657-1097.09	8.455-1090.84	8.451-1085.93	8.356
-1057.79	9.417 -1045.1	9.467-1024.75	9.571-1021.97	9.566-967.946	9.473
-958.664	9.432-953.132	9.415-925.619	9.315 -909.28	9.29-892.574	9.26
-872.622	9.26-871.725	9.26-859.541	9.271-830.281	9.315-823.168	9.319
-763.618	9.099-760.809	9.092-760.492	9.09-760.095	9.09-727.476	8.92
-722.885	8.952 -694.46	9.112-682.522	9.166-653.297	9.539-628.428	9.85
-559.364	9.896 -529.38	10.004-523.435	9.843-480.403	9.584-452.982	10.284
-440.375	10.464-422.031	11.073-412.448	11.159-402.296	11.08 -389.24	10.43
-354.5	10.286-342.822	10.523-331.799	10.554-315.394	10.441-277.778	10.071
-258.908	9.913-226.779	9.629-211.112	9.541-196.452	9.412-180.362	9.275
-151.336	8.982-133.945	8.885 -106.22	8.503 -81.054	8.344 -47.902	8.026
-34.186	7.913 -19.928	7.747 13.399	7.43 29.128	7.197 44.049	6.97
59.549	6.521 75.664	6.403 98.142	6.217 119.36	6.096 123.46	6.075
144.559	6.05 164.475	6.047 190.977	6.009 209.591	6.005 214.185	6.003
219.052	6.002 237.394	6.002 254.707	6.002 260.602	6.002 266.848	6.002
299.823	6.002 303	10.5 328	10.49 335	5.33 350	5.2
353	5.2 361	5.24 372	10.62 397	9.94 399.854	6.002
410.236	6.002 423.063	6.002 429.855	6.002 434.517	6.002 446.573	6.003
464.457	6.003 470.207	6.003 474.083	6.003 493.842	6.005 513.65	6.006
517.476	6.006 523.153	6.007 541.111	6.011 553.216	6.013 581.848	6.02
588.38	6.025 592.783	6.028 612.014	6.043 632.349	6.06 635.649	6.062
640.544	6.067 659.283	6.111 671.916	6.143 682.918	6.171 699.239	6.219
730.187	6.401 751.049	6.497 757.934	6.556 777.456	8.294 790.615	9.533
801.09	10.494 816.63	13.017 848.359	15.215 869.748	17.331 872.95	17.45
915.543	18.574 934.02	19.112 948.881	19.27 979.62	19.76 988.448	19.895
992.716	19.8751037.435	19.771051.411	19.5371107.147	18.3771110.106	18.305
1131.973	17.7611132.947	17.74 1149.14	17.181157.368	16.9161179.223	16.309
1247.222	14.0171274.596	14.221281.355	14.2151298.144	14.8621349.621	16.858
1370.344	17.6571383.754	18.121417.065	18.8961417.704	18.9081418.218	18.92
1452.02	19.5121466.092	19.6851486.153	19.9191513.965	20.171535.987	20.357
1554.419	20.471561.839	20.5721588.552	20.7841609.713	20.9541622.685	21.034
1654.908	21.2091656.818	21.2141657.587	21.2181690.951	21.3161705.461	21.445
1735.955	21.621759.217	21.8371773.829	21.968 1793.35	22.0751796.621	22.071
1827.483	21.9571849.082	21.9241861.616	21.8671892.751	21.541895.749	21.495
1921.601	20.8881936.104	20.5122024.765	18.9842027.685	18.932032.281	18.958
2060.055	19.412100.547	19.9122107.248	20.0822130.593	20.6822168.813	21.852
2220.32	22.1712234.995	22.3112237.079	22.3142239.852	22.422271.212	23.286

ExpandedLocal.rep

2292.894	23.2692305.345	23.3172368.436	23.1432383.478	23.1092403.401	23.052
2407.1	23.0262416.615	22.9362440.327	22.7182456.186	22.5012473.554	22.254
2528.438	21.4012540.009	21.2182564.525	21.0592572.033	21.012573.236	20.993
2574.899	20.9982618.732	21.0772646.602	21.0872672.918	21.1152724.073	20.92
2739.372	20.8692743.851	20.8842771.789	20.401 2772.6	20.392772.982	20.394
2839.054	21.0482873.044	21.0862895.586	21.1692905.509	21.2352931.039	21.345
2938.736	21.388 2970.61	21.4222972.943	21.4222979.053	21.395 3005.19	21.28
3010.181	21.1733038.418	20.9533058.852	20.2743089.323	15.1963116.125	10.902
3168.465	10.6663171.327	10.6633186.317	10.763202.034	10.8713208.036	10.871
3237.781	10.8273259.307	10.7963271.009	10.7793286.868	10.756 3287.26	10.755
3304.837	10.7073337.302	10.6173339.215	10.6113343.415	10.5993373.593	10.558
3392.581	10.5243407.971	10.5033437.386	10.463444.946	10.4453476.727	10.451
3497.312	10.4493511.106	10.4493523.494	10.4653562.598	10.4873602.042	10.513
3614.24	10.5263637.553	10.6023648.618	10.6373672.901	10.8213682.996	10.902
3699.894	13.2253746.004	20.1293751.752	20.689 3782.73	22.786 3786.13	23.053
3811.502	22.0783820.508	21.753837.721	23.4173854.886	25.1443892.558	23.909
3922.909	22.907				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-4099	.06	328	.05	372	.07

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	328	372		496	496	.1	.3
Ineffective Flow			num=	1			
Sta L	Sta R	Elev	Permanent				
2970.61	3854.89	21.42	F				

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 11780

INPUT

Description: Copy of COE 2.231

Station Elevation Data num= 395

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3788	12.67-3774.11	12.653	-3760.4	12.569-3738.99	12.497-3707.47	12.349			
-3701.42	12.304	-3688.6	12.237-3668.75	12.102-3630.25	11.823-3596.66	11.612			
-3577.79	11.467-3572.58	11.431-3563.39	11.284-3504.71	11.036-3498.15	11.018				
-3493.15	10.985-3470.93	10.407	-3447	10.167	-3422.9	10.219-3394.69	9.816		
-3352.66	10.231-3320.82	10.622-3317.54	10.653-3293.04	10.827-3282.42	10.897				
-3228.88	10.939	-3216.8	10.952-3212.18	10.939-3158.16	10.596-3143.13	10.509			
-3141.94	10.505-3140.56	10.498-3136.93	10.467-3111.65	10.263-3106.82	10.226				
-3088.21	10.001	-3071.7	9.818-3060.13	9.564-3044.99	9.412-3001.46	8.87			

ExpandedLocal.rep

-2988.08	8.88-2966.34	9.008-2920.76	9.551 -2896.1	9.827-2886.43	9.874
-2861.1	9.954-2860.98	9.955 -2860.6	9.954-2790.74	9.788-2784.77	9.761
-2730.72	9.473 -2720.5	9.418-2713.56	9.374-2685.38	9.196-2677.21	9.072
-2657.71	8.777 -2633.6	8.484-2615.14	8.257-2606.88	8.199-2580.02	8.076
-2566.11	8.007-2542.47	8.522-2509.78	8.719-2479.81	9.208-2474.66	9.275
-2454.4	9.448 -2406.3	10.119-2403.58	10.142-2401.37	10.149-2386.75	10.161
-2374.88	10.198-2370.41	10.232-2305.07	9.953-2304.69	9.951-2304.63	9.951
-2271.79	9.874-2256.89	9.844-2238.91	9.84-2219.74	9.81-2181.09	9.823
-2173.16	9.801-2164.14	9.763-2140.28	9.652-2100.69	9.498-2074.53	9.446
-2040.69	9.36-2008.78	9.247-1988.52	9.257-1975.91	9.281 -1953.4	9.369
-1943.03	9.407-1889.89	9.68-1877.28	9.731-1848.03	9.807 -1844.4	9.811
-1838.39	9.791-1794.98	9.632-1750.95	9.324-1745.78	9.279-1717.62	9.017
-1707.54	8.924-1667.55	8.605-1647.15	8.619-1635.22	8.629 -1624.1	8.642
-1613.7	8.632-1589.19	8.594-1546.16	8.305-1539.02	8.323-1512.38	8.439
-1490.47	8.534 -1470.2	8.689-1444.84	8.846-1414.38	9.157-1411.06	9.186
-1409.05	9.195-1400.81	9.17-1354.77	8.961-1343.52	8.928-1324.99	9.053
-1309.74	9.082-1280.29	8.929-1275.97	8.933-1262.59	8.948 -1246.2	8.921
-1242.19	9.003-1239.36	8.906 -1222.7	9.31-1181.64	9.939-1174.65	9.969
-1164.78	9.788-1140.87	9.881-1133.89	9.904-1109.41	9.828-1107.86	9.854
-1075.32	10.096-1075.03	10.093-1055.38	10.324-1042.21	10.457-1010.68	10.327
-1009.39	10.358-978.777	10.386-976.572	10.4-975.422	10.399 -943.75	10.148
-912.977	10.184-910.928	10.191-879.791	9.701-875.519	9.703-872.854	9.718
-845.285	10.066-819.257	9.539-805.265	9.515-779.641	9.082-758.965	9.095
-746.819	9.677-723.546	7.836-716.722	7.878-713.998	7.888-704.256	7.89
-681.19	10.028-658.123	9.475 -638.64	9.554-615.573	10.042-594.298	10.06
-582.765	10.093-571.231	10.075-528.681	9.817-517.148	9.824-494.081	8.69
-484.34	8.667-474.598	8.779-451.531	10.265-430.256	10.34-418.723	10.265
-395.656	9.886-381.044	9.877-366.432	9.927-331.831	10.394-320.298	10.366
-297.231	9.611-277.748	9.59-254.681	10.224-233.406	10.246 -210.34	9.888
-189.065	9.791-165.998	9.659-156.256	9.614 -133.19	9.694-123.448	9.634
-118.577	9.584-109.722	9.657 -90.64	9.816 -62.702	9.148 -52.961	8.971
-25.023	8.431 2.915	8.098 17.527	7.692 40.594	7.229 61.869	6.969
73.402	6.476 94.677	6.291 106.21	6.291 129.277	6.207 158.502	6.174
181.569	6.16 204.635	6.16 214.377	6.16 237.444	6.16 247.185	6.16
270.252	6.16 279.994	6.16 303.06	6.16 312.802	6.16 335.869	6.16
345.61	6.16 368.677	6.16 378.419	6.16 401.485	6.218 424.552	6.16
434.294	6.16 444.035	6.16 449.278	6.16 469.585	6.12 497.417	6.065
506.964	6.058 518.441	6.051 544.343	6.034 550	11.8 575	11.82
583	5.26 600	3.52 618	4.25 628	11.79 653	11.52
656.479	6.015 690.491	6.026 697.025	6.026 702.827	6.034 731.237	6.093
765.394	6.335 768.616	6.352 771.296	6.371 793.741	6.502 839.766	9.271
842.1	9.423 843.374	9.481 847.711	9.692 880.752	11.208 895.887	11.933
909.605	12.568 917.528	12.919 985.666	15.502 990.259	15.667 994.465	15.659
1026.624	15.5841061.728	16.9161062.581	16.9481064.144	16.9891099.354	17.879
1106.77	18.1061164.167	19.3281180.143	19.7221185.594	19.8221199.593	20.176
1207.584	20.2881233.942	19.6931240.393	19.751266.466	19.0511273.203	18.874
1324.333	17.2571338.822	16.8381353.829	16.6241391.956	15.8721404.441	15.633
1429.088	15.6741437.251	15.7171461.612	16.5391470.061	16.7531517.797	18.296

ExpandedLocal.rep

1535.68	18.8151544.859	19.0121568.489	19.5831591.709	19.9911601.299	20.14
1611.059	20.221634.109	20.4511645.483	20.5271666.918	20.6121689.282	20.684
1710.359	20.752 1754.33	20.941765.347	20.9781786.855	21.0381798.157	21.077
1860.736	21.34 1890.48	21.4491921.552	21.6521952.176	21.8531962.205	21.921
1982.001	22.0171995.014	22.082014.525	22.1152055.134	22.0882093.443	21.944
2107.558	21.9262144.622	21.842173.758	21.9692191.872	22.122206.858	22.171
2242.195	22.3192257.491	22.333 2291.65	22.386 2323.11	22.3792356.138	22.498
2388.729	22.5952404.816	22.7112421.539	22.7492437.341	22.6462454.349	22.606
2469.865	22.472487.158	22.3282517.358	21.8582552.777	21.392567.438	21.208
2567.645	21.2052585.589	20.9752599.692	20.8742618.402	20.6992641.497	20.657
2691.841	21.0032716.842	21.1952728.702	21.2032749.655	21.3622760.954	21.346
2782.469	21.285 2851.75	20.9912880.909	20.9612904.927	20.4432913.722	20.215
2943.829	20.712950.536	20.8262979.348	21.1162986.721	21.1213038.503	21.227
3044.975	21.233071.898	21.1343077.788	21.1293105.292	21.123110.602	21.12
3115.73	21.1263143.415	21.2813161.984	21.3273205.474	21.3993209.042	21.418
3238.868	21.514 3244.74	21.524 3257.75	21.5733276.725	21.6193286.364	21.614
3324.292	21.5183341.556	21.5183377.245	21.5423387.134	21.5323390.358	21.573
3396.701	21.6073439.159	21.827 3460.74	21.96 3469.11	22.0313512.362	22.433
3534.345	22.5883541.519	22.6143571.148	22.6943613.928	22.7293644.754	22.737
3676.616	22.7733683.168	22.7923686.337	22.7993755.163	22.814 3756.37	22.808
3791.966	22.3443811.721	22.1923831.155	21.7743853.973	21.6033865.571	21.662
3901.145	21.4243931.672	21.5013939.177	21.363951.577	21.5123975.973	21.924
3975.98	21.9243975.988	21.9254012.783	26.1724030.728	25.4054072.143	24.205

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3788	.06	575	.05	628	.08

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	575	628		48	48	48		.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 11732

INPUT

Description: Copy of COE 2.222

Station Elevation Data num= 398

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3788	12.67-3774.11	12.653	-3760.4	12.569	-3738.99	12.497	-3707.47	12.349	
-3701.42	12.304	-3688.6	12.237	-3668.75	12.102	-3630.25	11.823	-3596.66	11.612
-3577.79	11.467	-3572.58	11.431	-3563.39	11.284	-3504.71	11.036	-3498.15	11.018
-3493.15	10.985	-3470.93	10.407	-3447	10.167	-3422.9	10.219	-3394.69	9.816
-3352.66	10.231	-3320.82	10.622	-3317.54	10.653	-3293.04	10.827	-3282.42	10.897



ExpandedLocal.rep

-3228.88	10.939	-3216.8	10.952-3212.18	10.939-3158.16	10.596-3143.13	10.509
-3141.94	10.505	-3140.56	10.498-3136.93	10.467-3111.65	10.263-3106.82	10.226
-3088.21	10.001	-3071.7	9.818-3060.13	9.564-3044.99	9.412-3001.46	8.87
-2988.08	8.88	-2966.34	9.008-2920.76	9.551 -2896.1	9.827-2886.43	9.874
-2861.1	9.954	-2860.98	9.955 -2860.6	9.954-2790.74	9.788-2784.77	9.761
-2730.72	9.473	-2720.5	9.418-2713.56	9.374-2685.38	9.196-2677.21	9.072
-2657.71	8.777	-2633.6	8.484-2615.14	8.257-2606.88	8.199-2580.02	8.076
-2566.11	8.007	-2542.47	8.522-2509.78	8.719-2479.81	9.208-2474.66	9.275
-2454.4	9.448	-2406.3	10.119-2403.58	10.142-2401.37	10.149-2386.75	10.161
-2374.88	10.198	-2370.41	10.232-2305.07	9.953-2304.69	9.951-2304.63	9.951
-2271.79	9.874	-2256.89	9.844-2238.91	9.84-2219.74	9.81-2181.09	9.823
-2173.16	9.801	-2164.14	9.763-2140.28	9.652-2100.69	9.498-2074.53	9.446
-2040.69	9.36	-2008.78	9.247-1988.52	9.257-1975.91	9.281 -1953.4	9.369
-1943.03	9.407	-1889.89	9.68-1877.28	9.731-1848.03	9.807 -1844.4	9.811
-1838.39	9.791	-1794.98	9.632-1750.95	9.324-1745.78	9.279-1717.62	9.017
-1707.54	8.924	-1667.55	8.605-1647.15	8.619-1635.22	8.629 -1624.1	8.642
-1613.7	8.632	-1589.19	8.594-1546.16	8.305-1539.02	8.323-1512.38	8.439
-1490.47	8.534	-1470.2	8.689-1444.84	8.846-1414.38	9.157-1411.06	9.186
-1409.05	9.195	-1400.81	9.17-1354.77	8.961-1343.52	8.928-1324.99	9.053
-1309.74	9.082	-1280.29	8.929-1275.97	8.933-1262.59	8.948 -1246.2	8.921
-1242.19	9.003	-1239.36	8.906 -1222.7	9.31-1181.64	9.939-1174.65	9.969
-1164.78	9.788	-1140.87	9.881-1133.89	9.904-1109.41	9.828-1107.86	9.854
-1075.32	10.096	-1075.03	10.093-1055.38	10.324-1042.21	10.457-1010.68	10.327
-1009.39	10.358	-978.777	10.386-976.572	10.4-975.422	10.399 -943.75	10.148
-912.977	10.184	-910.928	10.191-879.791	9.701-875.519	9.703-872.854	9.718
-845.285	10.066	-819.257	9.539-805.265	9.515-779.641	9.082-758.965	9.095
-746.819	9.677	-723.546	7.836-716.722	7.878-713.998	7.888-704.256	7.89
-681.19	10.028	-658.123	9.475 -638.64	9.554-615.573	10.042-594.298	10.06
-582.765	10.093	-571.231	10.075-528.681	9.817-517.148	9.824-494.081	8.69
-484.34	8.667	-474.598	8.779-451.531	10.265-430.256	10.34-418.723	10.265
-395.656	9.886	-381.044	9.877-366.432	9.927-331.831	10.394-320.298	10.366
-297.231	9.611	-277.748	9.59-254.681	10.224-233.406	10.246 -210.34	9.888
-189.065	9.791	-165.998	9.659-156.256	9.614 -133.19	9.694-123.448	9.634
-118.577	9.584	-109.722	9.657 -90.64	9.816 -62.702	9.148 -52.961	8.971
-25.023	8.431	2.915	8.098 17.527	7.692 40.594	7.229 61.869	6.969
73.402	6.476	94.677	6.291 106.21	6.291 129.277	6.207 158.502	6.174
181.569	6.16	204.635	6.16 214.377	6.16 237.444	6.16 247.185	6.16
270.252	6.16	279.994	6.16 303.06	6.16 312.802	6.16 335.869	6.16
345.61	6.16	368.677	6.16 378.419	6.16 401.485	6.218 424.552	6.16
434.294	6.16	444.035	6.16 449.278	6.16 469.585	6.12 497.417	6.065
506.964	6.058	518.441	6.051 544.343	6.034 550	11.8 575	11.82
583	3.62	600	3.62 600.01	3.62 601	3.62 601.01	3.62
618	3.62	627	3.62 653	11.52 656.479	6.015 690.491	6.026
697.025	6.026	702.827	6.034 731.237	6.093 765.394	6.335 768.616	6.352
771.296	6.371	793.741	6.502 839.766	9.271 842.1	9.423 843.374	9.481
847.711	9.692	880.752	11.208 895.887	11.933 909.605	12.568 917.528	12.919
985.666	15.502	990.259	15.667 994.465	15.6591026.624	15.5841061.728	16.916
1062.581	16.9481064.144	16.9891099.354	17.879 1106.77	18.1061164.167		19.328

ExpandedLocal.rep

1180.143	19.7221185.594	19.8221199.593	20.1761207.584	20.2881233.942	19.693
1240.393	19.751266.466	19.0511273.203	18.8741324.333	17.2571338.822	16.838
1353.829	16.6241391.956	15.8721404.441	15.6331429.088	15.6741437.251	15.717
1461.612	16.5391470.061	16.7531517.797	18.296 1535.68	18.8151544.859	19.012
1568.489	19.5831591.709	19.9911601.299	20.141611.059	20.221634.109	20.451
1645.483	20.5271666.918	20.6121689.282	20.6841710.359	20.752 1754.33	20.94
1765.347	20.9781786.855	21.0381798.157	21.0771860.736	21.34 1890.48	21.449
1921.552	21.6521952.176	21.8531962.205	21.9211982.001	22.0171995.014	22.08
2014.525	22.1152055.134	22.0882093.443	21.9442107.558	21.9262144.622	21.84
2173.758	21.9692191.872	22.122206.858	22.1712242.195	22.3192257.491	22.333
2291.65	22.386 2323.11	22.3792356.138	22.4982388.729	22.5952404.816	22.711
2421.539	22.7492437.341	22.6462454.349	22.6062469.865	22.472487.158	22.328
2517.358	21.8582552.777	21.392567.438	21.2082567.645	21.2052585.589	20.975
2599.692	20.8742618.402	20.6992641.497	20.6572691.841	21.0032716.842	21.195
2728.702	21.2032749.655	21.3622760.954	21.3462782.469	21.285 2851.75	20.991
2880.909	20.9612904.927	20.4432913.722	20.2152943.829	20.712950.536	20.826
2979.348	21.1162986.721	21.1213038.503	21.2273044.975	21.233071.898	21.134
3077.788	21.1293105.292	21.123110.602	21.12 3115.73	21.1263143.415	21.281
3161.984	21.3273205.474	21.3993209.042	21.4183238.868	21.514 3244.74	21.524
3257.75	21.5733276.725	21.6193286.364	21.6143324.292	21.5183341.556	21.518
3377.245	21.5423387.134	21.5323390.358	21.5733396.701	21.6073439.159	21.827
3460.74	21.96 3469.11	22.0313512.362	22.4333534.345	22.5883541.519	22.614
3571.148	22.6943613.928	22.7293644.754	22.7373676.616	22.7733683.168	22.792
3686.337	22.7993755.163	22.814 3756.37	22.8083791.966	22.3443811.721	22.192
3831.155	21.7743853.973	21.6033865.571	21.6623901.145	21.4243931.672	21.501
3939.177	21.363951.577	21.5123975.973	21.924 3975.98	21.9243975.988	21.925
4012.783	26.1724030.728	25.4054072.143	24.205		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3788	.06	575	.05	653	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	575	653		84	84	.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 11648

INPUT

Description: Copy of COE 2.206

Station Elevation Data num= 395

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3788	12.67-3774.11	12.653	-3760.4	12.569-3738.99	12.497-3707.47	12.349			

ExpandedLocal.rep

-3701.42	12.304	-3688.6	12.237-3668.75	12.102-3630.25	11.823-3596.66	11.612
-3577.79	11.467-3572.58	11.431-3563.39	11.284-3504.71	11.036-3498.15	11.018	
-3493.15	10.985-3470.93	10.407 -3447	10.167 -3422.9	10.219-3394.69	9.816	
-3352.66	10.231-3320.82	10.622-3317.54	10.653-3293.04	10.827-3282.42	10.897	
-3228.88	10.939 -3216.8	10.952-3212.18	10.939-3158.16	10.596-3143.13	10.509	
-3141.94	10.505-3140.56	10.498-3136.93	10.467-3111.65	10.263-3106.82	10.226	
-3088.21	10.001 -3071.7	9.818-3060.13	9.564-3044.99	9.412-3001.46	8.87	
-2988.08	8.88-2966.34	9.008-2920.76	9.551 -2896.1	9.827-2886.43	9.874	
-2861.1	9.954-2860.98	9.955 -2860.6	9.954-2790.74	9.788-2784.77	9.761	
-2730.72	9.473 -2720.5	9.418-2713.56	9.374-2685.38	9.196-2677.21	9.072	
-2657.71	8.777 -2633.6	8.484-2615.14	8.257-2606.88	8.199-2580.02	8.076	
-2566.11	8.007-2542.47	8.522-2509.78	8.719-2479.81	9.208-2474.66	9.275	
-2454.4	9.448 -2406.3	10.119-2403.58	10.142-2401.37	10.149-2386.75	10.161	
-2374.88	10.198-2370.41	10.232-2305.07	9.953-2304.69	9.951-2304.63	9.951	
-2271.79	9.874-2256.89	9.844-2238.91	9.84-2219.74	9.81-2181.09	9.823	
-2173.16	9.801-2164.14	9.763-2140.28	9.652-2100.69	9.498-2074.53	9.446	
-2040.69	9.36-2008.78	9.247-1988.52	9.257-1975.91	9.281 -1953.4	9.369	
-1943.03	9.407-1889.89	9.68-1877.28	9.731-1848.03	9.807 -1844.4	9.811	
-1838.39	9.791-1794.98	9.632-1750.95	9.324-1745.78	9.279-1717.62	9.017	
-1707.54	8.924-1667.55	8.605-1647.15	8.619-1635.22	8.629 -1624.1	8.642	
-1613.7	8.632-1589.19	8.594-1546.16	8.305-1539.02	8.323-1512.38	8.439	
-1490.47	8.534 -1470.2	8.689-1444.84	8.846-1414.38	9.157-1411.06	9.186	
-1409.05	9.195-1400.81	9.17-1354.77	8.961-1343.52	8.928-1324.99	9.053	
-1309.74	9.082-1280.29	8.929-1275.97	8.933-1262.59	8.948 -1246.2	8.921	
-1242.19	9.003-1239.36	8.906 -1222.7	9.31-1181.64	9.939-1174.65	9.969	
-1164.78	9.788-1140.87	9.881-1133.89	9.904-1109.41	9.828-1107.86	9.854	
-1075.32	10.096-1075.03	10.093-1055.38	10.324-1042.21	10.457-1010.68	10.327	
-1009.39	10.358-978.777	10.386-976.572	10.4-975.422	10.399 -943.75	10.148	
-912.977	10.184-910.928	10.191-879.791	9.701-875.519	9.703-872.854	9.718	
-845.285	10.066-819.257	9.539-805.265	9.515-779.641	9.082-758.965	9.095	
-746.819	9.677-723.546	7.836-716.722	7.878-713.998	7.888-704.256	7.89	
-681.19	10.028-658.123	9.475 -638.64	9.554-615.573	10.042-594.298	10.06	
-582.765	10.093-571.231	10.075-528.681	9.817-517.148	9.824-494.081	8.69	
-484.34	8.667-474.598	8.779-451.531	10.265-430.256	10.34-418.723	10.265	
-395.656	9.886-381.044	9.877-366.432	9.927-331.831	10.394-320.298	10.366	
-297.231	9.611-277.748	9.59-254.681	10.224-233.406	10.246 -210.34	9.888	
-189.065	9.791-165.998	9.659-156.256	9.614 -133.19	9.694-123.448	9.634	
-118.577	9.584-109.722	9.657 -90.64	9.816 -62.702	9.148 -52.961	8.971	
-25.023	8.431 2.915	8.098 17.527	7.692 40.594	7.229 61.869	6.969	
73.402	6.476 94.677	6.291 106.21	6.291 129.277	6.207 158.502	6.174	
181.569	6.16 204.635	6.16 214.377	6.16 237.444	6.16 247.185	6.16	
270.252	6.16 279.994	6.16 303.06	6.16 312.802	6.16 335.869	6.16	
345.61	6.16 368.677	6.16 378.419	6.16 401.485	6.218 424.552	6.16	
434.294	6.16 444.035	6.16 449.278	6.16 469.585	6.12 497.417	6.065	
506.964	6.058 518.441	6.051 544.343	6.034 550	11.8 575	11.82	
583	5.26 600	3.52 618	4.25 628	11.79 653	11.52	
656.479	6.015 690.491	6.026 697.025	6.026 702.827	6.034 731.237	6.093	
765.394	6.335 768.616	6.352 771.296	6.371 793.741	6.502 839.766	9.271	

ExpandedLocal.rep

842.1	9.423	843.374	9.481	847.711	9.692	880.752	11.208	895.887	11.933
909.605	12.568	917.528	12.919	985.666	15.502	990.259	15.667	994.465	15.659
1026.624	15.584	1061.728	16.916	1062.581	16.948	1064.144	16.989	1099.354	17.879
1106.77	18.106	1164.167	19.328	1180.143	19.722	1185.594	19.822	1199.593	20.176
1207.584	20.288	1233.942	19.693	1240.393	19.751	1266.466	19.051	1273.203	18.874
1324.333	17.257	1338.822	16.838	1353.829	16.624	1391.956	15.872	1404.441	15.633
1429.088	15.674	1437.251	15.717	1461.612	16.539	1470.061	16.753	1517.797	18.296
1535.68	18.815	1544.859	19.012	1568.489	19.583	1591.709	19.991	1601.299	20.14
1611.059	20.221	1634.109	20.451	1645.483	20.527	1666.918	20.612	1689.282	20.684
1710.359	20.752	1754.33	20.941	1765.347	20.978	1786.855	21.038	1798.157	21.077
1860.736	21.34	1890.48	21.449	1921.552	21.652	1952.176	21.853	1962.205	21.921
1982.001	22.017	1995.014	22.082	2014.525	22.115	2055.134	22.088	2093.443	21.944
2107.558	21.926	2144.622	21.842	2173.758	21.969	2191.872	22.122	2206.858	22.171
2242.195	22.319	2257.491	22.333	2291.65	22.386	2323.11	22.379	2356.138	22.498
2388.729	22.595	2404.816	22.711	2421.539	22.749	2437.341	22.646	2454.349	22.606
2469.865	22.472	2487.158	22.328	2517.358	21.858	2552.777	21.392	2567.438	21.208
2567.645	21.205	2585.589	20.975	2599.692	20.874	2618.402	20.699	2641.497	20.657
2691.841	21.003	2716.842	21.195	2728.702	21.203	2749.655	21.362	2760.954	21.346
2782.469	21.285	2851.75	20.991	2880.909	20.961	2904.927	20.443	2913.722	20.215
2943.829	20.712	2950.536	20.826	2979.348	21.116	2986.721	21.121	3038.503	21.227
3044.975	21.233	3071.898	21.134	3077.788	21.129	3105.292	21.123	3110.602	21.12
3115.73	21.126	3143.415	21.281	3161.984	21.327	3205.474	21.399	3209.042	21.418
3238.868	21.514	3244.74	21.524	3257.75	21.573	3276.725	21.619	3286.364	21.614
3324.292	21.518	3341.556	21.518	3377.245	21.542	3387.134	21.532	3390.358	21.573
3396.701	21.607	3439.159	21.827	3460.74	21.96	3469.11	22.031	3512.362	22.433
3534.345	22.588	3541.519	22.614	3571.148	22.694	3613.928	22.729	3644.754	22.737
3676.616	22.773	3683.168	22.792	3686.337	22.799	3755.163	22.814	3756.37	22.808
3791.966	22.344	3811.721	22.192	3831.155	21.774	3853.973	21.603	3865.571	21.662
3901.145	21.424	3931.672	21.501	3939.177	21.363	3951.577	21.512	3975.973	21.924
3975.98	21.924	3975.988	21.925	4012.783	26.172	4030.728	25.405	4072.143	24.205

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3788	.06	575	.05	628	.08

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	575	628		502	502	.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 11146

INPUT  
 Description: Copy of COE 2.111  
 Station Elevation Data num= 395

ExpandedLocal.rep

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-3788	12.67	3774.11	12.653	-3760.4	12.569	3738.99	12.497	-3707.47	12.349
-3701.42	12.304	-3688.6	12.237	-3668.75	12.102	-3630.25	11.823	-3596.66	11.612
-3577.79	11.467	-3572.58	11.431	-3563.39	11.284	-3504.71	11.036	-3498.15	11.018
-3493.15	10.985	-3470.93	10.407	-3447	10.167	-3422.9	10.219	-3394.69	9.816
-3352.66	10.231	-3320.82	10.622	-3317.54	10.653	-3293.04	10.827	-3282.42	10.897
-3228.88	10.939	-3216.8	10.952	-3212.18	10.939	-3158.16	10.596	-3143.13	10.509
-3141.94	10.505	-3140.56	10.498	-3136.93	10.467	-3111.65	10.263	-3106.82	10.226
-3088.21	10.001	-3071.7	9.818	-3060.13	9.564	-3044.99	9.412	-3001.46	8.87
-2988.08	8.88	-2966.34	9.008	-2920.76	9.551	-2896.1	9.827	-2886.43	9.874
-2861.1	9.954	-2860.98	9.955	-2860.6	9.954	-2790.74	9.788	-2784.77	9.761
-2730.72	9.473	-2720.5	9.418	-2713.56	9.374	-2685.38	9.196	-2677.21	9.072
-2657.71	8.777	-2633.6	8.484	-2615.14	8.257	-2606.88	8.199	-2580.02	8.076
-2566.11	8.007	-2542.47	8.522	-2509.78	8.719	-2479.81	9.208	-2474.66	9.275
-2454.4	9.448	-2406.3	10.119	-2403.58	10.142	-2401.37	10.149	-2386.75	10.161
-2374.88	10.198	-2370.41	10.232	-2305.07	9.953	-2304.69	9.951	-2304.63	9.951
-2271.79	9.874	-2256.89	9.844	-2238.91	9.84	-2219.74	9.81	-2181.09	9.823
-2173.16	9.801	-2164.14	9.763	-2140.28	9.652	-2100.69	9.498	-2074.53	9.446
-2040.69	9.36	-2008.78	9.247	-1988.52	9.257	-1975.91	9.281	-1953.4	9.369
-1943.03	9.407	-1889.89	9.68	-1877.28	9.731	-1848.03	9.807	-1844.4	9.811
-1838.39	9.791	-1794.98	9.632	-1750.95	9.324	-1745.78	9.279	-1717.62	9.017
-1707.54	8.924	-1667.55	8.605	-1647.15	8.619	-1635.22	8.629	-1624.1	8.642
-1613.7	8.632	-1589.19	8.594	-1546.16	8.305	-1539.02	8.323	-1512.38	8.439
-1490.47	8.534	-1470.2	8.689	-1444.84	8.846	-1414.38	9.157	-1411.06	9.186
-1409.05	9.195	-1400.81	9.17	-1354.77	8.961	-1343.52	8.928	-1324.99	9.053
-1309.74	9.082	-1280.29	8.929	-1275.97	8.933	-1262.59	8.948	-1246.2	8.921
-1242.19	9.003	-1239.36	8.906	-1222.7	9.31	-1181.64	9.939	-1174.65	9.969
-1164.78	9.788	-1140.87	9.881	-1133.89	9.904	-1109.41	9.828	-1107.86	9.854
-1075.32	10.096	-1075.03	10.093	-1055.38	10.324	-1042.21	10.457	-1010.68	10.327
-1009.39	10.358	-978.777	10.386	-976.572	10.4	-975.422	10.399	-943.75	10.148
-912.977	10.184	-910.928	10.191	-879.791	9.701	-875.519	9.703	-872.854	9.718
-845.285	10.066	-819.257	9.539	-805.265	9.515	-779.641	9.082	-758.965	9.095
-746.819	9.677	-723.546	7.836	-716.722	7.878	-713.998	7.888	-704.256	7.89
-681.19	10.028	-658.123	9.475	-638.64	9.554	-615.573	10.042	-594.298	10.06
-582.765	10.093	-571.231	10.075	-528.681	9.817	-517.148	9.824	-494.081	8.69
-484.34	8.667	-474.598	8.779	-451.531	10.265	-430.256	10.34	-418.723	10.265
-395.656	9.886	-381.044	9.877	-366.432	9.927	-331.831	10.394	-320.298	10.366
-297.231	9.611	-277.748	9.59	-254.681	10.224	-233.406	10.246	-210.34	9.888
-189.065	9.791	-165.998	9.659	-156.256	9.614	-133.19	9.694	-123.448	9.634
-118.577	9.584	-109.722	9.657	-90.64	9.816	-62.702	9.148	-52.961	8.971
-25.023	8.431	2.915	8.098	17.527	7.692	40.594	7.229	61.869	6.969
73.402	6.476	94.677	6.291	106.21	6.291	129.277	6.207	158.502	6.174
181.569	6.16	204.635	6.16	214.377	6.16	237.444	6.16	247.185	6.16
270.252	6.16	279.994	6.16	303.06	6.16	312.802	6.16	335.869	6.16
345.61	6.16	368.677	6.16	378.419	6.16	401.485	6.218	424.552	6.16
434.294	6.16	444.035	6.16	449.278	6.16	469.585	6.12	497.417	6.065
506.964	6.058	518.441	6.051	544.343	6.034	550	12.19	575	12.21

ExpandedLocal.rep

583	5.65	600	3.91	618	4.64	628	12.18	653	11.91
656.479	6.015	690.491	6.026	697.025	6.026	702.827	6.034	731.237	6.093
765.394	6.335	768.616	6.352	771.296	6.371	793.741	6.502	839.766	9.271
842.1	9.423	843.374	9.481	847.711	9.692	880.752	11.208	895.887	11.933
909.605	12.568	917.528	12.919	985.666	15.502	990.259	15.667	994.465	15.659
1026.624	15.584	1061.728	16.916	1062.581	16.948	1064.144	16.989	1099.354	17.879
1106.77	18.106	1164.167	19.328	1180.143	19.722	1185.594	19.822	1199.593	20.176
1207.584	20.288	1233.942	19.693	1240.393	19.751	1266.466	19.051	1273.203	18.874
1324.333	17.257	1338.822	16.838	1353.829	16.624	1391.956	15.872	1404.441	15.633
1429.088	15.674	1437.251	15.717	1461.612	16.539	1470.061	16.753	1517.797	18.296
1535.68	18.815	1544.859	19.012	1568.489	19.583	1591.709	19.991	1601.299	20.14
1611.059	20.221	1634.109	20.451	1645.483	20.527	1666.918	20.612	1689.282	20.684
1710.359	20.752	1754.33	20.941	1765.347	20.978	1786.855	21.038	1798.157	21.077
1860.736	21.34	1890.48	21.449	1921.552	21.652	1952.176	21.853	1962.205	21.921
1982.001	22.017	1995.014	22.082	2014.525	22.115	2055.134	22.088	2093.443	21.944
2107.558	21.926	2144.622	21.842	2173.758	21.969	2191.872	22.122	2206.858	22.171
2242.195	22.319	2257.491	22.333	2291.65	22.386	2323.11	22.379	2356.138	22.498
2388.729	22.595	2404.816	22.711	2421.539	22.749	2437.341	22.646	2454.349	22.606
2469.865	22.472	2487.158	22.328	2517.358	21.858	2552.777	21.392	2567.438	21.208
2567.645	21.205	2585.589	20.975	2599.692	20.874	2618.402	20.699	2641.497	20.657
2691.841	21.003	2716.842	21.195	2728.702	21.203	2749.655	21.362	2760.954	21.346
2782.469	21.285	2851.75	20.991	2880.909	20.961	2904.927	20.443	2913.722	20.215
2943.829	20.712	2950.536	20.826	2979.348	21.116	2986.721	21.121	3038.503	21.227
3044.975	21.233	3071.898	21.134	3077.788	21.129	3105.292	21.123	3110.602	21.12
3115.73	21.126	3143.415	21.281	3161.984	21.327	3205.474	21.399	3209.042	21.418
3238.868	21.514	3244.74	21.524	3257.75	21.573	3276.725	21.619	3286.364	21.614
3324.292	21.518	3341.556	21.518	3377.245	21.542	3387.134	21.532	3390.358	21.573
3396.701	21.607	3439.159	21.827	3460.74	21.96	3469.11	22.031	3512.362	22.433
3534.345	22.588	3541.519	22.614	3571.148	22.694	3613.928	22.729	3644.754	22.737
3676.616	22.773	3683.168	22.792	3686.337	22.799	3755.163	22.814	3756.37	22.808
3791.966	22.344	3811.721	22.192	3831.155	21.774	3853.973	21.603	3865.571	21.662
3901.145	21.424	3931.672	21.501	3939.177	21.363	3951.577	21.512	3975.973	21.924
3975.98	21.924	3975.988	21.925	4012.783	26.172	4030.728	25.405	4072.143	24.205

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -3788 .07 575 .05 628 .07

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 575 628 338 338 338 .1 .3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 10808

ExpandedLocal.rep

INPUT

Description: Data from Land Survey

Station Elevation Data

num= 392

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4501	11.163-4494.05	11.156-4443.42	10.49-4424.88	10.385-4416.68	10.519				
-4390.3	10.101-4367.22	9.981-4355.72	9.885-4332.72	9.877-4312.93	10.052				
-4286.55	10.048-4280.84	10.01-4263.72	9.942-4254.91	9.924-4251.97	9.916				
-4249.62	9.906-4217.38	9.837-4194.22	9.802 -4182.8	9.801-4159.97	9.792				
-4149.9	9.786-4148.22	9.78-4142.34	9.783-4124.68	9.788-4093.22	9.813				
-4081.38	9.801-4061.09	9.778-4048.57	9.751-4035.49	9.754-4015.75	9.725				
-4001.96	9.713-3982.94	9.678-3973.73	9.64-3947.24	9.529 -3917.3	9.413				
-3884.31	9.453-3851.67	9.498-3821.38	9.526-3786.04	9.569-3767.21	9.65				
-3739.83	9.796-3720.41	9.873-3707.71	9.933-3687.59	9.994-3644.66	10.209				
-3621.96	10.291-3611.33	10.321-3589.15	10.399-3565.56	10.334-3532.21	10.239				
-3524.74	10.212-3520.28	10.18-3502.57	10.082-3489.82	10.009-3462.79	9.669				
-3456.62	9.614-3416.81	9.006 -3398.3	8.724-3390.22	8.648-3369.61	8.58				
-3347.81	8.476-3323.82	8.304-3319.07	8.266-3290.62	7.904 -3290.1	7.9				
-3288.41	7.885-3232.84	7.375-3224.22	7.287-3212.44	7.196-3175.35	6.923				
-3157.82	6.868 -3146.6	6.852-3124.62	6.846-3117.86	6.862-3091.42	6.892				
-3089.11	6.899-3074.26	6.916-3028.56	6.97-3025.02	6.956-2974.14	6.977				
-2937.4	7.127-2925.42	7.18-2916.65	7.253-2892.22	7.613-2884.62	7.79				
-2860.1	8.202-2830.42	8.765-2825.82	8.796-2801.67	8.934-2786.94	8.941				
-2759.42	9.107-2740.94	8.986-2726.22	8.758-2710.46	8.572-2703.89	8.487				
-2693.08	8.319-2660.28	7.779-2626.93	7.252-2598.21	7.018-2593.85	6.968				
-2591.24	6.945-2580.86	6.916-2530.22	6.821-2527.98	6.816-2527.69	6.817				
-2527.32	6.82-2494.62	7.01-2474.51	7.274-2440.03	7.665-2428.46	7.798				
-2410.71	7.919-2375.55	8.091-2362.31	8.131-2337.61	8.119-2329.23	8.098				
-2297.79	8.024-2293.44	8.023-2272.28	7.974-2263.08	7.95-2259.91	7.948				
-2196.92	7.906-2185.84	8.051-2163.85	8.09-2138.75	7.872-2117.54	7.896				
-2085.73	7.765-2064.62	7.794-2034.07	7.857-2031.54	7.865-2014.33	7.928				
-1970.95	8.091-1965.39	8.12-1958.19	8.142-1932.31	8.231-1904.02	8.341				
-1866.16	8.514-1853.68	8.537-1833.08	8.557-1806.42	8.523 -1800	8.522				
-1774.86	8.473-1764.66	8.45-1733.06	8.393-1711.84	8.376-1699.34	8.422				
-1690.57	8.39-1640.61	8.228-1631.91	8.202-1622.24	8.177-1600.74	8.126				
-1590.74	8.106-1564.48	7.966-1546.57	8.035-1521.01	8.245-1497.05	8.368				
-1445.75	8.551-1429.62	8.629-1414.05	8.646-1395.91	8.665-1384.71	8.628				
-1337.39	8.524-1328.48	8.505-1325.71	8.509-1275.66	8.572-1250.79	8.603				
-1227.33	8.637-1212.55	8.654-1193.61	8.665-1166.61	8.689 -1159.9	8.702				
-1149.02	8.764-1112.09	8.95-1092.47	9.129-1060.68	9.27-1058.75	9.275				
-1056.76	9.276-1012.88	9.222-991.329	9.195-975.786	9.225-957.614	9.22				
-928.169	9.274-923.899	9.286 -910.13	9.32-856.469	9.452-845.883	9.461				
-839.061	9.465-802.023	9.42 -790.02	9.404-780.984	9.383-756.887	9.288				
-724.88	9.341-723.754	9.339-722.907	9.336-716.896	9.333-690.622	9.308				
-686.309	9.288-657.489	9.135-634.157	8.904-591.223	8.485-570.595	8.436				
-558.09	8.443-495.721	8.719-492.577	8.735-490.598	8.741-481.903	8.808				
-458.692	8.96-449.576	9.096-403.463	9.671-374.444	10.135-359.293	10.639				
-339.168	10.553 -326.16	10.589-300.597	10.188-264.994	9.828 -259.04	9.772				

ExpandedLocal.rep

-246.91	9.697	-226.762	9.554	-200.213	9.448	-172.703	9.086	-146.312	8.904
-127.363	8.803	-107.741	8.322	-94.23	7.93	-69.17	7.352	-57.859	7.013
-27.965	7.101	-25.982	7.092	-11.918	7.154	0	6.5	43	5.3
79	5.2	114	5.6	150	4.2	182	5.5	202	5.5
233	5.2	263	5.3	271.16	7.086	309.643	7.358	337.659	7.547
345.729	7.648	370.909	7.94	394.769	7.8	402.832	7.731	404.158	7.729
404.703	7.726	408.764	7.729	470.658	7.547	485.605	7.728	503.907	7.876
513.692	8.133	550.766	8.828	570.406	9.226	602.69	9.691	603.656	9.704
604.268	9.709	636.905	10.652	644.8	10.797	670.155	11.504	684.599	11.891
703.405	12.466	755.689	13.975	769.904	14.393	773.998	14.583	803.153	15.653
818.189	16.209	852.128	16.86	864.272	17.201	883.593	17.6	887.152	17.656
903.08	17.889	969.423	18.969	970.191	18.98	970.536	18.984	971.446	18.999
1003.958	19.533	1008.072	19.596	1053.832	20.168	1071.21	20.196	1091.367	20.493
1104.836	20.959	1135.284	20.617	1138.462	20.578	1179.495	21.296	1205.714	21.647
1230.218	21.816	1239.34	21.885	1270.825	21.943	1272.749	21.947	1272.966	21.947
1302.98	21.925	1316.954	21.922	1354.947	21.836	1373.843	21.851	1403.69	21.908
1409.862	21.915	1411.513	21.914	1420.515	21.922	1472.986	21.955	1499.478	22.004
1508.347	22.023	1519.461	22.041	1541.973	22.081	1557.341	22.124	1594.347	22.194
1601.481	22.209	1609.908	22.223	1670.73	22.132	1676.1	22.122	1680.247	22.113
1715.787	22.074	1750.587	22.045	1753.711	22.029	1761.801	21.989	1785.757	21.856
1800.828	21.727	1820.927	21.557	1852.873	21.238	1880.57	20.948	1891.266	20.831
1915.421	20.669	1931.313	20.568	1943.944	20.489	1982.057	20.311	1996.775	20.225
2030.014	20.059	2031.945	20.052	2035.015	20.042	2067.115	19.968	2126.086	19.929
2134.287	19.958	2137.454	19.859	2172.187	19.974	2194.57	20.442	2207.794	20.503
2224.048	20.609	2251.561	20.763	2278.134	20.923	2308.229	21.002	2313.303	21.016
2314.518	21.017	2330.522	21.061	2379.896	21.175	2383.643	21.174	2385.466	21.183
2414.59	21.327	2450.339	21.501	2457.852	21.538	2501.793	21.658	2516.938	21.704
2538.449	21.806	2554.718	21.892	2564.697	21.925	2606.325	22.064	2616.836	22.098
2619.045	22.109	2650.135	22.263	2661.954	22.328	2688.271	22.392	2716.734	22.523
2775.496	22.036	2783.333	21.977	2798.06	21.875	2813.884	21.772	2816.633	21.754
2861.274	21.563	2883.232	21.522	2901.133	21.523	2916.531	21.541	2927.372	21.559
2940.655	21.596	2955.445	21.699	2990.082	21.873	3018.97	22.025	3023.263	22.063
3034.188	22.091	3046.653	22.107	3075.643	22.093	3116.463	21.859	3117.098	21.866
3146.827	22.302	3223.809	22.746	3233.769	23.184	3241.462	23.657	3277.482	25.779
3282.916	25.692	3286.335	25.656	3324.371	25.113	3341.214	24.896	3361.07	24.485
3386.073	25.413	3406.901	25.483						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-4501	.07	114	.05	182	.07

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	114	182		68	68		.1	.3
Ineffective Flow			num=	2				
Sta L	Sta R	Elev	Permanent					
-4501	54.5	10.6	F					
245.534	06.901	10.6	F					



ExpandedLocal.rep

CROSS SECTION

RIVER: Gum Bayou

REACH: Upper

RS: 10740

INPUT

Description: Data from Land Survey

Station Elevation Data num= 396

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4501	11.163-4494.05	11.156-4443.42	10.49-4424.88	10.385-4416.68	10.519				
-4390.3	10.101-4367.22	9.981-4355.72	9.885-4332.72	9.877-4312.93	10.052				
-4286.55	10.048-4280.84	10.01-4263.72	9.942-4254.91	9.924-4251.97	9.916				
-4249.62	9.906-4217.38	9.837-4194.22	9.802 -4182.8	9.801-4159.97	9.792				
-4149.9	9.786-4148.22	9.78-4142.34	9.783-4124.68	9.788-4093.22	9.813				
-4081.38	9.801-4061.09	9.778-4048.57	9.751-4035.49	9.754-4015.75	9.725				
-4001.96	9.713-3982.94	9.678-3973.73	9.64-3947.24	9.529 -3917.3	9.413				
-3884.31	9.453-3851.67	9.498-3821.38	9.526-3786.04	9.569-3767.21	9.65				
-3739.83	9.796-3720.41	9.873-3707.71	9.933-3687.59	9.994-3644.66	10.209				
-3621.96	10.291-3611.33	10.321-3589.15	10.399-3565.56	10.334-3532.21	10.239				
-3524.74	10.212-3520.28	10.18-3502.57	10.082-3489.82	10.009-3462.79	9.669				
-3456.62	9.614-3416.81	9.006 -3398.3	8.724-3390.22	8.648-3369.61	8.58				
-3347.81	8.476-3323.82	8.304-3319.07	8.266-3290.62	7.904 -3290.1	7.9				
-3288.41	7.885-3232.84	7.375-3224.22	7.287-3212.44	7.196-3175.35	6.923				
-3157.82	6.868 -3146.6	6.852-3124.62	6.846-3117.86	6.862-3091.42	6.892				
-3089.11	6.899-3074.26	6.916-3028.56	6.97-3025.02	6.956-2974.14	6.977				
-2937.4	7.127-2925.42	7.18-2916.65	7.253-2892.22	7.613-2884.62	7.79				
-2860.1	8.202-2830.42	8.765-2825.82	8.796-2801.67	8.934-2786.94	8.941				
-2759.42	9.107-2740.94	8.986-2726.22	8.758-2710.46	8.572-2703.89	8.487				
-2693.08	8.319-2660.28	7.779-2626.93	7.252-2598.21	7.018-2593.85	6.968				
-2591.24	6.945-2580.86	6.916-2530.22	6.821-2527.98	6.816-2527.69	6.817				
-2527.32	6.82-2494.62	7.01-2474.51	7.274-2440.03	7.665-2428.46	7.798				
-2410.71	7.919-2375.55	8.091-2362.31	8.131-2337.61	8.119-2329.23	8.098				
-2297.79	8.024-2293.44	8.023-2272.28	7.974-2263.08	7.95-2259.91	7.948				
-2196.92	7.906-2185.84	8.051-2163.85	8.09-2138.75	7.872-2117.54	7.896				
-2085.73	7.765-2064.62	7.794-2034.07	7.857-2031.54	7.865-2014.33	7.928				
-1970.95	8.091-1965.39	8.12-1958.19	8.142-1932.31	8.231-1904.02	8.341				
-1866.16	8.514-1853.68	8.537-1833.08	8.557-1806.42	8.523 -1800	8.522				
-1774.86	8.473-1764.66	8.45-1733.06	8.393-1711.84	8.376-1699.34	8.422				
-1690.57	8.39-1640.61	8.228-1631.91	8.202-1622.24	8.177-1600.74	8.126				
-1590.74	8.106-1564.48	7.966-1546.57	8.035-1521.01	8.245-1497.05	8.368				
-1445.75	8.551-1429.62	8.629-1414.05	8.646-1395.91	8.665-1384.71	8.628				
-1337.39	8.524-1328.48	8.505-1325.71	8.509-1275.66	8.572-1250.79	8.603				
-1227.33	8.637-1212.55	8.654-1193.61	8.665-1166.61	8.689 -1159.9	8.702				
-1149.02	8.764-1112.09	8.95-1092.47	9.129-1060.68	9.27-1058.75	9.275				
-1056.76	9.276-1012.88	9.222-991.329	9.195-975.786	9.225-957.614	9.22				

ExpandedLocal.rep

-928.169	9.274-923.899	9.286	-910.13	9.32-856.469	9.452-845.883	9.461
-839.061	9.465-802.023	9.42	-790.02	9.404-780.984	9.383-756.887	9.288
-724.88	9.341-723.754	9.339-722.907		9.336-716.896	9.333-690.622	9.308
-686.309	9.288-657.489	9.135-634.157		8.904-591.223	8.485-570.595	8.436
-558.09	8.443-495.721	8.719-492.577		8.735-490.598	8.741-481.903	8.808
-458.692	8.96-449.576	9.096-403.463		9.671-374.444	10.135-359.293	10.639
-339.168	10.553 -326.16	10.589-300.597		10.188-264.994	9.828 -259.04	9.772
-246.91	9.697-226.762	9.554-200.213		9.448-172.703	9.086-146.312	8.904
-127.363	8.803-107.741	8.322 -94.23		7.93 -69.17	7.352 -57.859	7.013
-27.965	7.101 -25.982	7.092 -11.918		7.154 0	6.1 23	5.7
46	5.4 78	5.2 107		6.1 124	5.3 142	3.6
154	1.3 165	3.2 180		6 216	5.2 241	5.5
246.813	6.944 271.16	7.086 309.643		7.358 337.659	7.547 345.729	7.648
370.909	7.94 394.769	7.8 402.832		7.731 404.158	7.729 404.703	7.726
408.764	7.729 470.658	7.547 485.605		7.728 503.907	7.876 513.692	8.133
550.766	8.828 570.406	9.226 602.69		9.691 603.656	9.704 604.268	9.709
636.905	10.652 644.8	10.797 670.155		11.504 684.599	11.891 703.405	12.466
755.689	13.975 769.904	14.393 773.998		14.583 803.153	15.653 818.189	16.209
852.128	16.86 864.272	17.201 883.593		17.6 887.152	17.656 903.08	17.889
969.423	18.969 970.191	18.98 970.536		18.984 971.446	18.9991003.958	19.533
1008.072	19.5961053.832	20.168 1071.21		20.1961091.367	20.4931104.836	20.959
1135.284	20.6171138.462	20.5781179.495		21.2961205.714	21.6471230.218	21.816
1239.34	21.8851270.825	21.9431272.749		21.9471272.966	21.947 1302.98	21.925
1316.954	21.9221354.947	21.8361373.843		21.851 1403.69	21.9081409.862	21.915
1411.513	21.9141420.515	21.9221472.986		21.9551499.478	22.0041508.347	22.023
1519.461	22.0411541.973	22.0811557.341		22.1241594.347	22.1941601.481	22.209
1609.908	22.223 1670.73	22.132 1676.1		22.1221680.247	22.1131715.787	22.074
1750.587	22.0451753.711	22.0291761.801		21.9891785.757	21.8561800.828	21.727
1820.927	21.5571852.873	21.238 1880.57		20.9481891.266	20.8311915.421	20.669
1931.313	20.5681943.944	20.4891982.057		20.311996.775	20.2252030.014	20.059
2031.945	20.052035.015	20.042067.115		19.9682126.086	19.9292134.287	19.958
2137.454	19.8592172.187	19.974 2194.57		20.4422207.794	20.5032224.048	20.609
2251.561	20.7632278.134	20.92308.229		21.0022313.303	21.0162314.518	21.017
2330.522	21.0612379.896	21.1752383.643		21.1742385.466	21.183 2414.59	21.327
2450.339	21.5012457.852	21.5382501.793		21.6582516.938	21.7042538.449	21.806
2554.718	21.892564.697	21.9252606.325		22.0642616.836	22.0982619.045	22.109
2650.135	22.2632661.954	22.3282688.271		22.392716.734	22.5232775.496	22.036
2783.333	21.977 2798.06	21.8752813.884		21.772816.633	21.7542861.274	21.563
2883.232	21.5222901.133	21.5232916.531		21.5412927.372	21.5592940.655	21.596
2955.445	21.6992990.082	21.873 3018.97		22.0253023.263	22.0633034.188	22.091
3046.653	22.1073075.643	22.093116.463		21.8593117.098	21.8663146.827	22.302
3223.809	22.7463233.769	23.1843241.462		23.6573277.482	25.7793282.916	25.692
3286.335	25.6563324.371	25.113341.214		24.896 3361.07	24.4853386.073	25.413
3406.901	25.483					

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*

ExpandedLocal.rep

-4501 .07 107 .05 180 .07

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	107	180		58 58	58	.1	.3
Ineffective Flow	num=		2				
Sta L	Sta R	Elev	Permanent				
-4501	121	10.6	F				
1763406.901		10.6	F				

BRIDGE

RIVER: Gum Bayou  
 REACH: Upper RS: 10711

INPUT

Description: Oak Drive  
 Gum #51  
 Distance from Upstream XS = 15  
 Deck/Roadway Width = 28  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num=	10		
Sta Hi Cord	Lo Cord	Sta Hi Cord Lo Cord	Sta Hi Cord Lo Cord
*****			
-352.79	10.6	0 10.6	46 11.1
103	11.7	136 12.1 10.5	161 12.1 10.5
175	12.1	204 12.1	264 12.1
691.7	12.1		

Upstream Bridge Cross Section Data

Station Elevation Data	num=		396	
Sta Elev	Sta Elev	Sta Elev	Sta Elev	Sta Elev
*****				
-4501	11.163-4494.05	11.156-4443.42	10.49-4424.88	10.385-4416.68 10.519
-4390.3	10.101-4367.22	9.981-4355.72	9.885-4332.72	9.877-4312.93 10.052
-4286.55	10.048-4280.84	10.01-4263.72	9.942-4254.91	9.924-4251.97 9.916
-4249.62	9.906-4217.38	9.837-4194.22	9.802 -4182.8	9.801-4159.97 9.792
-4149.9	9.786-4148.22	9.78-4142.34	9.783-4124.68	9.788-4093.22 9.813
-4081.38	9.801-4061.09	9.778-4048.57	9.751-4035.49	9.754-4015.75 9.725
-4001.96	9.713-3982.94	9.678-3973.73	9.64-3947.24	9.529 -3917.3 9.413
-3884.31	9.453-3851.67	9.498-3821.38	9.526-3786.04	9.569-3767.21 9.65
-3739.83	9.796-3720.41	9.873-3707.71	9.933-3687.59	9.994-3644.66 10.209
-3621.96	10.291-3611.33	10.321-3589.15	10.399-3565.56	10.334-3532.21 10.239
-3524.74	10.212-3520.28	10.18-3502.57	10.082-3489.82	10.009-3462.79 9.669
-3456.62	9.614-3416.81	9.006 -3398.3	8.724-3390.22	8.648-3369.61 8.58
-3347.81	8.476-3323.82	8.304-3319.07	8.266-3290.62	7.904 -3290.1 7.9
-3288.41	7.885-3232.84	7.375-3224.22	7.287-3212.44	7.196-3175.35 6.923

ExpandedLocal.rep

-3157.82	6.868	-3146.6	6.852-3124.62	6.846-3117.86	6.862-3091.42	6.892
-3089.11	6.899	-3074.26	6.916-3028.56	6.97-3025.02	6.956-2974.14	6.977
-2937.4	7.127	-2925.42	7.18-2916.65	7.253-2892.22	7.613-2884.62	7.79
-2860.1	8.202	-2830.42	8.765-2825.82	8.796-2801.67	8.934-2786.94	8.941
-2759.42	9.107	-2740.94	8.986-2726.22	8.758-2710.46	8.572-2703.89	8.487
-2693.08	8.319	-2660.28	7.779-2626.93	7.252-2598.21	7.018-2593.85	6.968
-2591.24	6.945	-2580.86	6.916-2530.22	6.821-2527.98	6.816-2527.69	6.817
-2527.32	6.82	-2494.62	7.01-2474.51	7.274-2440.03	7.665-2428.46	7.798
-2410.71	7.919	-2375.55	8.091-2362.31	8.131-2337.61	8.119-2329.23	8.098
-2297.79	8.024	-2293.44	8.023-2272.28	7.974-2263.08	7.95-2259.91	7.948
-2196.92	7.906	-2185.84	8.051-2163.85	8.09-2138.75	7.872-2117.54	7.896
-2085.73	7.765	-2064.62	7.794-2034.07	7.857-2031.54	7.865-2014.33	7.928
-1970.95	8.091	-1965.39	8.12-1958.19	8.142-1932.31	8.231-1904.02	8.341
-1866.16	8.514	-1853.68	8.537-1833.08	8.557-1806.42	8.523 -1800	8.522
-1774.86	8.473	-1764.66	8.45-1733.06	8.393-1711.84	8.376-1699.34	8.422
-1690.57	8.39	-1640.61	8.228-1631.91	8.202-1622.24	8.177-1600.74	8.126
-1590.74	8.106	-1564.48	7.966-1546.57	8.035-1521.01	8.245-1497.05	8.368
-1445.75	8.551	-1429.62	8.629-1414.05	8.646-1395.91	8.665-1384.71	8.628
-1337.39	8.524	-1328.48	8.505-1325.71	8.509-1275.66	8.572-1250.79	8.603
-1227.33	8.637	-1212.55	8.654-1193.61	8.665-1166.61	8.689 -1159.9	8.702
-1149.02	8.764	-1112.09	8.95-1092.47	9.129-1060.68	9.27-1058.75	9.275
-1056.76	9.276	-1012.88	9.222-991.329	9.195-975.786	9.225-957.614	9.22
-928.169	9.274	-923.899	9.286 -910.13	9.32-856.469	9.452-845.883	9.461
-839.061	9.465	-802.023	9.42 -790.02	9.404-780.984	9.383-756.887	9.288
-724.88	9.341	-723.754	9.339-722.907	9.336-716.896	9.333-690.622	9.308
-686.309	9.288	-657.489	9.135-634.157	8.904-591.223	8.485-570.595	8.436
-558.09	8.443	-495.721	8.719-492.577	8.735-490.598	8.741-481.903	8.808
-458.692	8.96	-449.576	9.096-403.463	9.671-374.444	10.135-359.293	10.639
-339.168	10.553	-326.16	10.589-300.597	10.188-264.994	9.828 -259.04	9.772
-246.91	9.697	-226.762	9.554-200.213	9.448-172.703	9.086-146.312	8.904
-127.363	8.803	-107.741	8.322 -94.23	7.93 -69.17	7.352 -57.859	7.013
-27.965	7.101	-25.982	7.092 -11.918	7.154 0	6.1 23	5.7
46	5.4	78	5.2 107	6.1 124	5.3 142	3.6
154	1.3	165	3.2 180	6 216	5.2 241	5.5
246.813	6.944	271.16	7.086 309.643	7.358 337.659	7.547 345.729	7.648
370.909	7.94	394.769	7.8 402.832	7.731 404.158	7.729 404.703	7.726
408.764	7.729	470.658	7.547 485.605	7.728 503.907	7.876 513.692	8.133
550.766	8.828	570.406	9.226 602.69	9.691 603.656	9.704 604.268	9.709
636.905	10.652	644.8	10.797 670.155	11.504 684.599	11.891 703.405	12.466
755.689	13.975	769.904	14.393 773.998	14.583 803.153	15.653 818.189	16.209
852.128	16.86	864.272	17.201 883.593	17.6 887.152	17.656 903.08	17.889
969.423	18.969	970.191	18.98 970.536	18.984 971.446	18.9991003.958	19.533
1008.072	19.5961053.832	20.168 1071.21	20.1961091.367	20.4931104.836	20.959	20.959
1135.284	20.6171138.462	20.5781179.495	21.2961205.714	21.6471230.218	21.816	21.816
1239.34	21.8851270.825	21.9431272.749	21.9471272.966	21.947 1302.98	21.925	21.925
1316.954	21.9221354.947	21.8361373.843	21.851 1403.69	21.9081409.862	21.915	21.915
1411.513	21.9141420.515	21.9221472.986	21.9551499.478	22.0041508.347	22.023	22.023
1519.461	22.0411541.973	22.0811557.341	22.1241594.347	22.1941601.481	22.209	22.209

ExpandedLocal.rep

1609.908	22.223	1670.73	22.132	1676.1	22.122	1680.247	22.113	1715.787	22.074
1750.587	22.045	1753.711	22.029	1761.801	21.989	1785.757	21.856	1800.828	21.727
1820.927	21.557	1852.873	21.238	1880.57	20.948	1891.266	20.831	1915.421	20.669
1931.313	20.568	1943.944	20.489	1982.057	20.311	1996.775	20.225	2030.014	20.059
2031.945	20.052	2035.015	20.042	2067.115	19.968	2126.086	19.929	2134.287	19.958
2137.454	19.859	2172.187	19.974	2194.57	20.442	2207.794	20.503	2224.048	20.609
2251.561	20.763	2278.134	20.923	2308.229	21.002	2313.303	21.016	2314.518	21.017
2330.522	21.061	2379.896	21.175	2383.643	21.174	2385.466	21.183	2414.59	21.327
2450.339	21.501	2457.852	21.538	2501.793	21.658	2516.938	21.704	2538.449	21.806
2554.718	21.892	2564.697	21.925	2606.325	22.064	2616.836	22.098	2619.045	22.109
2650.135	22.263	2661.954	22.328	2688.271	22.392	2716.734	22.523	2775.496	22.036
2783.333	21.977	2798.06	21.875	2813.884	21.772	2816.633	21.754	2861.274	21.563
2883.232	21.522	2901.133	21.523	2916.531	21.541	2927.372	21.559	2940.655	21.596
2955.445	21.699	2990.082	21.873	3018.97	22.025	3023.263	22.063	3034.188	22.091
3046.653	22.107	3075.643	22.093	3116.463	21.859	3117.098	21.866	3146.827	22.302
3223.809	22.746	3233.769	23.184	3241.462	23.657	3277.482	25.779	3282.916	25.692
3286.335	25.656	3324.371	25.113	3341.214	24.896	3361.07	24.485	3386.073	25.413
3406.901	25.483								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-4501	.07	107	.05	180	.07

Bank Sta: Left Right Coeff Contr. Expan.

107	180		.1	.3
-----	-----	--	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-4501	121	10.6	F
1763406.901		10.6	F

Downstream Deck/Roadway Coordinates

num= 11

Sta Hi	Cord Lo	Cord	Sta Hi	Cord Lo	Cord	Sta Hi	Cord Lo	Cord
-4464.33	10.7		0	10.7		42	11.1	
98	11.7		132	12.1	10.5	157	12.1	10.5
170	12.1		200	12.1		259	12.1	
316	12.1		691.7	12.1				

Downstream Bridge Cross Section Data

Station Elevation Data num= 393

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4501	11.163	-4494.05	11.156	-4443.42	10.49	-4424.88	10.385	-4416.68	10.519
-4390.3	10.101	-4367.22	9.981	-4355.72	9.885	-4332.72	9.877	-4312.93	10.052
-4286.55	10.048	-4280.84	10.01	-4263.72	9.942	-4254.91	9.924	-4251.97	9.916
-4249.62	9.906	-4217.38	9.837	-4194.22	9.802	-4182.8	9.801	-4159.97	9.792

ExpandedLocal.rep

-4149.9	9.786-4148.22	9.78-4142.34	9.783-4124.68	9.788-4093.22	9.813
-4081.38	9.801-4061.09	9.778-4048.57	9.751-4035.49	9.754-4015.75	9.725
-4001.96	9.713-3982.94	9.678-3973.73	9.64-3947.24	9.529 -3917.3	9.413
-3884.31	9.453-3851.67	9.498-3821.38	9.526-3786.04	9.569-3767.21	9.65
-3739.83	9.796-3720.41	9.873-3707.71	9.933-3687.59	9.994-3644.66	10.209
-3621.96	10.291-3611.33	10.321-3589.15	10.399-3565.56	10.334-3532.21	10.239
-3524.74	10.212-3520.28	10.18-3502.57	10.082-3489.82	10.009-3462.79	9.669
-3456.62	9.614-3416.81	9.006 -3398.3	8.724-3390.22	8.648-3369.61	8.58
-3347.81	8.476-3323.82	8.304-3319.07	8.266-3290.62	7.904 -3290.1	7.9
-3288.41	7.885-3232.84	7.375-3224.22	7.287-3212.44	7.196-3175.35	6.923
-3157.82	6.868 -3146.6	6.852-3124.62	6.846-3117.86	6.862-3091.42	6.892
-3089.11	6.899-3074.26	6.916-3028.56	6.97-3025.02	6.956-2974.14	6.977
-2937.4	7.127-2925.42	7.18-2916.65	7.253-2892.22	7.613-2884.62	7.79
-2860.1	8.202-2830.42	8.765-2825.82	8.796-2801.67	8.934-2786.94	8.941
-2759.42	9.107-2740.94	8.986-2726.22	8.758-2710.46	8.572-2703.89	8.487
-2693.08	8.319-2660.28	7.779-2626.93	7.252-2598.21	7.018-2593.85	6.968
-2591.24	6.945-2580.86	6.916-2530.22	6.821-2527.98	6.816-2527.69	6.817
-2527.32	6.82-2494.62	7.01-2474.51	7.274-2440.03	7.665-2428.46	7.798
-2410.71	7.919-2375.55	8.091-2362.31	8.131-2337.61	8.119-2329.23	8.098
-2297.79	8.024-2293.44	8.023-2272.28	7.974-2263.08	7.95-2259.91	7.948
-2196.92	7.906-2185.84	8.051-2163.85	8.09-2138.75	7.872-2117.54	7.896
-2085.73	7.765-2064.62	7.794-2034.07	7.857-2031.54	7.865-2014.33	7.928
-1970.95	8.091-1965.39	8.12-1958.19	8.142-1932.31	8.231-1904.02	8.341
-1866.16	8.514-1853.68	8.537-1833.08	8.557-1806.42	8.523 -1800	8.522
-1774.86	8.473-1764.66	8.45-1733.06	8.393-1711.84	8.376-1699.34	8.422
-1690.57	8.39-1640.61	8.228-1631.91	8.202-1622.24	8.177-1600.74	8.126
-1590.74	8.106-1564.48	7.966-1546.57	8.035-1521.01	8.245-1497.05	8.368
-1445.75	8.551-1429.62	8.629-1414.05	8.646-1395.91	8.665-1384.71	8.628
-1337.39	8.524-1328.48	8.505-1325.71	8.509-1275.66	8.572-1250.79	8.603
-1227.33	8.637-1212.55	8.654-1193.61	8.665-1166.61	8.689 -1159.9	8.702
-1149.02	8.764-1112.09	8.95-1092.47	9.129-1060.68	9.27-1058.75	9.275
-1056.76	9.276-1012.88	9.222-991.329	9.195-975.786	9.225-957.614	9.22
-928.169	9.274-923.899	9.286 -910.13	9.32-856.469	9.452-845.883	9.461
-839.061	9.465-802.023	9.42 -790.02	9.404-780.984	9.383-756.887	9.288
-724.88	9.341-723.754	9.339-722.907	9.336-716.896	9.333-690.622	9.308
-686.309	9.288-657.489	9.135-634.157	8.904-591.223	8.485-570.595	8.436
-558.09	8.443-495.721	8.719-492.577	8.735-490.598	8.741-481.903	8.808
-458.692	8.96-449.576	9.096-403.463	9.671-374.444	10.135-359.293	10.639
-339.168	10.553 -326.16	10.589-300.597	10.188-264.994	9.828 -259.04	9.772
-246.91	9.697-226.762	9.554-200.213	9.448-172.703	9.086-146.312	8.904
-127.363	8.803-107.741	8.322 -94.23	7.93 -69.17	7.352 -57.859	7.013
-27.965	7.101 -25.982	7.092 -11.918	7.154 0	5.4 35	6.3
73	5.1 107	6 134	3.2 148	2.4 164	3.5
178	6.1 211	5.6 244	6.1 280	5.6 309.643	7.358
337.659	7.547 345.729	7.648 370.909	7.94 394.769	7.8 402.832	7.731
404.158	7.729 404.703	7.726 408.764	7.729 470.658	7.547 485.605	7.728
503.907	7.876 513.692	8.133 550.766	8.828 570.406	9.226 602.69	9.691
603.656	9.704 604.268	9.709 636.905	10.652 644.8	10.797 670.155	11.504

ExpandedLocal.rep

684.599	11.891	703.405	12.466	755.689	13.975	769.904	14.393	773.998	14.583
803.153	15.653	818.189	16.209	852.128	16.86	864.272	17.201	883.593	17.6
887.152	17.656	903.08	17.889	969.423	18.969	970.191	18.98	970.536	18.984
971.446	18.999	1003.958	19.533	1008.072	19.596	1053.832	20.168	1071.21	20.196
1091.367	20.493	1104.836	20.959	1135.284	20.617	1138.462	20.578	1179.495	21.296
1205.714	21.647	1230.218	21.816	1239.34	21.885	1270.825	21.943	1272.749	21.947
1272.966	21.947	1302.98	21.925	1316.954	21.922	1354.947	21.836	1373.843	21.851
1403.69	21.908	1409.862	21.915	1411.513	21.914	1420.515	21.922	1472.986	21.955
1499.478	22.004	1508.347	22.023	1519.461	22.041	1541.973	22.081	1557.341	22.124
1594.347	22.194	1601.481	22.209	1609.908	22.223	1670.73	22.132	1676.1	22.122
1680.247	22.113	1715.787	22.074	1750.587	22.045	1753.711	22.029	1761.801	21.989
1785.757	21.856	1800.828	21.727	1820.927	21.557	1852.873	21.238	1880.57	20.948
1891.266	20.831	1915.421	20.669	1931.313	20.568	1943.944	20.489	1982.057	20.31
1996.775	20.225	2030.014	20.059	2031.945	20.052	2035.015	20.042	2067.115	19.968
2126.086	19.929	2134.287	19.958	2137.454	19.859	2172.187	19.974	2194.57	20.442
2207.794	20.503	2224.048	20.609	2251.561	20.763	2278.134	20.923	2308.229	21.002
2313.303	21.016	2314.518	21.017	2330.522	21.061	2379.896	21.175	2383.643	21.174
2385.466	21.183	2414.59	21.327	2450.339	21.501	2457.852	21.538	2501.793	21.658
2516.938	21.704	2538.449	21.806	2554.718	21.892	2564.697	21.925	2606.325	22.064
2616.836	22.098	2619.045	22.109	2650.135	22.263	2661.954	22.328	2688.271	22.39
2716.734	22.523	2775.496	22.036	2783.333	21.977	2798.06	21.875	2813.884	21.77
2816.633	21.754	2861.274	21.563	2883.232	21.522	2901.133	21.523	2916.531	21.541
2927.372	21.559	2940.655	21.596	2955.445	21.699	2990.082	21.873	3018.97	22.025
3023.263	22.063	3034.188	22.091	3046.653	22.107	3075.643	22.093	3116.463	21.859
3117.098	21.866	3146.827	22.302	3223.809	22.746	3233.769	23.184	3241.462	23.657
3277.482	25.779	3282.916	25.692	3286.335	25.656	3324.371	25.113	3341.214	24.896
3361.07	24.485	3386.073	25.413	3406.901	25.483				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-4501	.07	107	.05	178	.07

\*\*\*\*\*

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	107	178		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-4501	124.5	10.6	F
164.534	06.901	10.6	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

ExpandedLocal.rep

Number of Piers = 1

Pier Data

Pier Station Upstream= 148 Downstream= 144

Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 0 1 10.5

Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 0 1 10.5

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: Gum Bayou

REACH: Upper RS: 10682

INPUT

Description: Data from Land Survey

Station Elevation Data num= 393

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4501	11.163	4494.05	11.156	4443.42	10.49	4424.88	10.385	4416.68	10.519
-4390.3	10.101	4367.22	9.981	4355.72	9.885	4332.72	9.877	4312.93	10.052
-4286.55	10.048	4280.84	10.01	4263.72	9.942	4254.91	9.924	4251.97	9.916
-4249.62	9.906	4217.38	9.837	4194.22	9.802	-4182.8	9.801	4159.97	9.792
-4149.9	9.786	4148.22	9.78	4142.34	9.783	4124.68	9.788	4093.22	9.813
-4081.38	9.801	4061.09	9.778	4048.57	9.751	4035.49	9.754	4015.75	9.725
-4001.96	9.713	3982.94	9.678	3973.73	9.64	3947.24	9.529	-3917.3	9.413
-3884.31	9.453	3851.67	9.498	3821.38	9.526	3786.04	9.569	3767.21	9.65



ExpandedLocal.rep

-3739.83	9.796-3720.41	9.873-3707.71	9.933-3687.59	9.994-3644.66	10.209
-3621.96	10.291-3611.33	10.321-3589.15	10.399-3565.56	10.334-3532.21	10.239
-3524.74	10.212-3520.28	10.18-3502.57	10.082-3489.82	10.009-3462.79	9.669
-3456.62	9.614-3416.81	9.006 -3398.3	8.724-3390.22	8.648-3369.61	8.58
-3347.81	8.476-3323.82	8.304-3319.07	8.266-3290.62	7.904 -3290.1	7.9
-3288.41	7.885-3232.84	7.375-3224.22	7.287-3212.44	7.196-3175.35	6.923
-3157.82	6.868 -3146.6	6.852-3124.62	6.846-3117.86	6.862-3091.42	6.892
-3089.11	6.899-3074.26	6.916-3028.56	6.97-3025.02	6.956-2974.14	6.977
-2937.4	7.127-2925.42	7.18-2916.65	7.253-2892.22	7.613-2884.62	7.79
-2860.1	8.202-2830.42	8.765-2825.82	8.796-2801.67	8.934-2786.94	8.941
-2759.42	9.107-2740.94	8.986-2726.22	8.758-2710.46	8.572-2703.89	8.487
-2693.08	8.319-2660.28	7.779-2626.93	7.252-2598.21	7.018-2593.85	6.968
-2591.24	6.945-2580.86	6.916-2530.22	6.821-2527.98	6.816-2527.69	6.817
-2527.32	6.82-2494.62	7.01-2474.51	7.274-2440.03	7.665-2428.46	7.798
-2410.71	7.919-2375.55	8.091-2362.31	8.131-2337.61	8.119-2329.23	8.098
-2297.79	8.024-2293.44	8.023-2272.28	7.974-2263.08	7.95-2259.91	7.948
-2196.92	7.906-2185.84	8.051-2163.85	8.09-2138.75	7.872-2117.54	7.896
-2085.73	7.765-2064.62	7.794-2034.07	7.857-2031.54	7.865-2014.33	7.928
-1970.95	8.091-1965.39	8.12-1958.19	8.142-1932.31	8.231-1904.02	8.341
-1866.16	8.514-1853.68	8.537-1833.08	8.557-1806.42	8.523 -1800	8.522
-1774.86	8.473-1764.66	8.45-1733.06	8.393-1711.84	8.376-1699.34	8.422
-1690.57	8.39-1640.61	8.228-1631.91	8.202-1622.24	8.177-1600.74	8.126
-1590.74	8.106-1564.48	7.966-1546.57	8.035-1521.01	8.245-1497.05	8.368
-1445.75	8.551-1429.62	8.629-1414.05	8.646-1395.91	8.665-1384.71	8.628
-1337.39	8.524-1328.48	8.505-1325.71	8.509-1275.66	8.572-1250.79	8.603
-1227.33	8.637-1212.55	8.654-1193.61	8.665-1166.61	8.689 -1159.9	8.702
-1149.02	8.764-1112.09	8.95-1092.47	9.129-1060.68	9.27-1058.75	9.275
-1056.76	9.276-1012.88	9.222-991.329	9.195-975.786	9.225-957.614	9.22
-928.169	9.274-923.899	9.286 -910.13	9.32-856.469	9.452-845.883	9.461
-839.061	9.465-802.023	9.42 -790.02	9.404-780.984	9.383-756.887	9.288
-724.88	9.341-723.754	9.339-722.907	9.336-716.896	9.333-690.622	9.308
-686.309	9.288-657.489	9.135-634.157	8.904-591.223	8.485-570.595	8.436
-558.09	8.443-495.721	8.719-492.577	8.735-490.598	8.741-481.903	8.808
-458.692	8.96-449.576	9.096-403.463	9.671-374.444	10.135-359.293	10.639
-339.168	10.553 -326.16	10.589-300.597	10.188-264.994	9.828 -259.04	9.772
-246.91	9.697-226.762	9.554-200.213	9.448-172.703	9.086-146.312	8.904
-127.363	8.803-107.741	8.322 -94.23	7.93 -69.17	7.352 -57.859	7.013
-27.965	7.101 -25.982	7.092 -11.918	7.154 0	5.4 35	6.3
73	5.1 107	6 134	3.2 148	2.4 164	3.5
178	6.1 211	5.6 244	6.1 280	5.6 309.643	7.358
337.659	7.547 345.729	7.648 370.909	7.94 394.769	7.8 402.832	7.731
404.158	7.729 404.703	7.726 408.764	7.729 470.658	7.547 485.605	7.728
503.907	7.876 513.692	8.133 550.766	8.828 570.406	9.226 602.69	9.691
603.656	9.704 604.268	9.709 636.905	10.652 644.8	10.797 670.155	11.504
684.599	11.891 703.405	12.466 755.689	13.975 769.904	14.393 773.998	14.583
803.153	15.653 818.189	16.209 852.128	16.86 864.272	17.201 883.593	17.6
887.152	17.656 903.08	17.889 969.423	18.969 970.191	18.98 970.536	18.984
971.446	18.9991003.958	19.5331008.072	19.5961053.832	20.168 1071.21	20.196

ExpandedLocal.rep

1091.367	20.4931104.836	20.9591135.284	20.6171138.462	20.5781179.495	21.296
1205.714	21.6471230.218	21.816 1239.34	21.8851270.825	21.9431272.749	21.947
1272.966	21.947 1302.98	21.9251316.954	21.9221354.947	21.8361373.843	21.851
1403.69	21.9081409.862	21.9151411.513	21.9141420.515	21.9221472.986	21.955
1499.478	22.0041508.347	22.0231519.461	22.0411541.973	22.0811557.341	22.124
1594.347	22.1941601.481	22.2091609.908	22.223 1670.73	22.132 1676.1	22.122
1680.247	22.1131715.787	22.0741750.587	22.0451753.711	22.0291761.801	21.989
1785.757	21.8561800.828	21.7271820.927	21.5571852.873	21.238 1880.57	20.948
1891.266	20.8311915.421	20.6691931.313	20.5681943.944	20.4891982.057	20.31
1996.775	20.2252030.014	20.0592031.945	20.052035.015	20.042067.115	19.968
2126.086	19.9292134.287	19.9582137.454	19.8592172.187	19.974 2194.57	20.442
2207.794	20.5032224.048	20.6092251.561	20.7632278.134	20.92308.229	21.002
2313.303	21.0162314.518	21.0172330.522	21.0612379.896	21.1752383.643	21.174
2385.466	21.183 2414.59	21.3272450.339	21.5012457.852	21.5382501.793	21.658
2516.938	21.7042538.449	21.8062554.718	21.892564.697	21.9252606.325	22.064
2616.836	22.0982619.045	22.1092650.135	22.2632661.954	22.3282688.271	22.39
2716.734	22.5232775.496	22.0362783.333	21.977 2798.06	21.8752813.884	21.77
2816.633	21.7542861.274	21.5632883.232	21.5222901.133	21.5232916.531	21.541
2927.372	21.5592940.655	21.5962955.445	21.6992990.082	21.873 3018.97	22.025
3023.263	22.0633034.188	22.0913046.653	22.1073075.643	22.093116.463	21.859
3117.098	21.8663146.827	22.3023223.809	22.7463233.769	23.1843241.462	23.657
3277.482	25.7793282.916	25.6923286.335	25.6563324.371	25.113341.214	24.896
3361.07	24.4853386.073	25.4133406.901	25.483		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-4501	.07	107	.05	178	.07

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	107	178		127	127	.1	.3
Ineffective Flow	num= 2						
Sta L	Sta R	Elev	Permanent				
-4501	124.5	10.6	F				
164.53406.901		10.6	F				

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 10555

INPUT

Description: Data from Land Survey

Station Elevation Data		num= 386							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4501	11.163-4494.05	11.156-4443.42	10.49-4424.88	10.385-4416.68	10.519				

ExpandedLocal.rep

-4390.3	10.101-4367.22	9.981-4355.72	9.885-4332.72	9.877-4312.93	10.052
-4286.55	10.048-4280.84	10.01-4263.72	9.942-4254.91	9.924-4251.97	9.916
-4249.62	9.906-4217.38	9.837-4194.22	9.802 -4182.8	9.801-4159.97	9.792
-4149.9	9.786-4148.22	9.78-4142.34	9.783-4124.68	9.788-4093.22	9.813
-4081.38	9.801-4061.09	9.778-4048.57	9.751-4035.49	9.754-4015.75	9.725
-4001.96	9.713-3982.94	9.678-3973.73	9.64-3947.24	9.529 -3917.3	9.413
-3884.31	9.453-3851.67	9.498-3821.38	9.526-3786.04	9.569-3767.21	9.65
-3739.83	9.796-3720.41	9.873-3707.71	9.933-3687.59	9.994-3644.66	10.209
-3621.96	10.291-3611.33	10.321-3589.15	10.399-3565.56	10.334-3532.21	10.239
-3524.74	10.212-3520.28	10.18-3502.57	10.082-3489.82	10.009-3462.79	9.669
-3456.62	9.614-3416.81	9.006 -3398.3	8.724-3390.22	8.648-3369.61	8.58
-3347.81	8.476-3323.82	8.304-3319.07	8.266-3290.62	7.904 -3290.1	7.9
-3288.41	7.885-3232.84	7.375-3224.22	7.287-3212.44	7.196-3175.35	6.923
-3157.82	6.868 -3146.6	6.852-3124.62	6.846-3117.86	6.862-3091.42	6.892
-3089.11	6.899-3074.26	6.916-3028.56	6.97-3025.02	6.956-2974.14	6.977
-2937.4	7.127-2925.42	7.18-2916.65	7.253-2892.22	7.613-2884.62	7.79
-2860.1	8.202-2830.42	8.765-2825.82	8.796-2801.67	8.934-2786.94	8.941
-2759.42	9.107-2740.94	8.986-2726.22	8.758-2710.46	8.572-2703.89	8.487
-2693.08	8.319-2660.28	7.779-2626.93	7.252-2598.21	7.018-2593.85	6.968
-2591.24	6.945-2580.86	6.916-2530.22	6.821-2527.98	6.816-2527.69	6.817
-2527.32	6.82-2494.62	7.01-2474.51	7.274-2440.03	7.665-2428.46	7.798
-2410.71	7.919-2375.55	8.091-2362.31	8.131-2337.61	8.119-2329.23	8.098
-2297.79	8.024-2293.44	8.023-2272.28	7.974-2263.08	7.95-2259.91	7.948
-2196.92	7.906-2185.84	8.051-2163.85	8.09-2138.75	7.872-2117.54	7.896
-2085.73	7.765-2064.62	7.794-2034.07	7.857-2031.54	7.865-2014.33	7.928
-1970.95	8.091-1965.39	8.12-1958.19	8.142-1932.31	8.231-1904.02	8.341
-1866.16	8.514-1853.68	8.537-1833.08	8.557-1806.42	8.523 -1800	8.522
-1774.86	8.473-1764.66	8.45-1733.06	8.393-1711.84	8.376-1699.34	8.422
-1690.57	8.39-1640.61	8.228-1631.91	8.202-1622.24	8.177-1600.74	8.126
-1590.74	8.106-1564.48	7.966-1546.57	8.035-1521.01	8.245-1497.05	8.368
-1445.75	8.551-1429.62	8.629-1414.05	8.646-1395.91	8.665-1384.71	8.628
-1337.39	8.524-1328.48	8.505-1325.71	8.509-1275.66	8.572-1250.79	8.603
-1227.33	8.637-1212.55	8.654-1193.61	8.665-1166.61	8.689 -1159.9	8.702
-1149.02	8.764-1112.09	8.95-1092.47	9.129-1060.68	9.27-1058.75	9.275
-1056.76	9.276-1012.88	9.222-991.329	9.195-975.786	9.225-957.614	9.22
-928.169	9.274-923.899	9.286-910.13	9.32-856.469	9.452-845.883	9.461
-839.061	9.465-802.023	9.42 -790.02	9.404-780.984	9.383-756.887	9.288
-724.88	9.341-723.754	9.339-722.907	9.336-716.896	9.333-690.622	9.308
-686.309	9.288-657.489	9.135-634.157	8.904-591.223	8.485-570.595	8.436
-558.09	8.443-495.721	8.719-492.577	8.735-490.598	8.741-481.903	8.808
-458.692	8.96-449.576	9.096-403.463	9.671-374.444	10.135-359.293	10.639
-339.168	10.553 -326.16	10.589-300.597	10.188-264.994	9.828 -259.04	9.772
-246.91	9.697-226.762	9.554-200.213	9.448-172.703	9.086-146.312	8.904
-127.363	8.803-107.741	8.322 -94.23	7.93 -69.17	7.352 -57.859	7.013
-27.965	7.101 -25.982	7.092 -11.918	7.154 0	4.2 38	4.2
79	4.9 115	5.5 141	4.8 181	4.4 204	4.1
239	5.4 267	5.5 307	5.6 342	5 384	5.1
420	4.7 470.658	7.547 485.605	7.728 503.907	7.876 513.692	8.133

ExpandedLocal.rep

550.766	8.828	570.406	9.226	602.69	9.691	603.656	9.704	604.268	9.709
636.905	10.652	644.8	10.797	670.155	11.504	684.599	11.891	703.405	12.466
755.689	13.975	769.904	14.393	773.998	14.583	803.153	15.653	818.189	16.209
852.128	16.86	864.272	17.201	883.593	17.6	887.152	17.656	903.08	17.889
969.423	18.969	970.191	18.98	970.536	18.984	971.446	18.999	1003.958	19.533
1008.072	19.596	1053.832	20.168	1071.21	20.196	1091.367	20.493	1104.836	20.959
1135.284	20.617	1138.462	20.578	1179.495	21.296	1205.714	21.647	1230.218	21.816
1239.34	21.885	1270.825	21.943	1272.749	21.947	1272.966	21.947	1302.98	21.925
1316.954	21.922	1354.947	21.836	1373.843	21.851	1403.69	21.908	1409.862	21.915
1411.513	21.914	1420.515	21.922	1472.986	21.955	1499.478	22.004	1508.347	22.023
1519.461	22.041	1541.973	22.081	1557.341	22.124	1594.347	22.194	1601.481	22.209
1609.908	22.223	1670.73	22.132	1676.1	22.122	1680.247	22.113	1715.787	22.074
1750.587	22.045	1753.711	22.029	1761.801	21.989	1785.757	21.856	1800.828	21.727
1820.927	21.557	1852.873	21.238	1880.57	20.948	1891.266	20.831	1915.421	20.669
1931.313	20.568	1943.944	20.489	1982.057	20.311	1996.775	20.225	2030.014	20.059
2031.945	20.052	2035.015	20.042	2067.115	19.968	2126.086	19.929	2134.287	19.958
2137.454	19.859	2172.187	19.974	2194.57	20.442	2207.794	20.503	2224.048	20.609
2251.561	20.763	2278.134	20.923	2308.229	21.002	2313.303	21.016	2314.518	21.017
2330.522	21.061	2379.896	21.175	2383.643	21.174	2385.466	21.183	2414.59	21.327
2450.339	21.501	2457.852	21.538	2501.793	21.658	2516.938	21.704	2538.449	21.806
2554.718	21.892	2564.697	21.925	2606.325	22.064	2616.836	22.098	2619.045	22.109
2650.135	22.263	2661.954	22.328	2688.271	22.392	2716.734	22.523	2775.496	22.036
2783.333	21.977	2798.06	21.875	2813.884	21.772	2816.633	21.754	2861.274	21.563
2883.232	21.522	2901.133	21.523	2916.531	21.541	2927.372	21.559	2940.655	21.596
2955.445	21.699	2990.082	21.873	3018.97	22.025	3023.263	22.063	3034.188	22.091
3046.653	22.107	3075.643	22.093	3116.463	21.859	3117.098	21.866	3146.827	22.302
3223.809	22.746	3233.769	23.184	3241.462	23.657	3277.482	25.779	3282.916	25.692
3286.335	25.656	3324.371	25.113	3341.214	24.896	3361.07	24.485	3386.073	25.413
3406.901	25.483								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-4501	.07	115	.05	239	.07

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	115	239		509	509	.1	.3
Ineffective Flow			num=	2			
Sta L	Sta R	Elev	Permanent				
-4501	92.59	10.6	F				
259.593	406.901	10.6	F				

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Upper RS: 10046

ExpandedLocal.rep

INPUT

Description: Data from Land Survey

Station Elevation Data num= 274

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4618	11.163	-4611.05	11.156	-4560.42	10.49	-4541.88	10.385	-4533.68	10.519
-4507.3	10.101	-4484.22	9.981	-4472.72	9.885	-4449.72	9.877	-4429.93	10.052
-4403.55	10.048	-4397.84	10.01	-4380.72	9.942	-4371.91	9.924	-4368.97	9.916
-4366.62	9.906	-4334.38	9.837	-4311.22	9.802	-4299.8	9.801	-4276.97	9.792
-4266.9	9.786	-4265.22	9.78	-4259.34	9.783	-4241.68	9.788	-4210.22	9.813
-4198.38	9.801	-4178.09	9.778	-4165.57	9.751	-4152.49	9.754	-4132.75	9.725
-4118.96	9.713	-4099.94	9.678	-4090.73	9.64	-4064.24	9.529	-4034.3	9.413
-4001.31	9.453	-3968.67	9.498	-3938.38	9.526	-3903.04	9.569	-3884.21	9.65
-3856.83	9.796	-3837.41	9.873	-3824.71	9.933	-3804.59	9.994	-3761.66	10.209
-3738.96	10.291	-3728.33	10.321	-3706.15	10.399	-3682.56	10.334	-3649.21	10.239
-3641.74	10.212	-3637.28	10.18	-3619.57	10.082	-3606.82	10.009	-3579.79	9.669
-3573.62	9.614	-3533.81	9.006	-3515.3	8.724	-3507.22	8.648	-3486.61	8.58
-3464.81	8.476	-3440.82	8.304	-3436.07	8.266	-3407.62	7.904	-3407.1	7.9
-3405.41	7.885	-3349.84	7.375	-3341.22	7.287	-3329.44	7.196	-3292.35	6.923
-3274.82	6.868	-3263.6	6.852	-3241.62	6.846	-3234.86	6.862	-3208.42	6.892
-3206.11	6.899	-3191.26	6.916	-3145.56	6.97	-3142.02	6.956	-3091.14	6.977
-3054.4	7.127	-3042.42	7.18	-3033.65	7.253	-3009.22	7.613	-3001.62	7.79
-2977.1	8.202	-2947.42	8.765	-2942.82	8.796	-2918.67	8.934	-2903.94	8.941
-2876.42	9.107	-2857.94	8.986	-2843.22	8.758	-2827.46	8.572	-2820.89	8.487
-2810.08	8.319	-2777.28	7.779	-2743.93	7.252	-2715.21	7.018	-2710.85	6.968
-2708.24	6.945	-2697.86	6.916	-2647.22	6.821	-2644.98	6.816	-2644.69	6.817
-2644.32	6.82	-2611.62	7.01	-2591.51	7.274	-2557.03	7.665	-2545.46	7.798
-2527.71	7.919	-2492.55	8.091	-2479.31	8.131	-2454.61	8.119	-2446.23	8.098
-2414.79	8.024	-2410.44	8.023	-2389.28	7.974	-2380.08	7.95	-2376.91	7.948
-2313.92	7.906	-2302.84	8.051	-2280.85	8.09	-2255.75	7.872	-2234.54	7.896
-2202.73	7.765	-2181.62	7.794	-2151.07	7.857	-2148.54	7.865	-2131.33	7.928
-2087.95	8.091	-2082.39	8.12	-2075.19	8.142	-2049.31	8.231	-2021.02	8.341
-1983.16	8.514	-1970.68	8.537	-1950.08	8.557	-1923.42	8.523	-1917	8.522
-1891.86	8.473	-1881.66	8.45	-1850.06	8.393	-1828.84	8.376	-1816.34	8.422
-1807.57	8.39	-1757.61	8.228	-1748.91	8.202	-1739.24	8.177	-1717.74	8.126
-1707.74	8.106	-1681.48	7.966	-1663.57	8.035	-1638.01	8.245	-1614.05	8.368
-1562.75	8.551	-1546.62	8.629	-1531.05	8.646	-1512.91	8.665	-1501.71	8.628
-1454.39	8.524	-1445.48	8.505	-1442.71	8.509	-1392.66	8.572	-1367.79	8.603
-1344.33	8.637	-1329.55	8.654	-1310.61	8.665	-1283.61	8.689	-1276.9	8.702
-1266.02	8.764	-1229.09	8.95	-1209.47	9.129	-1177.68	9.27	-1175.75	9.275
-1173.76	9.276	-1129.88	9.222	-1108.32	9.195	-1092.78	9.225	-1074.61	9.22
-1045.16	9.274	-1040.89	9.286	-1027.13	9.32	-973.469	9.452	-962.883	9.461
-956.061	9.465	-919.023	9.42	-907.02	9.404	-897.984	9.383	-873.887	9.288
-841.88	9.341	-840.754	9.339	-839.907	9.336	-833.896	9.333	-807.622	9.308
-803.309	9.288	-774.489	9.135	-751.157	8.904	-708.223	8.485	-687.595	8.436
-675.09	8.443	-612.721	8.719	-609.577	8.735	-607.598	8.741	-598.903	8.808
-575.692	8.96	-566.576	9.096	-520.463	9.671	-491.444	10.135	-476.293	10.639
-456.168	10.553	-443.16	10.589	-417.597	10.188	-381.994	9.828	-376.04	9.772

ExpandedLocal.rep

-363.91	9.697-343.762	9.554-317.213	9.448-289.703	9.086-263.312	8.904
-244.363	8.803-224.741	8.322 -211.23	7.93 -186.17	7.352-174.859	7.013
-144.965	7.101-142.982	7.092-128.918	7.154-110.535	7.227 -85.335	7.328
-78.587	7.361 -74.306	7.344 -20.774	7.485 -12.088	7.471 0	6
11	5.8 30	5.6 40	5.1 50	5.5 52	4.7
60	3.8 68	4.4 81	4.3 87	3.7 96	3.7
106	4 123	3.9 127	5.3 146	5.3 162	5.7
192.643	7.358 220.659	7.547 228.729	7.648 253.909	7.94 277.769	7.8
285.832	7.731 287.158	7.729 287.703	7.726 291.764	7.729 353.658	7.547
368.605	7.728 386.907	7.876 396.692	8.133 433.766	8.828 453.406	9.226
485.69	9.691 486.656	9.704 487.268	9.709 519.905	10.652 527.8	10.797
553.155	11.504 567.599	11.891 586.405	12.466 638.689	13.975	

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-4618	.07	50	.05	127	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	50	127		0	0	.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Lower RS: 9910

INPUT

Description: Data from Land Survey

Station Elevation Data num= 277

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4668	11.163-4661.05	11.156-4610.42	10.49-4591.88	10.385-4583.68	10.519				
-4557.3	10.101-4534.22	9.981-4522.72	9.885-4499.72	9.877-4479.93	10.052				
-4453.55	10.048-4447.84	10.01-4430.72	9.942-4421.91	9.924-4418.97	9.916				
-4416.62	9.906-4384.38	9.837-4361.22	9.802 -4349.8	9.801-4326.97	9.792				
-4316.9	9.786-4315.22	9.78-4309.34	9.783-4291.68	9.788-4260.22	9.813				
-4248.38	9.801-4228.09	9.778-4215.57	9.751-4202.49	9.754-4182.75	9.725				
-4168.96	9.713-4149.94	9.678-4140.73	9.64-4114.24	9.529 -4084.3	9.413				
-4051.31	9.453-4018.67	9.498-3988.38	9.526-3953.04	9.569-3934.21	9.65				
-3906.83	9.796-3887.41	9.873-3874.71	9.933-3854.59	9.994-3811.66	10.209				
-3788.96	10.291-3778.33	10.321-3756.15	10.399-3732.56	10.334-3699.21	10.239				
-3691.74	10.212-3687.28	10.18-3669.57	10.082-3656.82	10.009-3629.79	9.669				
-3623.62	9.614-3583.81	9.006 -3565.3	8.724-3557.22	8.648-3536.61	8.58				
-3514.81	8.476-3490.82	8.304-3486.07	8.266-3457.62	7.904 -3457.1	7.9				
-3455.41	7.885-3399.84	7.375-3391.22	7.287-3379.44	7.196-3342.35	6.923				
-3324.82	6.868 -3313.6	6.852-3291.62	6.846-3284.86	6.862-3258.42	6.892				
-3256.11	6.899-3241.26	6.916-3195.56	6.97-3192.02	6.956-3141.14	6.977				

ExpandedLocal.rep

-3104.4	7.127-3092.42	7.18-3083.65	7.253-3059.22	7.613-3051.62	7.79
-3027.1	8.202-2997.42	8.765-2992.82	8.796-2968.67	8.934-2953.94	8.941
-2926.42	9.107-2907.94	8.986-2893.22	8.758-2877.46	8.572-2870.89	8.487
-2860.08	8.319-2827.28	7.779-2793.93	7.252-2765.21	7.018-2760.85	6.968
-2758.24	6.945-2747.86	6.916-2697.22	6.821-2694.98	6.816-2694.69	6.817
-2694.32	6.82-2661.62	7.01-2641.51	7.274-2607.03	7.665-2595.46	7.798
-2577.71	7.919-2542.55	8.091-2529.31	8.131-2504.61	8.119-2496.23	8.098
-2464.79	8.024-2460.44	8.023-2439.28	7.974-2430.08	7.95-2426.91	7.948
-2363.92	7.906-2352.84	8.051-2330.85	8.09-2305.75	7.872-2284.54	7.896
-2252.73	7.765-2231.62	7.794-2201.07	7.857-2198.54	7.865-2181.33	7.928
-2137.95	8.091-2132.39	8.12-2125.19	8.142-2099.31	8.231-2071.02	8.341
-2033.16	8.514-2020.68	8.537-2000.08	8.557-1973.42	8.523 -1967	8.522
-1941.86	8.473-1931.66	8.45-1900.06	8.393-1878.84	8.376-1866.34	8.422
-1857.57	8.39-1807.61	8.228-1798.91	8.202-1789.24	8.177-1767.74	8.126
-1757.74	8.106-1731.48	7.966-1713.57	8.035-1688.01	8.245-1664.05	8.368
-1612.75	8.551-1596.62	8.629-1581.05	8.646-1562.91	8.665-1551.71	8.628
-1504.39	8.524-1495.48	8.505-1492.71	8.509-1442.66	8.572-1417.79	8.603
-1394.33	8.637-1379.55	8.654-1360.61	8.665-1333.61	8.689 -1326.9	8.702
-1316.02	8.764-1279.09	8.95-1259.47	9.129-1227.68	9.27-1225.75	9.275
-1223.76	9.276-1179.88	9.222-1158.32	9.195-1142.78	9.225-1124.61	9.22
-1095.16	9.274-1090.89	9.286-1077.13	9.32-1023.46	9.452-1012.88	9.461
-1006.06	9.465-969.023	9.42 -957.02	9.404-947.984	9.383-923.887	9.288
-891.88	9.341-890.754	9.339-889.907	9.336-883.896	9.333-857.622	9.308
-853.309	9.288-824.489	9.135-801.157	8.904-758.223	8.485-737.595	8.436
-725.09	8.443-662.721	8.719-659.577	8.735-657.598	8.741-648.903	8.808
-625.692	8.96-616.576	9.096-570.463	9.671-541.444	10.135-526.293	10.639
-506.168	10.553 -493.16	10.589-467.597	10.188-431.994	9.828 -426.04	9.772
-413.91	9.697-393.762	9.554-367.213	9.448-339.703	9.086-313.312	8.904
-294.363	8.803-274.741	8.322 -261.23	7.93 -236.17	7.352-224.859	7.013
-194.965	7.101-192.982	7.092-178.918	7.154-160.535	7.227-135.335	7.328
-128.587	7.361-124.306	7.344 -70.774	7.485 -62.088	7.471 -40.052	7.385
0	5.8 15	5.7 26	5.3 27	4.7 37	3.9
37	4 43	4.9 51	5.8 56	4.7 64	5.5
79	5.9 86	5.5 94	5.5 98	5.7 109	5.7
117	6.1 144	6 168	6.3 170.659	7.547 178.729	7.648
203.909	7.94 227.769	7.8 235.832	7.731 237.158	7.729 237.703	7.726
241.764	7.729 303.658	7.547 318.605	7.728 336.907	7.876 346.692	8.133
383.766	8.828 403.406	9.226 435.69	9.691 436.656	9.704 437.268	9.709
469.905	10.652 477.8	10.797 503.155	11.504 517.599	11.891 536.405	12.466
588.689	13.975 602.904	14.393			

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -4668 .06 15 .05 51 .07

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 15 51 761 761 761 .1 .3

ExpandedLocal.rep

CROSS SECTION

RIVER: Gum Bayou

REACH: Lower

RS: 9149

INPUT

Description: Copy of COE 1.73275\*

Station Elevation Data num= 311

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-721	8.27	705.919	8.239	680.186	8.23	662.159	8.094	647.345	7.969
-613.375	7.658	581.663	7.325	567.834	7.264	548.822	7.157	505.228	7.075
-483.141	7.08	-459.3	7.032	442.067	6.958	417.459	6.948	410.625	6.939
-356.189	7.144	351.778	7.161	344.036	7.211	286.096	7.457	283.723	7.457
-220.414	7.549	205.149	7.512	187.574	7.567	173.023	7.544	154.733	7.598
-140.897	7.599	121.892	7.656	108.771	7.7	-89.051	7.76	-64.767	7.866
-56.21	7.881	-33.325	7.903	-18.052	7.89	-.54	7.937	42.312	8.031
61	8.024	75.153	7.986	82.713	7.994	88.801	8.003	90.849	8.006
161.519	8.199	174.44	8.193	206.689	8.1	207.576	8.097	208.764	8.089
212.949	8.067	260.392	7.796	273.85	7.745	300.76	7.637	306.986	7.66
331.702	7.634	340.123	7.671	362.644	7.758	373.26	7.818	385.496	7.912
407.81	9.52	565.62	9.18	723.44	8.63	820.16	8.5	821.28	8.5
881.25	8.43	944.38	8.38	983.06	8.31	1007.5	8.16	1064.52	7.88
1070.62	7.88	1133.75	7.88	1196.88	7.93	1260	7.88	1323.12	7.95
1386.25	7.9	1424.12	7.88	1436.75	7.62	1455.69	7.93	1512.5	7.95
1575.62	7.93	1638.75	7.9	1701.88	7.9	1716.13	7.89	1765	7.66
1828.12	7.37	1891.25	7.12	1954.38	6.8	2017.5	6.51	2080.62	6.13
2143.75	5.99	2206.88	5.72	2270	5.42	2327.02	5.11	2333.12	5.12
2396.25	5.28	2459.38	5.45	2502.14	5.56	2522.5	6.12	2527	3.47
2530	3.17	2533.75	2.85	2537.5	2.44	2545	1.64	2552.81	2.06
2555.42	2.2	2560.62	2.78	2565.83	3.45	2568.44	4.07	2576.25	5.85
2599.45	5.57	2602.3	5.6	2628.35	5.9	2654.4	6.32	2680.44	6.57
2706.49	6.77	2732.54	6.99	2758.59	7.22	2784.64	7.57	2849.76	8.28
2914.88	8.86	2980	9.433	3008.445	19.196	3024.585	19.241	3042.8	19.294
3062.32	19.332	3066.862	19.342	3074.857	19.338	3090.925	19.332	3100.054	19.298
3114.987	19.165	3141.269	18.712	3163.112	18.335	3207.682	20.548	3211.237	20.57
3213.257	20.699	3261.257	20.195	3277.356	20.028	3282.678	19.965	3287.241	19.924
3294.654	19.879	3322.935	19.632	3329.589	19.618	3340.339	19.625	3360.643	19.651
3378.779	19.643	3394.324	19.662	3409.206	19.644	3430.018	19.638	3436.439	19.634
3443.93	19.637	3501.407	19.607	3509.15	19.602	3527.217	19.601	3537.101	19.596
3559.122	19.568	3606.98	19.476	3609.094	19.471	3610.504	19.469	3679.879	19.261
3684.052	19.253	3715.573	19.173	3726.427	19.139	3751.268	19.201	3759.011	19.197
3777.077	19.266	3786.962	19.292	3794.376	19.344	3822.657	19.462	3857.802	19.852
3858.706	19.855	3860.364	19.893	3883.941	20.283	3894.045	20.454	3908.927	20.462
3929.74	2039	33.913	19.912	3943.651	19.819	3983.885	19.142	4026.938	19.039
4033.858	19.045	4036.823	19.037	4044.237	19.012	4072.517	18.883	4076.145	18.88



ExpandedLocal.rep

4106.523	18.8574108.709	18.8554110.697	18.8514114.952	18.844160.646	18.784
4177.493	18.7624186.194	18.764209.792	18.736 4212.46	18.7364213.064	18.735
4271.094	18.6644311.959	18.4724317.362	18.4484352.211	18.3374387.297	18.204
4390.576	18.216 4399.47	18.2284416.124	18.2594435.576	18.324467.219	18.415
4492.199	18.4334492.767	18.432 4494.31	18.434518.315	18.3914546.355	18.304
4569.411	18.2354620.333	18.1724632.068	18.1584663.203	18.1334669.674	18.136
4683.988	18.086 4697.15	18.044702.002	18.0234734.609	17.994771.937	17.929
4773.793	17.9234834.685	17.6124850.436	17.5494873.667	17.3894875.984	17.375
4876.839	17.3564901.532	16.7234911.806	16.5834935.871	16.3014968.506	15.957
4981.741	15.8175003.723	15.685016.708	15.8385029.271	16.0795051.675	16.617
5054.819	16.6595086.642	17.0115097.778	17.093 5121.61	17.2345127.303	17.26
5158.185	17.4175191.544	17.5575211.027	17.6225226.512	17.6735253.024	17.707
5261.479	17.7115266.417	17.708 5281.57	17.653 5310.17	17.5525346.166	17.727
5357.83	17.7365366.689	17.7535397.721	17.8625436.878	17.939 5458.14	17.93
5488.216	17.8465507.067	17.7865539.086	17.735549.004	17.7055577.457	17.72
5605.587	17.7195614.114	17.735615.392	17.7335623.398	17.7345637.065	17.733
5653.082	17.7265717.132	17.6225717.635	17.6215742.567	17.4875752.729	17.423
5775.335	17.0045791.078	16.769 5808.22	16.7065820.573	16.7355831.918	16.624
5858.013	16.4785888.501	16.4125895.178	16.4025928.202	16.45956.191	16.4
5993.041	16.4015996.082	16.4015998.391	16.4016022.354	16.4026033.485	16.403
6047.789	16.404 6068.58	16.4086073.224	16.4086085.452	16.4126098.659	16.416
6103.674	16.4196124.094	16.4326138.769	16.4466155.645	16.4756189.249	16.572
6215.481	16.766244.053	16.899 6251.27	17.0016270.274	17.9786279.147	18.368
6302.14	18.556341.163	20.446351.466	20.896355.098	21.0446362.685	20.661
6403.88	19.2496419.525	19.5126429.316	19.56 6454.62	22.2516454.751	22.256
6454.825	22.266455.095	22.276458.511	22.5996554.552	31.7716556.491	32.103
6559.903	32.189				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-721	.06	2522.5	.05	2576.25	.07

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	2522.5	2576.25		500	500	.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Lower RS: 8649

INPUT

Description: Data from COEtoSTP River Sta 1.638

Station Elevation Data num= 401

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-466	8.27	450.919	8.239	425.186	8.23	407.159	8.094	392.345	7.969

ExpandedLocal.rep

-358.375	7.658-326.663	7.325-312.834	7.264-293.822	7.157-250.228	7.075
-228.141	7.08 -204.3	7.032-187.067	6.958-162.459	6.948-155.625	6.939
-101.189	7.144 -96.778	7.161 -89.036	7.211 -31.096	7.457 -28.723	7.457
34.586	7.549 49.851	7.512 67.426	7.567 81.977	7.544 100.267	7.598
114.103	7.599 133.108	7.656 146.229	7.7 165.949	7.76 190.233	7.866
198.79	7.881 221.675	7.903 236.948	7.89 254.46	7.937 297.312	8.031
316	8.024 330.153	7.986 337.713	7.994 343.801	8.003 345.849	8.006
416.519	8.199 429.44	8.193 461.689	8.1 462.576	8.097 463.764	8.089
467.949	8.067 515.392	7.796 528.85	7.745 555.76	7.637 561.986	7.66
586.702	7.634 595.123	7.671 617.644	7.758 628.26	7.818 640.496	7.912
691.738	8.853 693.994	8.886 695.41	8.902 701.591	9.024 727.67	9.409
731.98	9.419 760.806	9.582 763.964	9.498 784.259	8.991 793.661	8.888
803.674	8.805 826.485	8.686 849.392	8.151 881.962	7.093 892.135	7.025
911.548	6.92 924.959	6.811 943.37	6.801 957.784	6.773 973.135	6.826
990.608	6.911 998.939	6.9341074.811	7.2961089.082	7.3161102.482	7.404
1121.907	7.5311134.304	7.5991154.731	7.7261176.487	7.8621192.833	7.938
1220.381	8.0941225.149	8.1061253.205	8.1841261.594	8.145 1286.03	8.148
1339.831	7.8971348.859	7.8941351.679	7.8831382.209	7.5781388.883	7.463
1447.624	6.7311450.153	6.7041452.528	6.6971482.977	6.503 1484.35	6.497
1515.802	6.4811516.172	6.4811526.342	6.5091526.467	6.5091546.315	6.664
1550.624	6.6911569.161	6.9631593.189	7.1771608.847	7.1821618.129	7.124
1622.159	7.1181691.227	7.1521692.946	7.1471693.693	7.1461709.962	7.368
1765.228	8.1361767.764	8.1491773.607	8.2011800.995	8.4371822.011	8.491
1836.762	8.5191840.191	8.511855.986	8.463 1892.46	8.3341908.296	8.249
1915.538	8.202 1917.27	8.191928.647	8.0771944.316	7.91951.857	7.815
1986.88	7.2381997.396	7.1662010.083	7.112023.263	7.0742042.935	7.046
2056.489	7.116 2070.57	7.1262079.692	7.1632088.474	7.1632117.878	7.258
2134.013	7.3062149.302	7.3732165.185	7.4182198.876	7.4842218.912	7.533
2225.091	7.5312247.935	7.483 2259.8	7.4782297.853	7.4582316.169	7.518
2328.596	7.5412354.415	7.6522361.096	7.6932361.682	7.6972403.826	7.881
2405.321	7.8932427.871	8.051 2448.96	8.184 2451.12	8.1952492.599	8.635
2499.439	8.6192503.339	8.56 2531.13	8.5742556.545	7.4592579.877	7.207
2590.612	7.1052602.852	7.0412613.861	6.972623.516	7.1062652.609	7.296
2667.155	7.1362693.057	7.2112710.794	7.0282723.393	6.9682737.116	6.992
2752.122	7.026 2765	5.61 2790	6.36 2792	2.97 2795	2.26
2800	.76 2805	1.46 2810	2.96 2815	6 2840	5.63
2846.348	9.2932851.635	9.6212869.597	10.782911.682	12.6592939.343	13.212
2951.148	14.0682972.628	14.974 2985.84	15.4273000.905	15.9833010.194	16.274
3033.113	16.879 3053.18	17.3433064.208	17.5913081.238	17.8783090.914	17.996
3105.3	18.2363128.648	18.3943143.777	18.613165.023	18.8043197.032	18.943
3200.348	18.963204.117	18.9723263.445	19.1963279.585	19.241 3297.8	19.294
3317.32	19.3323321.862	19.3423329.857	19.3383345.925	19.3323355.054	19.298
3369.987	19.1653396.269	18.7123418.112	18.3353462.682	20.5483466.237	20.57
3468.257	20.6993516.257	20.1953532.356	20.0283537.678	19.9653542.241	19.924
3549.654	19.8793577.935	19.6323584.589	19.6183595.339	19.6253615.643	19.651
3633.779	19.643649.324	19.6623664.206	19.6443685.018	19.6383691.439	19.634
3698.93	19.6373756.407	19.607 3764.15	19.6023782.217	19.6013792.101	19.596
3814.122	19.568 3861.98	19.4763864.094	19.4713865.504	19.4693934.879	19.261

ExpandedLocal.rep

3939.052	19.2533970.573	19.173981.427	19.1394006.268	19.2014014.011	19.197
4032.077	19.2664041.962	19.2924049.376	19.3444077.657	19.4624112.802	19.852
4113.706	19.8554115.364	19.894138.941	20.284149.045	20.4544163.927	20.462
4184.74	204188.913	19.9124198.651	19.8194238.885	19.1424281.938	19.039
4288.858	19.0454291.823	19.0374299.237	19.0124327.517	18.8834331.145	18.88
4361.523	18.8574363.709	18.8554365.697	18.8514369.952	18.844415.646	18.784
4432.493	18.7624441.194	18.764464.792	18.736 4467.46	18.7364468.064	18.735
4526.094	18.6644566.959	18.4724572.362	18.4484607.211	18.3374642.297	18.204
4645.576	18.216 4654.47	18.2284671.124	18.2594690.576	18.324722.219	18.415
4747.199	18.4334747.767	18.432 4749.31	18.434773.315	18.3914801.355	18.304
4824.411	18.2354875.333	18.1724887.068	18.1584918.203	18.1334924.674	18.136
4938.988	18.086 4952.15	18.044957.002	18.0234989.609	17.995026.937	17.929
5028.793	17.9235089.685	17.6125105.436	17.5495128.667	17.3895130.984	17.375
5131.839	17.3565156.532	16.7235166.806	16.5835190.871	16.3015223.506	15.957
5236.741	15.8175258.723	15.685271.708	15.8385284.271	16.0795306.675	16.617
5309.819	16.6595341.642	17.0115352.778	17.093 5376.61	17.2345382.303	17.26
5413.185	17.4175446.544	17.5575466.027	17.6225481.512	17.6735508.024	17.707
5516.479	17.7115521.417	17.708 5536.57	17.653 5565.17	17.5525601.166	17.727
5612.83	17.7365621.689	17.7535652.721	17.8625691.878	17.939 5713.14	17.93
5743.216	17.8465762.067	17.7865794.086	17.735804.004	17.7055832.457	17.72
5860.587	17.7195869.114	17.735870.392	17.7335878.398	17.7345892.065	17.733
5908.082	17.7265972.132	17.6225972.635	17.6215997.567	17.4876007.729	17.423
6030.335	17.0046046.078	16.769 6063.22	16.7066075.573	16.7356086.918	16.624
6113.013	16.4786143.501	16.4126150.178	16.4026183.202	16.46211.191	16.4
6248.041	16.4016251.082	16.4016253.391	16.4016277.354	16.4026288.485	16.403
6302.789	16.404 6323.58	16.4086328.224	16.4086340.452	16.4126353.659	16.416
6358.674	16.4196379.094	16.4326393.769	16.4466410.645	16.4756444.249	16.572
6470.481	16.766499.053	16.899 6506.27	17.0016525.274	17.9786534.147	18.368
6557.14	18.556596.163	20.446606.466	20.896610.098	21.0446617.685	20.661
6658.88	19.2496674.525	19.5126684.316	19.56 6709.62	22.2516709.751	22.256
6709.825	22.266710.095	22.276713.511	22.5996809.552	31.7716811.491	32.103
6814.903	32.189				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-466	.06	2790	.05	2815	.06

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	2790	2815		117	117	.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Lower RS: 8532

INPUT

ExpandedLocal.rep

Description: Data from COEtoSTP River Sta 1.616

Station Elevation Data num= 401

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-466	8.27	450.919	8.239	425.186	8.23	407.159	8.094	392.345	7.969
-358.375	7.658	326.663	7.325	312.834	7.264	293.822	7.157	250.228	7.075
-228.141	7.08	-204.3	7.032	187.067	6.958	162.459	6.948	155.625	6.939
-101.189	7.144	-96.778	7.161	-89.036	7.211	-31.096	7.457	-28.723	7.457
34.586	7.549	49.851	7.512	67.426	7.567	81.977	7.544	100.267	7.598
114.103	7.599	133.108	7.656	146.229	7.7	165.949	7.76	190.233	7.866
198.79	7.881	221.675	7.903	236.948	7.89	254.46	7.937	297.312	8.031
316	8.024	330.153	7.986	337.713	7.994	343.801	8.003	345.849	8.006
416.519	8.199	429.44	8.193	461.689	8.1	462.576	8.097	463.764	8.089
467.949	8.067	515.392	7.796	528.85	7.745	555.76	7.637	561.986	7.66
586.702	7.634	595.123	7.671	617.644	7.758	628.26	7.818	640.496	7.912
691.738	8.853	693.994	8.886	695.41	8.902	701.591	9.024	727.67	9.409
731.98	9.419	760.806	9.582	763.964	9.498	784.259	8.991	793.661	8.888
803.674	8.805	826.485	8.686	849.392	8.151	881.962	7.093	892.135	7.025
911.548	6.92	924.959	6.811	943.37	6.801	957.784	6.773	973.135	6.826
990.608	6.911	998.939	6.934	1074.811	7.296	1089.082	7.316	1102.482	7.404
1121.907	7.531	1134.304	7.599	1154.731	7.726	1176.487	7.862	1192.833	7.938
1220.381	8.094	1225.149	8.106	1253.205	8.184	1261.594	8.145	1286.03	8.148
1339.831	7.897	1348.859	7.894	1351.679	7.883	1382.209	7.578	1388.883	7.463
1447.624	6.731	1450.153	6.704	1452.528	6.697	1482.977	6.503	1484.35	6.497
1515.802	6.481	1516.172	6.481	1526.342	6.509	1526.467	6.509	1546.315	6.664
1550.624	6.691	1569.161	6.963	1593.189	7.177	1608.847	7.182	1618.129	7.124
1622.159	7.118	1691.227	7.152	1692.946	7.147	1693.693	7.146	1709.962	7.368
1765.228	8.136	1767.764	8.149	1773.607	8.201	1800.995	8.437	1822.011	8.491
1836.762	8.519	1840.191	8.511	1855.986	8.463	1892.46	8.334	1908.296	8.249
1915.538	8.202	1917.27	8.191	1928.647	8.077	1944.316	7.919	1951.857	7.815
1986.88	7.238	1997.396	7.166	2010.083	7.112	2023.263	7.074	2042.935	7.046
2056.489	7.116	2070.57	7.126	2079.692	7.163	2088.474	7.163	2117.878	7.258
2134.013	7.306	2149.302	7.373	2165.185	7.418	2198.876	7.484	2218.912	7.533
2225.091	7.531	2247.935	7.483	2259.8	7.478	2297.853	7.458	2316.169	7.518
2328.596	7.541	2354.415	7.652	2361.096	7.693	2361.682	7.697	2403.826	7.881
2405.321	7.893	2427.871	8.051	2448.96	8.184	2451.12	8.195	2492.599	8.635
2499.439	8.619	2503.339	8.56	2531.13	8.574	2556.545	7.459	2579.877	7.207
2590.612	7.105	2602.852	7.041	2613.861	6.972	2623.516	7.106	2652.609	7.296
2667.155	7.136	2693.057	7.211	2710.794	7.028	2723.393	6.968	2737.116	6.992
2752.122	7.026	2765	5.61	2790	6.36	2792	2.97	2795	2.26
2800	.76	2805	1.46	2810	2.96	2815	6	2840	5.63
2846.348	9.293	2851.635	9.621	2869.597	10.782	2911.682	12.659	2939.343	13.212
2951.148	14.068	2972.628	14.974	2985.84	15.427	3000.905	15.983	3010.194	16.274
3033.113	16.879	3053.18	17.343	3064.208	17.591	3081.238	17.878	3090.914	17.996
3105.3	18.236	3128.648	18.394	3143.777	18.613	3165.023	18.804	3197.032	18.943
3200.348	18.963	3204.117	18.972	3263.445	19.196	3279.585	19.241	3297.8	19.294
3317.32	19.332	3321.862	19.342	3329.857	19.338	3345.925	19.332	3355.054	19.298
3369.987	19.165	3396.269	18.712	3418.112	18.335	3462.682	20.548	3466.237	20.57

ExpandedLocal.rep

3468.257	20.6993516.257	20.1953532.356	20.0283537.678	19.9653542.241	19.924
3549.654	19.8793577.935	19.6323584.589	19.6183595.339	19.6253615.643	19.651
3633.779	19.643649.324	19.6623664.206	19.6443685.018	19.6383691.439	19.634
3698.93	19.6373756.407	19.607 3764.15	19.6023782.217	19.6013792.101	19.596
3814.122	19.568 3861.98	19.4763864.094	19.4713865.504	19.4693934.879	19.261
3939.052	19.2533970.573	19.173981.427	19.1394006.268	19.2014014.011	19.197
4032.077	19.2664041.962	19.2924049.376	19.3444077.657	19.4624112.802	19.852
4113.706	19.8554115.364	19.894138.941	20.284149.045	20.4544163.927	20.462
4184.74	204188.913	19.9124198.651	19.8194238.885	19.1424281.938	19.039
4288.858	19.0454291.823	19.0374299.237	19.0124327.517	18.8834331.145	18.88
4361.523	18.8574363.709	18.8554365.697	18.8514369.952	18.844415.646	18.784
4432.493	18.7624441.194	18.764464.792	18.736 4467.46	18.7364468.064	18.735
4526.094	18.6644566.959	18.4724572.362	18.4484607.211	18.3374642.297	18.204
4645.576	18.216 4654.47	18.2284671.124	18.2594690.576	18.324722.219	18.415
4747.199	18.4334747.767	18.432 4749.31	18.434773.315	18.3914801.355	18.304
4824.411	18.2354875.333	18.1724887.068	18.1584918.203	18.1334924.674	18.136
4938.988	18.086 4952.15	18.044957.002	18.0234989.609	17.995026.937	17.929
5028.793	17.9235089.685	17.6125105.436	17.5495128.667	17.3895130.984	17.375
5131.839	17.3565156.532	16.7235166.806	16.5835190.871	16.3015223.506	15.957
5236.741	15.8175258.723	15.685271.708	15.8385284.271	16.0795306.675	16.617
5309.819	16.6595341.642	17.0115352.778	17.093 5376.61	17.2345382.303	17.26
5413.185	17.4175446.544	17.5575466.027	17.6225481.512	17.6735508.024	17.707
5516.479	17.7115521.417	17.708 5536.57	17.653 5565.17	17.5525601.166	17.727
5612.83	17.7365621.689	17.7535652.721	17.8625691.878	17.939 5713.14	17.93
5743.216	17.8465762.067	17.7865794.086	17.735804.004	17.7055832.457	17.72
5860.587	17.7195869.114	17.735870.392	17.7335878.398	17.7345892.065	17.733
5908.082	17.7265972.132	17.6225972.635	17.6215997.567	17.4876007.729	17.423
6030.335	17.0046046.078	16.769 6063.22	16.7066075.573	16.7356086.918	16.624
6113.013	16.4786143.501	16.4126150.178	16.4026183.202	16.46211.191	16.4
6248.041	16.4016251.082	16.4016253.391	16.4016277.354	16.4026288.485	16.403
6302.789	16.404 6323.58	16.4086328.224	16.4086340.452	16.4126353.659	16.416
6358.674	16.4196379.094	16.4326393.769	16.4466410.645	16.4756444.249	16.572
6470.481	16.766499.053	16.899 6506.27	17.0016525.274	17.9786534.147	18.368
6557.14	18.556596.163	20.446606.466	20.896610.098	21.0446617.685	20.661
6658.88	19.2496674.525	19.5126684.316	19.56 6709.62	22.2516709.751	22.256
6709.825	22.266710.095	22.276713.511	22.5996809.552	31.7716811.491	32.103
6814.903	32.189				

Manning's n Values		num= 3	
Sta	n Val	Sta	n Val
-466	.06	2790	.05
		2815	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	2790	2815		641	641	.1	.3

CROSS SECTION

ExpandedLocal.rep

RIVER: Gum Bayou  
 REACH: Lower

RS: 7891

INPUT

Description: Data from Land Survey

Data from Land Survey

Station Elevation Data num= 259

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2282	8.955	-2274.84	8.946	-2267.33	8.903	-2260.59	8.828	-2244.09	8.531
-2216.52	8.099	-2176.55	7.476	-2174.39	7.449	-2172.46	7.431	-2127.4	7.058
-2111.98	6.973	-2084.33	6.884	-2078.25	6.888	-2058.22	6.951	-2040.27	7.045
-2034.99	7.106	-1996.2	7.557	-1985.77	7.742	-1979.96	7.835	-1959.47	8.144
-1922.67	8.695	-1908.08	8.887	-1895.59	8.985	-1881.66	9.096	-1872.36	9.162
-1869.48	9.181	-1783.37	9.575	-1780.69	9.598	-1779.42	9.615	-1775.89	9.642
-1756.19	9.722	-1734.22	9.813	-1731.82	9.82	-1685.07	9.809	-1658.82	10.063
-1644.82	10.234	-1641.91	10.22	-1638.89	10.221	-1610.14	10.04	-1555.84	9.558
-1540.34	9.487	-1533.01	9.49	-1515.71	9.455	-1479.17	9.471	-1466.44	9.459
-1462.97	9.46	-1460.41	9.466	-1443.54	9.481	-1417.16	9.515	-1402.5	9.607
-1387.81	9.694	-1374.61	9.709	-1359.48	9.72	-1351.51	9.711	-1348.01	9.711
-1339.02	9.728	-1302.57	9.747	-1278.91	9.744	-1273.22	9.731	-1249.16	9.702
-1242.61	9.685	-1214.51	9.591	-1206.31	9.581	-1185.16	9.531	-1158.72	9.495
-1150.3	9.458	-1135.53	9.375	-1107.55	9.187	-1101.87	9.141	-1092.83	8.949
-1052.78	8.385	-1034.56	8.21	-1005.52	7.98	-999.31	7.894	-985.373	7.862
-970.625	7.843	-961.863	7.854	-933.59	7.911	-915.854	8.17	-899.932	8.236
-888.469	8.225	-866.274	8.264	-848.312	8.184	-840.694	8.177	-832.795	8.164
-795.739	8.158	-754.252	7.836	-721.419	7.63	-701.134	7.513	-688.319	7.373
-659.339	7.149	-635.304	6.914	-609.246	6.781	-602.389	6.76	-574.946	6.646
-564.426	6.644	-551.39	6.606	-503.643	6.48	-498.845	6.472	-470.728	6.461
-468.389	6.46	-439.424	6.476	-437.875	6.477	-437.813	6.478	-437.503	6.478
-371.983	6.515	-366.058	6.509	-339.068	6.528	-313.741	6.5	-295.506	6.482
-285.655	6.481	-273.237	6.481	-256.8	6.509	-210.687	6.606	-205.487	6.613
-203.267	6.616	-180.488	6.651	-167.593	6.679	-135.479	6.735	-131.919	6.741
-130.489	6.743	-127.141	6.747	-101.68	6.814	-96.245	6.816	-72.283	6.88
-60.571	6.869	-42.885	6.886	0	5	25	3.6	44	2.7
63	3.2	87	2.9	123	2.9	149	1.9	175	2.3
195	2.9	228	2.9	260	.7	281	2.7	304	2.7
328	3.1	353	2.8	371	3.6	395	2.7	418	3.4
454	3.3	479	1.7	505	3.3	529	2.2	550	1.5
589	2.4	628	3.4	653	4.3	654.479	16.193	684.999	16.606
690.618	16.663	697.164	16.717	726.757	17.001	752.159	16.935	762.896	16.913
775.405	16.843	835.175	16.507	844.044	16.382	853.645	16.264	881.615	15.913
907.453	15.466	926.716	15.296	943.592	14.901	964.614	14.9	979.731	14.449
994.327	14.654	1010.126	15.238	1031.897	16.266	1044.151	16.507	1087.96	17.697
1088.148	17.702	1088.217	17.703	1088.367	17.706	1124.287	18.401	1155.121	18.773
1160.426	18.831	1166.607	18.875	1187.1	18.985	1196.565	19.053	1211.821	19.098
1240.894	19.122	1245.664	19.131	1258.464	19.145	1267.955	19.151	1287.453	19.067

ExpandedLocal.rep

1302.945	18.5631323.507	17.2421337.935	18.5861364.034	20.0871372.926	19.976
1389.561	19.8031434.435	19.7121439.299	19.6681441.581	19.6971447.897	19.708
1477.896	19.6721491.669	19.647 1525.02	19.6491547.877	19.705 1568.25	19.788
1582.867	19.8051583.241	19.8041593.782	19.7771617.842	19.7291619.323	19.721
1623.334	19.7031652.817	19.5461677.743	19.3521687.792	19.3341721.487	18.661
1722.767	18.6751747.028	18.5251757.742	18.3641772.569	18.6811792.716	19.334
1812.71	19.107 1823.65	18.8711836.466	18.8991862.666	18.7021891.926	19.044
1897.641	19.2041899.162	19.211907.398	19.2481925.814	19.3581932.616	19.359
1947.387	19.3791967.591	19.4032002.086	19.4432002.513	19.4432002.674	19.443
2002.847	19.4442037.541	19.4462053.518	19.4352072.515	19.4282079.059	19.419
2107.49	19.3312127.076	19.32142.465	19.3082164.865	19.31 2177.44	19.302
2181.222	19.2912191.462	19.2512206.763	19.1882212.415	19.1532243.743	18.963
2282.365	18.5382283.386	18.532 2317.34	17.62334.468	17.6272352.315	17.725
2360.008	17.7152380.838	17.84 2411.09	18.2512422.264	18.234	

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2282	.06	228	.05	281	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	228	281		78	78	.1	.3

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Lower RS: 7813

INPUT

Description: Data from Land Survey

Station Elevation Data num= 259

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2417	8.955-2409.84	8.946-2402.33	8.903-2395.59	8.828-2379.09	8.531				
-2351.52	8.099-2311.55	7.476-2309.39	7.449-2307.46	7.431 -2262.4	7.058				
-2246.98	6.973-2219.33	6.884-2213.25	6.888-2193.22	6.951-2175.27	7.045				
-2169.99	7.106 -2131.2	7.557-2120.77	7.742-2114.96	7.835-2094.47	8.144				
-2057.67	8.695-2043.08	8.887-2030.59	8.985-2016.66	9.096-2007.36	9.162				
-2004.48	9.181-1918.37	9.575-1915.69	9.598-1914.42	9.615-1910.89	9.642				
-1891.19	9.722-1869.22	9.813-1866.82	9.82-1820.07	9.809-1793.82	10.063				
-1779.82	10.234-1776.91	10.22-1773.89	10.221-1745.14	10.04-1690.84	9.558				
-1675.34	9.487-1668.01	9.49-1650.71	9.455-1614.17	9.471-1601.44	9.459				
-1597.97	9.46-1595.41	9.466-1578.54	9.481-1552.16	9.515 -1537.5	9.607				
-1522.81	9.694-1509.61	9.709-1494.48	9.72-1486.51	9.711-1483.01	9.711				
-1474.02	9.728-1437.57	9.747-1413.91	9.744-1408.22	9.731-1384.16	9.702				
-1377.61	9.685-1349.51	9.591-1341.31	9.581-1320.16	9.531-1293.72	9.495				
-1285.3	9.458-1270.53	9.375-1242.55	9.187-1236.87	9.141-1227.83	8.949				

ExpandedLocal.rep

-1187.78	8.385-1169.56	8.21-1140.52	7.98-1134.31	7.894-1120.37	7.862
-1105.62	7.843-1096.86	7.854-1068.59	7.911-1050.85	8.17-1034.93	8.236
-1023.46	8.225-1001.27	8.264-983.312	8.184-975.694	8.177-967.795	8.164
-930.739	8.158-889.252	7.836-856.419	7.63-836.134	7.513-823.319	7.373
-794.339	7.149-770.304	6.914-744.246	6.781-737.389	6.76-709.946	6.646
-699.426	6.644 -686.39	6.606-638.643	6.48-633.845	6.472-605.728	6.461
-603.389	6.46-574.424	6.476-572.875	6.477-572.813	6.478-572.503	6.478
-506.983	6.515-501.058	6.509-474.068	6.528-448.741	6.5-430.506	6.482
-420.655	6.481-408.237	6.481 -391.8	6.509-345.687	6.606-340.487	6.613
-338.267	6.616-315.488	6.651-302.593	6.679-270.479	6.735-266.919	6.741
-265.489	6.743-262.141	6.747 -236.68	6.814-231.245	6.816-207.283	6.88
-195.571	6.869-177.885	6.886-132.142	6.815-124.222	6.815 -119.09	6.816
-95.048	6.768 -88.548	6.758 -83.705	6.759 -52.874	6.741 -40.494	6.746
-17.2	6.854 -1.499	6.892 0	4.7 26	3.8 41	5
66	4.5 91	5 114	4.2 135	4.7 147	1.2
153	.5 157	1.2 182	2.9 194	3 225	3.9
249	3.6 262	3.4 292	3.8 316	3.5 323	3.1
328	3.7 354	2.1 389	3.3 416	3 438	3.3
473	3.1 506	2.7 522	3.5 574	3.3 591.757	17.001
617.159	16.935 627.896	16.913 640.405	16.843 700.175	16.507 709.044	16.382
718.645	16.264 746.615	15.913 772.453	15.466 791.716	15.296 808.592	14.901
829.614	14.9 844.731	14.449 859.327	14.654 875.126	15.238 896.897	16.266
909.151	16.507 952.96	17.697 953.148	17.702 953.217	17.703 953.367	17.706
989.287	18.4011020.121	18.7731025.426	18.831031.607	18.875 1052.1	18.985
1061.565	19.0531076.821	19.0981105.894	19.1221110.664	19.131123.464	19.145
1132.955	19.1511152.453	19.0671167.945	18.5631188.507	17.2421202.935	18.586
1229.034	20.0871237.926	19.9761254.561	19.8031299.435	19.7121304.299	19.668
1306.581	19.6971312.897	19.7081342.896	19.6721356.669	19.647 1390.02	19.649
1412.877	19.705 1433.25	19.7881447.867	19.8051448.241	19.8041458.782	19.777
1482.842	19.7291484.323	19.7211488.334	19.7031517.817	19.5461542.743	19.352
1552.792	19.3341586.487	18.6611587.767	18.6751612.028	18.5251622.742	18.364
1637.569	18.6811657.716	19.334 1677.71	19.107 1688.65	18.8711701.466	18.899
1727.666	18.7021756.926	19.0441762.641	19.2041764.162	19.211772.398	19.248
1790.814	19.3581797.616	19.3591812.387	19.3791832.591	19.4031867.086	19.443
1867.513	19.4431867.674	19.4431867.847	19.4441902.541	19.4461918.518	19.435
1937.515	19.4281944.059	19.4191972.49	19.3311992.076	19.32007.465	19.308
2029.865	19.31 2042.44	19.3022046.222	19.2912056.462	19.2512071.763	19.188
2077.415	19.1532108.743	18.9632147.365	18.5382148.386	18.532	

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2417 .06 -1.499 .05 591.757 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 -1.499 591.757 76 76 76 .1 .3

Ineffective Flow num= 3  
 Sta L Sta R Elev Permanent



ExpandedLocal.rep

-2417 228.03 9.8 F  
 258.97 404.06 9.8 F  
 433.97 582.36 9.8 F

CULVERT

RIVER: Gum Bayou  
 REACH: Lower RS: 7775

INPUT

Description: Gum #53  
 Distance from Upstream XS = 7  
 Deck/Roadway Width = 62  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 15

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-1758.74		10.1		0	10.1		34		10.2					
	82	9.8		138	10.2		182		10.6					
	241	11		277	11.6		312		11.8					
	353	11.9		398	11.7		458		11.6					
	518	11.4		576	11.9		649		12.2					

Upstream Bridge Cross Section Data

Station Elevation Data num= 259

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2417	8.955-2409.84	8.946-2402.33	8.903-2395.59	8.828-2379.09	8.531				
-2351.52	8.099-2311.55	7.476-2309.39	7.449-2307.46	7.431 -2262.4	7.058				
-2246.98	6.973-2219.33	6.884-2213.25	6.888-2193.22	6.951-2175.27	7.045				
-2169.99	7.106 -2131.2	7.557-2120.77	7.742-2114.96	7.835-2094.47	8.144				
-2057.67	8.695-2043.08	8.887-2030.59	8.985-2016.66	9.096-2007.36	9.162				
-2004.48	9.181-1918.37	9.575-1915.69	9.598-1914.42	9.615-1910.89	9.642				
-1891.19	9.722-1869.22	9.813-1866.82	9.82-1820.07	9.809-1793.82	10.063				
-1779.82	10.234-1776.91	10.22-1773.89	10.221-1745.14	10.04-1690.84	9.558				
-1675.34	9.487-1668.01	9.49-1650.71	9.455-1614.17	9.471-1601.44	9.459				
-1597.97	9.46-1595.41	9.466-1578.54	9.481-1552.16	9.515 -1537.5	9.607				
-1522.81	9.694-1509.61	9.709-1494.48	9.72-1486.51	9.711-1483.01	9.711				
-1474.02	9.728-1437.57	9.747-1413.91	9.744-1408.22	9.731-1384.16	9.702				
-1377.61	9.685-1349.51	9.591-1341.31	9.581-1320.16	9.531-1293.72	9.495				
-1285.3	9.458-1270.53	9.375-1242.55	9.187-1236.87	9.141-1227.83	8.949				
-1187.78	8.385-1169.56	8.21-1140.52	7.98-1134.31	7.894-1120.37	7.862				
-1105.62	7.843-1096.86	7.854-1068.59	7.911-1050.85	8.17-1034.93	8.236				
-1023.46	8.225-1001.27	8.264-983.312	8.184-975.694	8.177-967.795	8.164				
-930.739	8.158-889.252	7.836-856.419	7.63-836.134	7.513-823.319	7.373				
-794.339	7.149-770.304	6.914-744.246	6.781-737.389	6.76-709.946	6.646				

ExpandedLocal.rep

-699.426	6.644	-686.39	6.606-638.643	6.48-633.845	6.472-605.728	6.461
-603.389	6.46	-574.424	6.476-572.875	6.477-572.813	6.478-572.503	6.478
-506.983	6.515	-501.058	6.509-474.068	6.528-448.741	6.5-430.506	6.482
-420.655	6.481	-408.237	6.481 -391.8	6.509-345.687	6.606-340.487	6.613
-338.267	6.616	-315.488	6.651-302.593	6.679-270.479	6.735-266.919	6.741
-265.489	6.743	-262.141	6.747 -236.68	6.814-231.245	6.816-207.283	6.88
-195.571	6.869	-177.885	6.886-132.142	6.815-124.222	6.815 -119.09	6.816
-95.048	6.768	-88.548	6.758 -83.705	6.759 -52.874	6.741 -40.494	6.746
-17.2	6.854	-1.499	6.892 0	4.7 26	3.8 41	5
66	4.5	91	5 114	4.2 135	4.7 147	1.2
153	.5	157	1.2 182	2.9 194	3 225	3.9
249	3.6	262	3.4 292	3.8 316	3.5 323	3.1
328	3.7	354	2.1 389	2.1 416	1.1 438	1.6
473	3.1	506	2.7 522	3.5 574	3.3 591.757	17.001
617.159	16.935	627.896	16.913 640.405	16.843 700.175	16.507 709.044	16.382
718.645	16.264	746.615	15.913 772.453	15.466 791.716	15.296 808.592	14.901
829.614	14.9	844.731	14.449 859.327	14.654 875.126	15.238 896.897	16.266
909.151	16.507	952.96	17.697 953.148	17.702 953.217	17.703 953.367	17.706
989.287	18.401	1020.121	18.773 1025.426	18.831 1031.607	18.875 1052.1	18.985
1061.565	19.053	1076.821	19.098 1105.894	19.122 1110.664	19.131 1123.464	19.145
1132.955	19.151	1152.453	19.067 1167.945	18.563 1188.507	17.242 1202.935	18.586
1229.034	20.087	1237.926	19.976 1254.561	19.803 1299.435	19.712 1304.299	19.668
1306.581	19.697	1312.897	19.708 1342.896	19.672 1356.669	19.647 1390.02	19.649
1412.877	19.705	1433.25	19.788 1447.867	19.805 1448.241	19.804 1458.782	19.777
1482.842	19.729	1484.323	19.721 1488.334	19.703 1517.817	19.546 1542.743	19.352
1552.792	19.334	1586.487	18.661 1587.767	18.675 1612.028	18.525 1622.742	18.364
1637.569	18.681	1657.716	19.334 1677.71	19.107 1688.65	18.871 1701.466	18.899
1727.666	18.702	1756.926	19.044 1762.641	19.204 1764.162	19.211 1772.398	19.248
1790.814	19.358	1797.616	19.359 1812.387	19.379 1832.591	19.403 1867.086	19.443
1867.513	19.443	1867.674	19.443 1867.847	19.444 1902.541	19.446 1918.518	19.435
1937.515	19.428	1944.059	19.419 1972.49	19.331 1992.076	19.320 1972.465	19.308
2029.865	19.31	2042.44	19.302 2046.222	19.291 2056.462	19.251 2071.763	19.188
2077.415	19.153	2108.743	18.963 2147.365	18.538 2148.386	18.532	

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2417	.05	135	.05	182	.05

\*\*\*\*\*

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	-1.499	591.757		.1	.3

Ineffective Flow num= 3

Sta L	Sta R	Elev	Permanent
-2417	228.03	9.8	F
258.97	404.06	9.8	F
433.97	582.36	9.8	F

Downstream Deck/Roadway Coordinates

ExpandedLocal.rep

num= 12

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-1758.74		10.1			0		10.1			39		10.2		
87		9.8			143		10.2			188		10.6		
247		11			282		11.6			317		11.8		
358		11.9			404		11.7			463		11.6		

Downstream Bridge Cross Section Data

Station Elevation Data num= 253

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2417	8.955-2409.84	8.946-2402.33	8.903-2395.59	8.828-2379.09	8.531				
-2351.52	8.099-2311.55	7.476-2309.39	7.449-2307.46	7.431 -2262.4	7.058				
-2246.98	6.973-2219.33	6.884-2213.25	6.888-2193.22	6.951-2175.27	7.045				
-2169.99	7.106 -2131.2	7.557-2120.77	7.742-2114.96	7.835-2094.47	8.144				
-2057.67	8.695-2043.08	8.887-2030.59	8.985-2016.66	9.096-2007.36	9.162				
-2004.48	9.181-1918.37	9.575-1915.69	9.598-1914.42	9.615-1910.89	9.642				
-1891.19	9.722-1869.22	9.813-1866.82	9.82-1820.07	9.809-1793.82	10.063				
-1779.82	10.234-1776.91	10.22-1773.89	10.221-1745.14	10.04-1690.84	9.558				
-1675.34	9.487-1668.01	9.49-1650.71	9.455-1614.17	9.471-1601.44	9.459				
-1597.97	9.46-1595.41	9.466-1578.54	9.481-1552.16	9.515 -1537.5	9.607				
-1522.81	9.694-1509.61	9.709-1494.48	9.72-1486.51	9.711-1483.01	9.711				
-1474.02	9.728-1437.57	9.747-1413.91	9.744-1408.22	9.731-1384.16	9.702				
-1377.61	9.685-1349.51	9.591-1341.31	9.581-1320.16	9.531-1293.72	9.495				
-1285.3	9.458-1270.53	9.375-1242.55	9.187-1236.87	9.141-1227.83	8.949				
-1187.78	8.385-1169.56	8.21-1140.52	7.98-1134.31	7.894-1120.37	7.862				
-1105.62	7.843-1096.86	7.854-1068.59	7.911-1050.85	8.17-1034.93	8.236				
-1023.46	8.225-1001.27	8.264-983.312	8.184-975.694	8.177-967.795	8.164				
-930.739	8.158-889.252	7.836-856.419	7.63-836.134	7.513-823.319	7.373				
-794.339	7.149-770.304	6.914-744.246	6.781-737.389	6.76-709.946	6.646				
-699.426	6.644 -686.39	6.606-638.643	6.48-633.845	6.472-605.728	6.461				
-603.389	6.46-574.424	6.476-572.875	6.477-572.813	6.478-572.503	6.478				
-506.983	6.515-501.058	6.509-474.068	6.528-448.741	6.5-430.506	6.482				
-420.655	6.481-408.237	6.481 -391.8	6.509-345.687	6.606-340.487	6.613				
-338.267	6.616-315.488	6.651-302.593	6.679-270.479	6.735-266.919	6.741				
-265.489	6.743-262.141	6.747 -236.68	6.814-231.245	6.816-207.283	6.88				
-195.571	6.869-177.885	6.886-132.142	6.815-124.222	6.815 -119.09	6.816				
-95.048	6.768 -88.548	6.758 -83.705	6.759 -52.874	6.741 -40.494	6.746				
-17.2	6.854 -1.499	6.892 0	4.9 31	4.9 55	2.8				
71	3.6 89	3.7 112	4 125	1.3 136	1.5				
159	3.7 191	3.9 221	4.8 245	1.5 302	1.1				
313	3.9 329	3.8 353	3.5 395	4.2 414	4.5				
434.083	15.157 482.839	15.878 483.34	15.885 483.525	15.886 483.924	15.889				
519.479	16.193 549.999	16.606 555.618	16.663 562.164	16.717 591.757	17.001				
617.159	16.935 627.896	16.913 640.405	16.843 700.175	16.507 709.044	16.382				
718.645	16.264 746.615	15.913 772.453	15.466 791.716	15.296 808.592	14.901				
829.614	14.9 844.731	14.449 859.327	14.654 875.126	15.238 896.897	16.266				

ExpandedLocal.rep

909.151	16.507	952.96	17.697	953.148	17.702	953.217	17.703	953.367	17.706
989.287	18.401	1020.121	18.773	1025.426	18.831	1031.607	18.875	1052.1	18.985
1061.565	19.053	1076.821	19.098	1105.894	19.122	1110.664	19.131	1123.464	19.145
1132.955	19.151	1152.453	19.067	1167.945	18.563	1188.507	17.242	1202.935	18.586
1229.034	20.087	1237.926	19.976	1254.561	19.803	1299.435	19.712	1304.299	19.668
1306.581	19.697	1312.897	19.708	1342.896	19.672	1356.669	19.647	1390.02	19.649
1412.877	19.705	1433.25	19.788	1447.867	19.805	1448.241	19.804	1458.782	19.777
1482.842	19.729	1484.323	19.721	1488.334	19.703	1517.817	19.546	1542.743	19.352
1552.792	19.334	1586.487	18.661	1587.767	18.675	1612.028	18.525	1622.742	18.364
1637.569	18.681	1657.716	19.334	1677.71	19.107	1688.65	18.871	1701.466	18.899
1727.666	18.702	1756.926	19.044	1762.641	19.204	1764.162	19.211	1772.398	19.248
1790.814	19.358	1797.616	19.359	1812.387	19.379	1832.591	19.403	1867.086	19.443
1867.513	19.443	1867.674	19.443	1867.847	19.444	1902.541	19.446	1918.518	19.435
1937.515	19.428	1944.059	19.419	1972.49	19.331	1992.076	19.320	07.465	19.308
2029.865	19.31	2042.44	19.302	2046.222	19.291				

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
*****								
-2417	.05		112	.05		159	.05	

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	-1.499	434.083		.1	.3

Ineffective Flow num= 3

Sta L	Sta R	Elev	Permanent
-2417	96.5	9.8	F
120.5	266.5	9.8	F
290	424	9.8	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 4

Culvert Name	Shape	Rise	Span	Top n	Bottom n	Depth Blocked	Entrance Loss Coef
Culvert #4	Circular	6					
FHWA Chart # 1 - Concrete Pipe Culvert							
FHWA Scale # 1 - Square edge entrance with headwall							
Solution Criteria = Highest U.S. EG							
Culvert Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef	
1	7	62	.012	.012	0	.7	

Upstream Elevation = 3.7  
 Centerline Station = 238  
 Downstream Elevation = 3.9  
 Centerline Station = 103

Culvert Name      Shape      Rise      Span  
 Culvert #3      Circular      6  
 FHWA Chart # 1 - Concrete Pipe Culvert  
 FHWA Scale # 1 - Square edge entrance with headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n      Bottom n      Depth Blocked      Entrance Loss Coef  
 Exit Loss Coef  
                          7      62      .012      .012      0      .7  
 1

Upstream Elevation = 3.5  
 Centerline Station = 249  
 Downstream Elevation = 3.8  
 Centerline Station = 114

Culvert Name      Shape      Rise      Span  
 Culvert #2      Circular      6  
 FHWA Chart # 1 - Concrete Pipe Culvert  
 FHWA Scale # 1 - Square edge entrance with headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n      Bottom n      Depth Blocked      Entrance Loss Coef  
 Exit Loss Coef  
                          7      62      .012      .012      0      .7  
 1

Upstream Elevation = 1.2  
 Centerline Station = 414  
 Downstream Elevation = 1.5  
 Centerline Station = 273

Culvert Name      Shape      Rise      Span  
 Culvert #1      Circular      6  
 FHWA Chart # 1 - Concrete Pipe Culvert  
 FHWA Scale # 1 - Square edge entrance with headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n      Bottom n      Depth Blocked      Entrance Loss Coef  
 Exit Loss Coef  
                          7      62      .012      .012      0      .7  
 1

Upstream Elevation = 1.2  
 Centerline Station = 424  
 Downstream Elevation = 1.3  
 Centerline Station = 284

CROSS SECTION

ExpandedLocal.rep

RIVER: Gum Bayou

REACH: Lower

RS: 7737

INPUT

Description: Data from Land Survey

Station Elevation Data num= 253

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-2417	8.955	2409.84	8.946	2402.33	8.903	2395.59	8.828	2379.09	8.531
-2351.52	8.099	2311.55	7.476	2309.39	7.449	2307.46	7.431	2262.4	7.058
-2246.98	6.973	2219.33	6.884	2213.25	6.888	2193.22	6.951	2175.27	7.045
-2169.99	7.106	2131.2	7.557	2120.77	7.742	2114.96	7.835	2094.47	8.144
-2057.67	8.695	2043.08	8.887	2030.59	8.985	2016.66	9.096	2007.36	9.162
-2004.48	9.181	1918.37	9.575	1915.69	9.598	1914.42	9.615	1910.89	9.642
-1891.19	9.722	1869.22	9.813	1866.82	9.82	1820.07	9.809	1793.82	10.063
-1779.82	10.234	1776.91	10.22	1773.89	10.221	1745.14	10.04	1690.84	9.558
-1675.34	9.487	1668.01	9.49	1650.71	9.455	1614.17	9.471	1601.44	9.459
-1597.97	9.46	1595.41	9.466	1578.54	9.481	1552.16	9.515	1537.5	9.607
-1522.81	9.694	1509.61	9.709	1494.48	9.72	1486.51	9.711	1483.01	9.711
-1474.02	9.728	1437.57	9.747	1413.91	9.744	1408.22	9.731	1384.16	9.702
-1377.61	9.685	1349.51	9.591	1341.31	9.581	1320.16	9.531	1293.72	9.495
-1285.3	9.458	1270.53	9.375	1242.55	9.187	1236.87	9.141	1227.83	8.949
-1187.78	8.385	1169.56	8.21	1140.52	7.98	1134.31	7.894	1120.37	7.862
-1105.62	7.843	1096.86	7.854	1068.59	7.911	1050.85	8.17	1034.93	8.236
-1023.46	8.225	1001.27	8.264	983.312	8.184	975.694	8.177	967.795	8.164
-930.739	8.158	889.252	7.836	856.419	7.63	836.134	7.513	823.319	7.373
-794.339	7.149	770.304	6.914	744.246	6.781	737.389	6.76	709.946	6.646
-699.426	6.644	686.39	6.606	638.643	6.48	633.845	6.472	605.728	6.461
-603.389	6.46	574.424	6.476	572.875	6.477	572.813	6.478	572.503	6.478
-506.983	6.515	501.058	6.509	474.068	6.528	448.741	6.5	430.506	6.482
-420.655	6.481	408.237	6.481	391.8	6.509	345.687	6.606	340.487	6.613
-338.267	6.616	315.488	6.651	302.593	6.679	270.479	6.735	266.919	6.741
-265.489	6.743	262.141	6.747	236.68	6.814	231.245	6.816	207.283	6.88
-195.571	6.869	177.885	6.886	132.142	6.815	124.222	6.815	119.09	6.816
-95.048	6.768	88.548	6.758	83.705	6.759	52.874	6.741	40.494	6.746
-17.2	6.854	-1.499	6.892	0	4.9	31	4.9	55	2.8
71	3.6	89	3.7	112	4	125	1.3	136	1.5
159	3.7	191	3.9	221	4.8	245	4.4	302	3.8
313	3.9	329	3.8	353	3.5	395	4.2	414	4.5
434.083	15.157	482.839	15.878	483.34	15.885	483.525	15.886	483.924	15.889
519.479	16.193	549.999	16.606	555.618	16.663	562.164	16.717	591.757	17.001
617.159	16.935	627.896	16.913	640.405	16.843	700.175	16.507	709.044	16.382
718.645	16.264	746.615	15.913	772.453	15.466	791.716	15.296	808.592	14.901
829.614	14.9	844.731	14.449	859.327	14.654	875.126	15.238	896.897	16.266
909.151	16.507	952.96	17.697	953.148	17.702	953.217	17.703	953.367	17.706
989.287	18.401	1020.121	18.773	1025.426	18.831	1031.607	18.875	1052.1	18.985

ExpandedLocal.rep

1061.565	19.0531076.821	19.0981105.894	19.1221110.664	19.131123.464	19.145
1132.955	19.1511152.453	19.0671167.945	18.5631188.507	17.2421202.935	18.586
1229.034	20.0871237.926	19.9761254.561	19.8031299.435	19.7121304.299	19.668
1306.581	19.6971312.897	19.7081342.896	19.6721356.669	19.647 1390.02	19.649
1412.877	19.705 1433.25	19.7881447.867	19.8051448.241	19.8041458.782	19.777
1482.842	19.7291484.323	19.7211488.334	19.7031517.817	19.5461542.743	19.352
1552.792	19.3341586.487	18.6611587.767	18.6751612.028	18.5251622.742	18.364
1637.569	18.6811657.716	19.334 1677.71	19.107 1688.65	18.8711701.466	18.899
1727.666	18.7021756.926	19.0441762.641	19.2041764.162	19.211772.398	19.248
1790.814	19.3581797.616	19.3591812.387	19.3791832.591	19.4031867.086	19.443
1867.513	19.4431867.674	19.4431867.847	19.4441902.541	19.4461918.518	19.435
1937.515	19.4281944.059	19.419 1972.49	19.3311992.076	19.32007.465	19.308
2029.865	19.31 2042.44	19.3022046.222	19.291		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2417	.06	-1.499	.05	434.083	.06

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	-1.499	434.083		81	81	81		.1	.3

Ineffective Flow num= 3

Sta L	Sta R	Elev	Permanent
-2417	96.5	9.8	F
120.5	266.5	9.8	F
290	424	9.8	F

CROSS SECTION

RIVER: Gum Bayou  
 REACH: Lower RS: 7656

INPUT

Description: Data from Land Survey

Station Elevation Data num= 241

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2352	8.955	-2344.84	8.946	-2337.33	8.903	-2330.59	8.828	-2314.09	8.531
-2286.52	8.099	-2246.55	7.476	-2244.39	7.449	-2242.46	7.431	-2197.4	7.058
-2181.98	6.973	-2154.33	6.884	-2148.25	6.888	-2128.22	6.951	-2110.27	7.045
-2104.99	7.106	-2066.2	7.557	-2055.77	7.742	-2049.96	7.835	-2029.47	8.144
-1992.67	8.695	-1978.08	8.887	-1965.59	8.985	-1951.66	9.096	-1942.36	9.162
-1939.48	9.181	-1853.37	9.575	-1850.69	9.598	-1849.42	9.615	-1845.89	9.642
-1826.19	9.722	-1804.22	9.813	-1801.82	9.82	-1755.07	9.809	-1728.82	10.063
-1714.82	10.234	-1711.91	10.22	-1708.89	10.221	-1680.14	10.04	-1625.84	9.558
-1610.34	9.487	-1603.01	9.49	-1585.71	9.455	-1549.17	9.471	-1536.44	9.459
-1532.97	9.46	-1530.41	9.466	-1513.54	9.481	-1487.16	9.515	-1472.5	9.607

ExpandedLocal.rep

-1457.81	9.694-1444.61	9.709-1429.48	9.72-1421.51	9.711-1418.01	9.711
-1409.02	9.728-1372.57	9.747-1348.91	9.744-1343.22	9.731-1319.16	9.702
-1312.61	9.685-1284.51	9.591-1276.31	9.581-1255.16	9.531-1228.72	9.495
-1220.3	9.458-1205.53	9.375-1177.55	9.187-1171.87	9.141-1162.83	8.949
-1122.78	8.385-1104.56	8.21-1075.52	7.98-1069.31	7.894-1055.37	7.862
-1040.62	7.843-1031.86	7.854-1003.59	7.911-985.854	8.17-969.932	8.236
-958.469	8.225-936.274	8.264-918.312	8.184-910.694	8.177-902.795	8.164
-865.739	8.158-824.252	7.836-791.419	7.63-771.134	7.513-758.319	7.373
-729.339	7.149-705.304	6.914-679.246	6.781-672.389	6.76-644.946	6.646
-634.426	6.644 -621.39	6.606-573.643	6.48-568.845	6.472-540.728	6.461
-538.389	6.46-509.424	6.476-507.875	6.477-507.813	6.478-507.503	6.478
-441.983	6.515-436.058	6.509-409.068	6.528-383.741	6.5-365.506	6.482
-355.655	6.481-343.237	6.481 -326.8	6.509-280.687	6.606-275.487	6.613
-273.267	6.616-250.488	6.651-237.593	6.679-205.479	6.735-201.919	6.741
-200.489	6.743-197.141	6.747 -171.68	6.814-166.245	6.816-142.283	6.88
-130.571	6.869-112.885	6.886 -67.142	6.815 -59.222	6.815 -54.09	6.816
-30.048	6.768 -23.548	6.758 -18.705	6.759 0	5.5 41	3.5
65	2.7 99	2.2 137	2.6 160	3.2 190	.6
209	3.4 222	3.2 241	3.5 273	3.1 295	3.3
323	3.8 375	3.7 400	3.1 425	3.2 462	3
490	3.6 525	1.9 556	2.2 583	2.6 608	2.3
628	1.9 658	1.7 688	2.5 717	2 753	3.2
765.175	16.507 774.044	16.382 783.645	16.264 811.615	15.913 837.453	15.466
856.716	15.296 873.592	14.901 894.614	14.9 909.731	14.449 924.327	14.654
940.126	15.238 961.897	16.266 974.151	16.507 1017.96	17.6971018.148	17.702
1018.217	17.7031018.367	17.7061054.287	18.4011085.121	18.7731090.426	18.83
1096.607	18.875 1117.1	18.9851126.565	19.0531141.821	19.0981170.894	19.122
1175.664	19.131188.464	19.1451197.955	19.1511217.453	19.0671232.945	18.563
1253.507	17.2421267.935	18.5861294.034	20.0871302.926	19.9761319.561	19.803
1364.435	19.7121369.299	19.6681371.581	19.6971377.897	19.7081407.896	19.672
1421.669	19.647 1455.02	19.6491477.877	19.705 1498.25	19.7881512.867	19.805
1513.241	19.8041523.782	19.7771547.842	19.7291549.323	19.7211553.334	19.703
1582.817	19.5461607.743	19.3521617.792	19.3341651.487	18.6611652.767	18.675
1677.028	18.5251687.742	18.3641702.569	18.6811722.716	19.334 1742.71	19.107
1753.65	18.8711766.466	18.8991792.666	18.7021821.926	19.0441827.641	19.204
1829.162	19.211837.398	19.2481855.814	19.3581862.616	19.3591877.387	19.379
1897.591	19.4031932.086	19.4431932.513	19.4431932.674	19.4431932.847	19.444
1967.541	19.4461983.518	19.4352002.515	19.4282009.059	19.419 2037.49	19.331
2057.076	19.3				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2352	.06	160	.05	209	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	160	209		4910	4910	.1	.3



ExpandedLocal.rep

CROSS SECTION

RIVER: Gum Bayou

REACH: Lower

RS: 2746

INPUT

Description: Data from COEtoSTP River Sta 0.52

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
312	10.261	333.726	10.143	341.468	10.1	349.992	10.141	378.046	9.975
387.92	9.788	422.366	9.403	453.79	9.095	475.962	8.837	496.388	8.63
511.006	8.472	527.274	8.293	587.051	7.412	593.985	7.307	596.952	7.253
599.646	7.212	620.178	6.943	642.784	6.717	643.966	6.707	655.671	6.652
688.286	6.496	691.582	6.489	695.619	6.487	759.533	6.43	789.18	6.44
800.565	6.442	811.232	6.461	821.246	6.471	852.436	6.465	865.566	6.484
875.662	6.498	886.777	6.521	912.756	6.559	945.339	6.611	954.206	6.616
984.374	6.607	1018.508	6.588	1021.271	6.586	1033.086	6.578	1036.57	6.574
1039.858	6.573	1042.968	6.575	1051.356	6.577	1087.509	6.581	1107.898	6.577
1130.102	6.571	1132.051	6.569	1161.964	6.551	1176.592	6.55	1192.49	6.547
1227.118	6.552	1247.218	6.544	1275.626	6.546	1310.216	6.551	1340.098	6.519
1354.757	6.505	1372.642	6.493	1386.538	6.502	1421.924	6.454	1456.199	6.453
1469.658	6.446	1488.381	6.461	1518.166	6.483	1553.776	6.507	1572.299	6.536
1577.463	6.532	1599.57	6.521	1612.937	6.507	1618.052	6.504	1619.753	6.505
1623.15	6.502	1654.745	6.491	1686.447	6.516	93.098	6.505	1763.204	6.513
1764.825	6.513	1769.676	6.512	1790.892	6.517	1801.518	6.518	1812.155	6.516
1864.237	6.506	1874.904	6.503	1888.686	6.519	16.203	6.485	1948.29	6.471
1968.895	6.485	1989.466	6.517	2021.677	6.542	2053.996	6.514	2058	1.93
2083	1.23	2085	-.07	2095	-3.27	2100	-3.37	2105	-2.77
2113	.33	2115	1.53	2140	2.23	2147.277	6.502	2170.538	6.478
2205.143	6.461	2206.515	6.462	2265.024	6.598	2274.882	6.619	2277.566	6.624
2293.999	6.701	2311.644	6.772	2314.526	6.797	2345.721	7.605	2365.919	9.69
2384.175	11.252	2413.877	14.324	2415.341	14.403	2447.954	15.324	2460.69	15.875
2482.032	16.681	2494.015	16.554	2516.109	17.928	2533.583	17.988	2550.187	18.582
2573.832	18.674	2584.265	18.735	2600.437	18.661	2631.682	18.596	2660.764	18.581
2679.765	18.582	2686.879	18.565	2705.702	18.541	2721.462	18.542	2734.07	18.541
2756.045	18.534	2783.514	19.279	0.628	19.032	2816.205	18.623	2856.731	18.579
2859.794	18.572	2862.244	18.568	2865.92	18.565	2903.744	18.488	2919.954	18.427
2960.48	18.344	2961.18	18.343	2963.429	18.338	2965.754	18.331	2994.618	18.245
3026.676	18.144	3029.258	18.142	3032.293	18.156	3062.173	18.229	3087.599	18.391
3099.303	18.489	3128.002	18.693	3133.599	18.716	3153.612	18.705	3193.831	18.795
3211.28	18.752	3226.746	18.8	3233.58	18.813	3259.66	18.763	3260.145	18.76
3290.34	18.703	3295.101	18.705	3298.432	18.711	3330.58	18.777	3376.538	18.882
3401.537	18.941	3462.737	18.766	3468.089	18.747	3472.495	18.702	3494.783	18.463
3507.973	18.582	3519.695	18.122	3543.452	18.344	3570.184	17.727	3586.703	17.855
3633.226	17.896	3645.963	17.905	3649.483	17.905	3678.242	17.694	3718.714	17.408
3738.387	17.309	3775.469	17.114	3787.945	17.077	3813.072	17.01	3822.56	16.973

ExpandedLocal.rep

3841.272 16.9983857.175 17.0083859.013 17.0123869.437 17.0353894.741 17.192
3913.987 17.6923970.204 19.3483975.635 19.1683980.415 19.0574010.964 18.322
4045.667 17.1714046.844 17.2274055.498 17.6824118.283 20.8564124.246 21.122
4146.527 20.784

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
312 .05 2058 .05 2140 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
2058 2140 0 0 0 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal
REACH: Main RS: 5808

INPUT

Description: Copy of COE 1.1

Station Elevation Data num= 5
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
\*\*\*\*\*
100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
100 .1 100 .04 127 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
100 127 245 245 245 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal
REACH: Main RS: 5563

INPUT

Description: Copy of COE 1.05363\*

Station Elevation Data num= 5
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
\*\*\*\*\*
100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3

ExpandedLocal.rep

Sta	n Val	Sta	n Val	Sta	n Val
100	.1	100	.04	127	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	127		245	245		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 5318

INPUT

Description: Copy of COE 1.00727\*

Station Elevation Data		num=		5					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
100	24.5	109	11.5	114	10.1	118.5	10.9	127	24.5

Manning's n Values		num=		3	
Sta	n Val	Sta	n Val	Sta	n Val
100	.1	100	.04	127	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	127		244	244		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 5074

INPUT

Description: Copy of COE 0.960909\*

Station Elevation Data		num=		5					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
100	24.5	109	11.5	114	10.1	118.5	10.9	127	24.5

Manning's n Values		num=		3	
Sta	n Val	Sta	n Val	Sta	n Val
100	.1	100	.04	127	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	127		245	245		.1	.3

ExpandedLocal.rep

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 4829

INPUT

Description: Copy of COE 0.914545\*

Station Elevation Data		num=		5							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
100	24.5	109	11.5	114	10.1	118.5	10.9	127	24.5		

Manning's n Values		num=		3							
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
100	.1	100	.04	127	.1						

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	100	127		245	245	245		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 4584

INPUT

Description: Copy of COE 0.868181\*

Station Elevation Data		num=		5							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
100	24.5	109	11.5	114	10.1	118.5	10.9	127	24.5		

Manning's n Values		num=		3							
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
100	.1	100	.04	127	.1						

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	100	127		245	245	245		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 4339

ExpandedLocal.rep

INPUT

Description: Copy of COE 0.821818\*

Station Elevation Data num= 5  
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
\*\*\*\*\*  
100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3  
Sta n Val Sta n Val Sta n Val  
\*\*\*\*\*  
100 .1 100 .04 127 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
100 127 245 245 245 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 4094

INPUT

Description: Copy of COE 0.775454\*

Station Elevation Data num= 5  
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
\*\*\*\*\*  
100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3  
Sta n Val Sta n Val Sta n Val  
\*\*\*\*\*  
100 .1 100 .04 127 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
100 127 244 244 244 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 3850

INPUT

Description: Copy of COE 0.729090\*

Station Elevation Data num= 5  
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
\*\*\*\*\*

ExpandedLocal.rep

100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
100 .1 100 .04 127 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
100 127 245 245 245 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal
REACH: Main RS: 3605

INPUT
Description: Copy of COE .682727\*
Station Elevation Data num= 5

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
\*\*\*\*\*
100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
100 .1 100 .04 127 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
100 127 245 245 245 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal
REACH: Main RS: 3360

INPUT
Description: Copy of COE 0.636363\*
Station Elevation Data num= 5

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
\*\*\*\*\*
100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
100 .1 100 .04 127 .1

ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 100 127 245 245 245 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 3115

INPUT

Description: Copy of COE 0.59

Station Elevation Data num= 5  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 100 .1 100 .04 127 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 100 127 53 53 53 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 3062

INPUT

Description: Copy of COE 0.58

Station Elevation Data num= 5  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 100 .1 100 .04 127 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 100 127 158 158 158 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 100 105 26 F

123 127 26 F

CULVERT

RIVER: Poor Boy Canal
REACH: Main RS: 2983

INPUT

Description: Data from Army Corps Model

Distance from Upstream XS = 4

Deck/Roadway Width = 150

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 2

Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

\*\*\*\*\*

0 26 150 26

Upstream Bridge Cross Section Data

Station Elevation Data num= 5

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*

100 24.5 109 10.1 114 10.1 119 10.1 127 24.5

Manning's n Values num= 2

Sta n Val Sta n Val

\*\*\*\*\*

100 .04 127 .1

Bank Sta: Left Right Coeff Contr. Expan.

100 127 .1 .3

Ineffective Flow num= 2

Sta L Sta R Elev Permanent

100 105 26 F

123 127 26 F

Downstream Deck/Roadway Coordinates

num= 2

Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

\*\*\*\*\*

0 26 150 26

Downstream Bridge Cross Section Data

Station Elevation Data num= 5

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*

100 24.5 109 9.82 114 9.82 119 9.82 127 24.5



ExpandedLocal.rep

Manning's n Values num= 2  
 Sta n Val Sta n Val  
 \*\*\*\*\*  
 100 .04 127 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 100 127 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 100 107 26 F  
 121 127 26 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name Shape Rise Span  
 Culvert #1 Box 10 10  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 1 4 150 .012 .012 0 .5  
 Upstream Elevation = 10.1  
 Centerline Station = 114  
 Downstream Elevation = 9.82  
 Centerline Station = 114

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 2904

INPUT

Description: Copy of COE 0.55  
 Station Elevation Data num= 5  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*

ExpandedLocal.rep

100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
100 .1 100 .04 127 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
100 127 53 53 53 .1 .3
Ineffective Flow num= 2
Sta L Sta R Elev Permanent
100 107 26 F
121 127 26 F

CROSS SECTION

RIVER: Poor Boy Canal
REACH: Main RS: 2851

INPUT

Description: Copy of COE 0.54
Station Elevation Data num= 5
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
\*\*\*\*\*
100 24.5 109 11.5 114 10.1 118.5 10.9 127 24.5

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
100 .1 100 .04 127 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
100 127 180 180 180 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal
REACH: Main RS: 2671

INPUT

Description: Copy of COE 0.505833\*
Station Elevation Data num= 11
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
\*\*\*\*\*
91.67 24.33 133.33 24.11 138.83 16.86 143.06 11.39 144.88 10.82
148.46 9.91 151.82 10.56 153.38 10.93 156.98 16.09 162.67 24.1

ExpandedLocal.rep

208.08 24.12

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 91.67 .1 133.33 .04 162.67 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 133.33 162.67 181 181 181 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 2490

INPUT  
 Description: Copy of COE 0.471666\*

Station Elevation Data num= 11  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 83.33 24.16 166.67 23.71 172.58 16.57 177.11 11.27 179.08 10.62  
 182.92 9.71 186.56 10.47 188.25 10.96 192.17 16 198.33 23.7  
 289.17 23.74

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 83.33 .1 166.67 .04 198.33 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 166.67 198.33 180 180 180 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 2310

INPUT  
 Description: Copy of COE 0.4375\*

Station Elevation Data num= 11  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 75 23.98 200 23.32 206.32 16.28 211.17 11.16 213.27 10.42  
 217.38 9.52 221.3 10.38 223.13 10.99 227.35 15.91 234 23.3  
 370.25 23.36

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 75 .1 200 .04 234 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 200 234 180 180 180 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 2130

INPUT

Description: Copy of COE 0.40333\*

Station Elevation Data num= 11  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 66.67 23.81 233.33 22.92 240.06 16 245.23 11.05 247.46 10.22  
 251.83 9.32 256.05 10.3 258.01 11.02 262.53 15.82 269.67 22.9  
 451.33 22.98

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 66.67 .1 233.33 .04 269.67 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 233.33 269.67 181 181 181 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 1949

INPUT

Description: Copy of COE 0.369166\*

Station Elevation Data num= 11  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 58.33 23.64 266.67 22.53 273.8 15.71 279.28 10.93 281.65 10.02  
 286.29 9.13 290.79 10.21 292.88 11.05 297.72 15.73 305.33 22.5  
 532.42 22.6

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val

ExpandedLocal.rep

\*\*\*\*\*

58.33 .1 266.67 .04 305.33 .1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	266.67	305.33		180	180	180		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 1769

INPUT

Description: Copy of COE 0.0335\*

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
50	23.47	300	22.14	307.55	15.42	313.34	10.82	315.85	9.81
320.75	8.94	325.54	10.12	327.76	11.08	332.9	15.64	341	22.1
613.5	22.22								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
50	.1	300	.04	341	.1

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	300	341		181	181	181		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 1588

INPUT

Description: Copy of COE 0.300833

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
41.67	23.29	333.33	21.74	341.29	15.14	347.4	10.71	350.04	9.61
355.21	8.74	360.28	10.04	362.64	11.11	368.08	15.55	376.67	21.7
694.58	21.84								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
41.67	.1	333.33	.04	376.67	.1

\*\*\*\*\*

ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
333.33 376.67 180 180 180 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 1408

INPUT

Description: Copy of COE 0.266666\*

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
33.33	23.12	366.67	21.35	375.03	14.85	381.45	10.59	384.23	9.41
389.67	8.55	395.02	9.95	397.51	11.14	403.27	15.46	412.33	21.3
775.67	21.46								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
33.33	.1	366.67	.04	412.33	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
366.67 412.33 180 180 180 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal  
REACH: Main RS: 1228

INPUT

Description: Copy of COE 0.2325\*

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
25	22.95	400	20.95	408.77	14.56	415.51	10.48	418.42	9.21
424.12	8.35	429.77	9.86	432.39	11.17	438.45	15.37	448	20.9
856.75	21.08								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
25	.1	400	.04	448	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

400 448 181 181 181 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal
REACH: Main RS: 1047

INPUT

Description: Copy of COE 0.198333\*

Station Elevation Data num= 11
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
16.67 22.77 433.33 20.56 442.52 14.27 449.57 10.37 452.62 9
458.58 8.16 464.51 9.77 467.27 11.2 473.63 15.28 483.67 20.5
937.83 20.7

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
16.67 .1 433.33 .04 483.67 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
433.33 483.67 180 180 180 .1 .3

CROSS SECTION

RIVER: Poor Boy Canal
REACH: Main RS: 867

INPUT

Description: Copy of COE 0.164166\*

Station Elevation Data num= 11
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
8.33 22.6 466.67 20.16 476.26 13.99 483.62 10.25 486.81 8.8
493.04 7.96 499.26 9.69 502.14 11.23 508.82 15.19 519.33 20.1
1018.92 20.32

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
8.33 .1 466.67 .04 519.33 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
466.67 519.33 181 181 181 .1 .3

ExpandedLocal.rep

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 686

INPUT

Description: Copy of COE 0.13

Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	22.43	500	19.77	510	13.7	521	8.6	527.5	7.77
534	9.6	544	15.1	555	19.7	1100	19.94		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	500	.04	555	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	500	555		52	52		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	470.55	23.7	F
584.45	1100	23.7	F

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 634

INPUT

Description: Copy of COE 0.12

Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	22.43	500	19.77	510	13.7	521	7.77	527.5	7.77
534	7.77	544	15.1	555	19.7	1100	19.94		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	500	.04	555	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	500	555		53	53		.1	.3

Ineffective Flow num= 2



ExpandedLocal.rep

Sta L	Sta R	Elev	Permanent
0	516.5	23.7	F
538.5	1100	23.7	F

CULVERT

RIVER: Poor Boy Canal  
 REACH: Main RS: 607

INPUT

Description: Data from Army Corps Model

Distance from Upstream XS = 6  
 Deck/Roadway Width = 41  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 2

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0		23.7			1200		23.7		

\*\*\*\*\*

0	23.7	1200	23.7
---	------	------	------

Upstream Bridge Cross Section Data

Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	22.43	500	19.77	510	13.7	521	7.77	527.5	7.77
534	7.77	544	15.1	555	19.7	1100	19.94		

\*\*\*\*\*

0	22.43	500	19.77	510	13.7	521	7.77	527.5	7.77
534	7.77	544	15.1	555	19.7	1100	19.94		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	500	.04	555	.1

\*\*\*\*\*

0	.1	500	.04	555	.1
---	----	-----	-----	-----	----

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	500	555		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	516.5	23.7	F
538.5	1100	23.7	F

Downstream Deck/Roadway Coordinates

num= 2

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0		23.7			1200		23.7		

\*\*\*\*\*

0	23.7	1200	23.7
---	------	------	------

Downstream Bridge Cross Section Data

Station Elevation Data num= 9

ExpandedLocal.rep

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	22.43	500	19.77	510	13.7	521	7.77	527.5	7.77
534	7.77	544	15.1	555	19.7	1100	19.94		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	500	.04	555	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	500	555		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	519.5	23.7	F
535.5	1100	23.7	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name	Shape	Rise	Span	Exit Loss Coef		
Culvert #1	Box	10	10			
FHWA Chart # 8 - flared wingwalls						
FHWA Scale # 1 - Wingwall flared 30 to 75 deg.						
Solution Criteria = Highest U.S. EG						
Culvert Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	
1	6	41	.013	.013	0	.5

Upstream Elevation = 8.01  
 Centerline Station = 527.5  
 Downstream Elevation = 8.01  
 Centerline Station = 527.5

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 581

INPUT

ExpandedLocal.rep

Description: Copy of COE 0.11

Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	22.43	500	19.77	510	13.7	521	7.77	527.5	7.77
534	7.77	544	15.1	555	19.7	1100	19.94		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	500	.04	555	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	500	555		53	53		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	519.5	23.7	F
535.5	1100	23.7	F

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 528

INPUT

Description: Copy of COE 0.1

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	17.6	20	18.4	40	15.9	60	20.4	80	20.1
100	19.8	105	7.4	113	6.9	123	8.6	138	15.2
140	19.9	160	20.4	180	20.6	200	19.8	220	19
240	18.7								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	100	.04	140	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	140		87	87		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	88.685	23.7	F
151.735	240	23.7	F

CROSS SECTION

ExpandedLocal.rep

RIVER: Poor Boy Canal  
 REACH: Main RS: 441

INPUT

Description: Copy of COE 0.0835\*

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	17.6	20	18.4	40	15.9	60	20.4	80	20.1
100	19.8	105	6.88	113	6.38	123	8.08	138	14.97
140	19.9	160	20.4	180	20.6	200	19.8	220	19
240	18.7								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	100	.04	140	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	140		87	87		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 354

INPUT

Description: Copy of COE 0.067\*

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	17.6	20	18.4	40	15.9	60	20.4	80	20.1
100	19.8	105	6.37	113	5.87	123	7.57	138	14.73
140	19.9	160	20.4	180	20.6	200	19.8	220	19
240	18.7								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	100	.04	140	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	140		87	87		.1	.3

CROSS SECTION

ExpandedLocal.rep

RIVER: Poor Boy Canal  
 REACH: Main RS: 267

INPUT

Description: Copy of COE 0.0505\*

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	17.6	20	18.4	40	15.9	60	20.4	80	20.1
100	19.8	105	5.85	113	5.35	123	7.05	138	14.5
140	19.9	160	20.4	180	20.6	200	19.8	220	19
240	18.7								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	100	.04	140	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	140		87	87		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 180

INPUT

Description: Copy of COE 0.034\*

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	17.6	20	18.4	40	15.9	60	20.4	80	20.1
100	19.8	105	5.33	113	4.83	123	6.53	138	14.27
140	19.9	160	20.4	180	20.6	200	19.8	220	19
240	18.7								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	100	.04	140	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	140		87	87		.1	.3

CROSS SECTION

ExpandedLocal.rep

RIVER: Poor Boy Canal  
 REACH: Main RS: 92

INPUT

Description: Copy of COE .0175\*

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	17.6	20	18.4	40	15.9	60	20.4	80	20.1
100	19.8	105	4.82	113	4.32	123	6.02	138	14.03
140	19.9	160	20.4	180	20.6	200	19.8	220	19
240	18.7								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	100	.04	140	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	140		87	87		.1	.3

CROSS SECTION

RIVER: Poor Boy Canal  
 REACH: Main RS: 5

INPUT

Description: Copy of COE 0.001

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	17.6	20	18.4	40	15.9	60	20.4	80	20.1
100	19.8	105	4.3	113	3.8	123	5.5	138	13.8
140	19.9	160	20.4	180	20.6	200	19.8	220	19
240	18.7								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	100	.04	140	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	140		0	0		.1	.3

CROSS SECTION

ExpandedLocal.rep

RIVER: Reine Canal  
 REACH: Main RS: 8003

INPUT

Description: Pilot Channel by TJF for stability

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.6	13	14.3	22	7.6	24	5	27	4
28	3	29	3	30	4.3	35	7.8	45	15.1
65	15.3	95	15.6	121	15.6	122	16		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	13	.04	45	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	13	45		1154	1154		.1	.3

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main RS: 6849

INPUT

Description:

Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	14.6	5	13.8	14	7.9	16	5.6	20	5.2
24	5.5	27	8.5	37	14.5	43	15.2		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	5	.04	37	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	5	37		403	403		.1	.3

CROSS SECTION

RIVER: Reine Canal

REACH: Main

RS: 6446

INPUT

Description: US Rue Rochelle

Station Elevation Data

num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
485	16.1	492	15.8	500	10.3	503	6.9	511	7
518	7.1	520	9.7	527	15	550	15.4	575	15.1
600	15.1	625	15	650	15.1	675	15.1	700	14.9
725	15.3								

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
485	.1	492	.04	527	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	492	527		60	60		.1	.3

Ineffective Flow

num= 2

Sta L	Sta R	Elev	Permanent
485	499	13.84	F
519	725	13.84	F

CULVERT

RIVER: Reine Canal

REACH: Main

RS: 6412

INPUT

Description: Rue Rochelle Crossing

Crossing from SELA model

Distance from Upstream XS = 1

Deck/Roadway Width = 58

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 2

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
450	13.84	6	550	13.84	6

Upstream Bridge Cross Section Data

Station Elevation Data

num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
485	16.1	492	15.8	500	6.9	511	6.9	518	7.1
520	9.7	527	15	550	15.4	575	15.1	600	15.1



ExpandedLocal.rep

625 15 650 15.1 675 15.1 700 14.9 725 15.3

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 485 .1 492 .06 527 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 492 527 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 485 499 13.84 F  
 519 725 13.84 F

Downstream Deck/Roadway Coordinates  
 num= 2  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 400 13.84 6 600 13.84 6

Downstream Bridge Cross Section Data  
 Station Elevation Data num= 20  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 435 15.3 437 16 450 16.1 475 15.8 494 15.2  
 500 6.8 506 6.8 510 6.8 518 6.8 525 14.5  
 530 15 540 15.6 550 15.6 550.5 15.2 575 15.3  
 598 15.5 598.5 15.9 600 15.9 602 15.9 606 16

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 435 .1 494 .06 525 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 494 525 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 435 499.5 13.84 F  
 518.5 606 13.84 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

ExpandedLocal.rep

Number of Culverts = 1

Culvert Name      Shape      Rise      Span  
 Culvert #1      Box      5      8  
 FHWA Chart # 10- 90 degree headwall; Chamfered or beveled inlet  
 FHWA Scale # 1 - Inlet edges chamfered 3/4 inch  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n   Bottom n   Depth Blocked   Entrance Loss Coef  
 Exit Loss Coef  
                          1      58      .013      .013      0      .5

1

Number of Barrels = 2  
 Upstream Elevation = 7.6  
 Centerline Stations  
     Sta.      Sta.  
     504      514  
 Downstream Elevation = 7.2  
 Centerline Stations  
     Sta.      Sta.  
     504      514

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main                      RS: 6386

INPUT

Description: DS Rue Rochelle

Station Elevation Data      num=      20  
     Sta      Elev      Sta      Elev      Sta      Elev      Sta      Elev      Sta      Elev  
 \*\*\*\*\*  
     435      15.3      437      16      450      16.1      475      15.8      494      15.2  
     500      10.5      506      7      510      6.8      516      6.9      525      14.5  
     530      15      540      15.6      550      15.6      550.5      15.2      575      15.3  
     598      15.5      598.5      15.9      600      15.9      602      15.9      606      16

Manning's n Values      num=      3  
     Sta      n Val      Sta      n Val      Sta      n Val  
 \*\*\*\*\*  
     435      .1      494      .04      525      .1

Bank Sta: Left      Right      Lengths: Left Channel      Right      Coeff Contr.      Expan.  
                     494      525                      1205      1205      1205      .1      .3

Ineffective Flow      num=      2  
     Sta L      Sta R      Elev      Permanent  
     435      499.5      13.84      F

518.5 606 13.84 F

CROSS SECTION

RIVER: Reine Canal  
REACH: Main RS: 5181

INPUT  
Description:

Station Elevation Data		num= 13		Sta		Elev		Sta		Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	16.2	20	16.9	29	16.8	32	19.3	37	16.8		
41	15.2	47	10.8	50	7.5	58	6.6	65	8.9		
77	14.3	100	15.1	127	15.4						

Manning's n Values		num= 3		Sta		n Val	
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.1	41	.06	77	.1		

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	41	77	1583	1583	1583		.1	.3

CROSS SECTION

RIVER: Reine Canal  
REACH: Main RS: 3598

INPUT  
Description:

Station Elevation Data		num= 11		Sta		Elev		Sta		Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	19.2	13	19.4	21	17.6	27	11.9	33	7.3		
41	5.7	52	7.1	62	17.8	70	18.5	98	17.7		
129	17.5										

Manning's n Values		num= 3		Sta		n Val	
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.1	21	.04	62	.1		

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	21	62	910	910	910		.1	.3

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main RS: 2688

INPUT

Description: US I-10 North  
 Section from SELA model

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
500	18.6	507	17.7	520	16.3	531	10.7	545	9.3
550	6.6	560	6.6	567	7.1	578	11.8	592	14.8
597	16.9	606	17.9	620	19.2				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
500	.1	520	.07	597	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	520	597		64	64	.1	.3

BRIDGE

RIVER: Reine Canal  
 REACH: Main RS: 2642

INPUT

Description: I-10 North  
 Bridge from SELA model  
 Distance from Upstream XS = 14.5  
 Deck/Roadway Width = 35  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates num= 2

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
0	21.9	18.4	100	21.9	18.4

Upstream Bridge Cross Section Data

Station Elevation Data num= 24

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	17.59	.01	17.59	9.5	17.59	20	13	20.01	13
21	13	21.01	13	32.7	6	40	6	40.01	6

ExpandedLocal.rep

41	6	41.01	6	60	6	60.01	6	61	6
61.01	6	64.2	6	80	13	80.01	13	81	13
81.01	13	90.5	17.59	100	17.59	100.01	17.59		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	9.5	.04	90.5	.1

Bank Sta: Left Right Coeff Contr. Expan.

9.5	90.5		.1	.3
-----	------	--	----	----

Downstream Deck/Roadway Coordinates

num= 2

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
0	21.9	18.4	100	21.9	18.4

Downstream Bridge Cross Section Data

Station Elevation Data num= 24

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	17.59	.01	17.59	9.5	17.59	20	13	20.01	13
21	13	21.01	13	32.7	6	40	6	40.01	6
41	6	41.01	6	60	6	60.01	6	61	6
61.01	6	64.2	6	80	13	80.01	13	81	13
81.01	13	90.5	17.59	100	17.59	100.01	17.59		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	9.5	.04	90.5	.1

Bank Sta: Left Right Coeff Contr. Expan.

9.5	90.5		.1	.3
-----	------	--	----	----

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 4

Pier Data

Pier Station Upstream= 20.5 Downstream= 20.5

```

Upstream      num=      2
  Width  Elev   Width  Elev
*****
      1    14     1    18.4

```

```

Downstream    num=      2
  Width  Elev   Width  Elev
*****
      1    14     1    18.4

```

```

Pier Data
Pier Station   Upstream=  40.5   Downstream=  40.5

```

```

Upstream      num=      2
  Width  Elev   Width  Elev
*****
      1    14     1    18.4

```

```

Downstream    num=      2
  Width  Elev   Width  Elev
*****
      1    14     1    18.4

```

```

Pier Data
Pier Station   Upstream=  60.5   Downstream=  60.5

```

```

Upstream      num=      2
  Width  Elev   Width  Elev
*****
      1    14     1    18.4

```

```

Downstream    num=      2
  Width  Elev   Width  Elev
*****
      1    14     1    18.4

```

```

Pier Data
Pier Station   Upstream=  80.5   Downstream=  80.5

```

```

Upstream      num=      2
  Width  Elev   Width  Elev
*****
      1    14     1    18.4

```

```

Downstream    num=      2
  Width  Elev   Width  Elev
*****
      1    14     1    18.4

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data  
Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method  
Energy Only

Additional Bridge Parameters

- Add Friction component to Momentum
- Do not add Weight component to Momentum
- Class B flow critical depth computations use critical depth inside the bridge at the upstream end
- Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: Reine Canal  
REACH: Main RS: 2624

INPUT

Description: DS I-10 North  
Section from SELA model

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
493	17.9	500	17	509	13.2	520	12.2	530	10.1
534	9	542	5.9	551	7.9	558	11.9	573	13.6
584	17.2	592	18.2	600	20.4				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
493	.078	493	.04	584	.078

Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	493	584	26	26	26		.1	.3

CROSS SECTION

RIVER: Reine Canal  
REACH: Main RS: 2598

INPUT

Description: US I-10 South  
Section from Sela model

Station Elevation Data num= 19

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
500	20.5	505.6	18.4	507.1	18.4	517.3	17.7	526.5	12.6
531.5	11.2	541.7	11.2	546	7.1	549.8	7.5	559	6.7

ExpandedLocal.rep

566.5 6.9 568.1 7.4 577.2 11.1 587 13.3 590.5 14.1  
 600.6 17.1 606 18 607.7 18.1 622 20.5

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 500 .078 517.3 .04 622 .078

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 517.3 622 64 64 64 .1 .3

BRIDGE

RIVER: Reine Canal  
 REACH: Main RS: 2566

INPUT

Description: I-10 South  
 Bridge from Sela model  
 Distance from Upstream XS = 6  
 Deck/Roadway Width = 52  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 2  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 0 22.8 19.3 100 22.8 19.3

Upstream Bridge Cross Section Data

Station Elevation Data num= 24  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 17.59 .01 17.59 9.5 17.59 20 13 20.01 13  
 21 13 21.01 13 32.7 6 40 6 40.01 6  
 41 6 41.01 6 60 6 60.01 6 61 6  
 61.01 6 64.2 6 80 13 80.01 13 81 13  
 81.01 13 90.5 17.59 100 17.59 100.01 17.59

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .1 9.5 .04 90.5 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 9.5 90.5 .1 .3

Downstream Deck/Roadway Coordinates



ExpandedLocal.rep

num= 2

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0	22.8	19.3	100	22.8	19.3				

Downstream Bridge Cross Section Data

Station Elevation Data num= 24

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	17.59	.01	17.59	9.5	17.59	20	13	20.01	13
21	13	21.01	13	32.7	6	40	6	40.01	6
41	6	41.01	6	60	6	60.01	6	61	6
61.01	6	64.2	6	80	13	80.01	13	81	13
81.01	13	90.5	17.59	100	17.59	100.01	17.59		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	9.5	.04	90.5	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	9.5	90.5	.1	.3	

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 4

Pier Data

Pier Station Upstream= 20.5 Downstream= 20.5

Upstream num= 2  
 Width Elev Width Elev

1 10 1 19.3

Downstream num= 2

Width Elev Width Elev

1 10 1 19.3

Pier Data

Pier Station Upstream= 40.5 Downstream= 40.5

Upstream num= 2

Width Elev Width Elev

```

*****
      1      10      1      19.3
Downstream      num=      2
      Width  Elev   Width  Elev
*****
      1      10      1      19.3

```

```

Pier Data
Pier Station      Upstream=      60.5      Downstream=      60.5
Upstream      num=      2
      Width  Elev   Width  Elev
*****
      1      10      1      19.3
Downstream      num=      2
      Width  Elev   Width  Elev
*****
      1      10      1      19.3

```

```

Pier Data
Pier Station      Upstream=      80.5      Downstream=      80.5
Upstream      num=      2
      Width  Elev   Width  Elev
*****
      1      10      1      19.3
Downstream      num=      2
      Width  Elev   Width  Elev
*****
      1      10      1      19.3

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

ExpandedLocal.rep

RIVER: Reine Canal  
 REACH: Main RS: 2534

INPUT

Description: DS I-10 South  
 Section from SELA model

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
483	19.3	493	18.6	500	17.2	510	12.9	519	10.5
526	8.3	532	7.6	532.6	8.3	540	6.6	552	8.7
561	11.8	569	12.1	584	17.6	592	17.9	592.5	17.9
600	19.4								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
483	.078	483	.04	600	.078

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	483	600		79 79	79	.1	.3

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main RS: 2455

INPUT

Description: US I-10 Frontage Road  
 Section from SELA model

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
500	18.3	517.6	15	520.7	13.3	538.2	10.2	542.4	7.2
550.6	6.9	556.8	7.6	562	12.2	569.2	14.7	576.5	17.1
578.5	18.3	582.7	18.8						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
500	.085	520.7	.04	562	.085

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	520.7	562		37 37	37	.1	.3

BRIDGE

ExpandedLocal.rep

RIVER: Reine Canal  
 REACH: Main RS: 2437

INPUT

Description: I-10 Frontage Road  
 Bridge from SELA model  
 Distance from Upstream XS = 5  
 Deck/Roadway Width = 27  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 6

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
450	17.4				500	20.9	17.4			500	20.9	17.8		
576	20.9	17.8			576	20.9	17.3			600	17.4			

Upstream Bridge Cross Section Data

Station Elevation Data num= 22

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
450	17.4	500	17.4	500.01	17.4	509	13.9	519	9.9
519.01	9.9	520	9.9	520.01	9.9	520.09	9.706	521	7.5
528	6.6	536	7.6	537	13.7	538.01	13.74	539.01	13.78
557	14.5	557.01	14.5	558	14.5	558.01	14.5	576	17.3
576.01	17.3	600	17.3						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
450	.1	520	.04	537	.1

Bank Sta: Left Right Coeff Contr. Expan.  
 520.01 537 .1 .3

Downstream Deck/Roadway Coordinates

num= 6

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
450	17.4				500	20.9	17.4			500	20.9	17.8		
576	20.9	17.8			576	20.9	17.3			600	17.4			

Downstream Bridge Cross Section Data

Station Elevation Data num= 22

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
450	17.4	500	17.4	500.01	17.4	509	13.9	519	9.9
519.01	9.9	520	9.9	520.01	9.9	520.09	9.706	521	7.5

ExpandedLocal.rep

528	6.6	536	7.6	537	13.7	538.01	13.74	539.01	13.78
557	14.5	557.01	14.5	558	14.5	558.01	14.5	576	17.3
576.01	17.3	600	17.3						

Manning's n Values num= 4

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****	*****	*****
450	.1	500	.04	500.01	.04	576	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	500	576		.1	.3

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 3

Pier Data

Pier Station	Upstream=	519.5	Downstream=	519.5
Upstream	num=	2		
Width	Elev	Width	Elev	
*****	*****	*****	*****	*****
1	13	1	17.8	
Downstream	num=	2		
Width	Elev	Width	Elev	
*****	*****	*****	*****	*****
1	13	1	17.8	

Pier Data

Pier Station	Upstream=	538.5	Downstream=	538.5
Upstream	num=	2		
Width	Elev	Width	Elev	
*****	*****	*****	*****	*****
1	13	1	17.8	
Downstream	num=	2		
Width	Elev	Width	Elev	
*****	*****	*****	*****	*****
1	13	1	17.8	

Pier Data

Pier Station	Upstream=	557.5	Downstream=	557.5
Upstream	num=	2		
Width	Elev	Width	Elev	

```

*****
      1      13      1      17.8
Downstream      num=      2
      Width  Elev  Width  Elev
*****
      1      13      1      17.8

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth  
inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: Reine Canal

REACH: Main RS: 2418

INPUT

Description: DS I-10 Frontage Road

Section from SELA model

```

Station Elevation Data      num=      9
      Sta  Elev  Sta  Elev  Sta  Elev  Sta  Elev  Sta  Elev
*****
      500  18.5  514  17.1  532   8.8  540   6.9  552   7.7
      556  11.8  566  13.1  575  16.8  580  19.3

```

Manning's n Values num= 3

```

      Sta  n Val  Sta  n Val  Sta  n Val
*****
      500   .085  514   .04  575   .085

```

```

Bank Sta: Left  Right  Lengths: Left Channel  Right  Coeff Contr.  Expan.
          514    575          331   331    331          .1         .3

```

CROSS SECTION

ExpandedLocal.rep

RIVER: Reine Canal  
 REACH: Main RS: 2087

INPUT

Description:

Station Elevation Data num= 33

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	18.7	16	25.3	31	21.2	37	16.6	49	16.2
54	11.5	61	8.2	62	6.1	66	5.7	70	6.3
72	9.5	80	12.6	87	15.7	102	15.8	123	14.5
126	11.4	133	10.3	144	7.2	159	3.1	381	3.6
540	4.5	604	4.5	673	5.4	713	6	736	6.8
752	7.8	775	8.9	810	9.8	839	10	903	12.1
908	13.9	930	14	1120	14.5				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	49	.04	87	.06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

49	87	146	146	146	.1	.3
----	----	-----	-----	-----	----	----

Right Levee Station= 87 Elevation= 20  
 Blocked Obstructions num= 1

Sta L	Sta R	Elev
102	1120	15.8

LATERAL STRUCTURE

RIVER: Reine Canal  
 REACH: Main RS: 2086

INPUT

Description:

Lateral structure position = Next ot right bank station  
 Distance from Upstream XS =  
 Deck/Roadway Width = 20  
 Weir Coefficient = 2.6  
 Weir Flow Reference = Water Surface

Weir Embankment Coordinates num = 19

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	15.8	20	15.8	40.4	9	50.6	9	71	15.8
121	15.8	141.4	9	151.6	9	172	15.8	222	15.8

ExpandedLocal.rep

242.4	9	252.6	9	273	15.8	323	15.8	343.4	9
353.6	9	374	15.8	424	15.8	986	15.8		

Weir crest shape = Broad Crested

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main RS: 1941

INPUT

Description:

Station Elevation Data num= 33

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	18.7	16	25.3	31	21.2	37	16.6	49	16.2
54	11.5	61	8.2	62	6.1	66	5.7	70	6.3
72	9.5	80	12.6	87	15.7	102	15.8	123	14.5
126	11.4	133	10.3	144	7.2	159	3.1	381	3.6
540	4.5	604	4.5	673	5.4	713	6	736	6.8
752	7.8	775	8.9	810	9.8	839	10	903	12.1
908	13.9	930	14	1120	14.5				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	49	.04	87	.06

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff	Contr.	Expan.
49	87	330	330		.1	.3

Right Levee Station= 87 Elevation= 20

Blocked Obstructions num= 1

Sta L	Sta R	Elev
102	1120	15.8

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main RS: 1611

INPUT

Description:

Station Elevation Data num= 33

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-----	------	-----	------	-----	------	-----	------	-----	------



ExpandedLocal.rep

```
*****
      0   18.7   16   25.3   31   21.2   37   16.6   49   16.2
     54   11.5   61    8.2   62    6.1   66    5.7   70    6.3
     72    9.5   80   12.6   87   15.7  102   15.8  123   14.5
    126   11.4  133   10.3  144    7.2  159    3.1  381    3.6
    540    4.5  604    4.5  673    5.4  713    6    736    6.8
    752    7.8  775    8.9  810    9.8  839   10   903   12.1
    908   13.9  930    14  1120   14.5
```

```
Manning's n Values      num=      3
  Sta  n Val    Sta  n Val    Sta  n Val
*****
      0   .06    49   .04    87   .06
```

```
Bank Sta: Left   Right   Lengths: Left Channel   Right   Coeff Contr.   Expan.
           49     87           61     61     61           .1           .3
Right Levee      Station=      87   Elevation=      20
Blocked Obstructions num=      1
  Sta L   Sta R   Elev
*****
    102   1120   15.8
```

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main RS: 1550

INPUT

Description:

```
Station Elevation Data      num=      19
  Sta  Elev    Sta  Elev    Sta  Elev    Sta  Elev    Sta  Elev
*****
      0   15.6    15   15.6    35   13.7    41    9.7    48    7.3
     55    5.6    58    6.4    60    9      65   12     71   15.7
     86   14.7   140   15.7   170   16.6   197   16     225  15.6
    309   16.4   395   15.1   510   15.5   815  15.9
```

```
Manning's n Values      num=      3
  Sta  n Val    Sta  n Val    Sta  n Val
*****
      0   .06    35   .04    71   .06
```

```
Bank Sta: Left   Right   Lengths: Left Channel   Right   Coeff Contr.   Expan.
           35     71           451   451   451           .1           .3
Right Levee      Station=      71   Elevation=      18
Blocked Obstructions num=      1
  Sta L   Sta R   Elev
```

ExpandedLocal.rep

\*\*\*\*\*  
 71 815 15.7

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main RS: 1099

INPUT

Description:

Station Elevation Data num= 19

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	15.6	15	15.6	35	13.7	41	9.7	48	7.3
55	5.1	58	6.4	60	9	65	12	71	15.7
86	14.7	140	15.7	170	16.6	197	16	225	15.6
309	16.4	395	15.1	510	15.5	815	15.9		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	35	.04	71	.06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 35 71 879 879 879 .1 .3

Right Levee Station= 71 Elevation= 18

Blocked Obstructions num= 1

Sta L	Sta R	Elev
71	815	15.8

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main RS: 660

INPUT

Description:

Station Elevation Data num= 6

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	15	10	15	42	4.75	62	4.75	94	15
100	15								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

ExpandedLocal.rep

\*\*\*\*\*

0 .06 10 .04 94 .06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	10	94		440 440	440		.1	.3

CROSS SECTION

RIVER: Reine Canal  
 REACH: Main RS: 220

INPUT

Description:

Station Elevation Data num= 6

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	15	10	15	42	4.39	62	4.39	94	15
100	15								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	10	.04	94	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	10	94		0 0	0		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 41958

INPUT

Description: Data from Survey

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-919	27	0	28.1	11	26.7	25	23.2	32	23.5
43	26.1	53	27.1	68	28.2	435	26.9	1016	27.2

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-919	.06	11	.05	43	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
-----------	------	-------	----------	--------------	-------	-------	--------	--------

11 43 47 47 47 .1 .3

CROSS SECTION

RIVER: W-15 Main
REACH: Upper RS: 41911

INPUT

Description: Data from Survey

Station Elevation Data num= 8
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
0 27.7 20 27.3 36 26.5 46 23.3 54 23.1
66 26.5 81 27.1 102 27.3

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
0 .06 36 .05 66 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
36 66 70 70 70 .1 .3

Ineffective Flow num= 2
Sta L Sta R Elev Permanent
0 25.9 27.2 F
75.12 102 27.2 F

CULVERT

RIVER: W-15 Main
REACH: Upper RS: 41876

INPUT

Description: W-15 #34
Cherrywood Lane
Distance from Upstream XS = 18.5
Deck/Roadway Width = 33
Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates num= 4
Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord
0 27.4 38 27.4 116 27.3
169 27.2

Upstream Bridge Cross Section Data

ExpandedLocal.rep

Station Elevation Data num= 8  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 27.7 20 27.3 36 26.5 45.4 23 56 23  
 66 26.5 81 27.1 102 27.3

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 36 .05 66 .06

Bank Sta: Left Right Coeff Contr. Expan.  
 36 66 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 25.9 27.2 F  
 75.12 102 27.2 F

Downstream Deck/Roadway Coordinates  
 num= 4  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 0 27.4 5 27.4 50 27.4  
 128 27.3

Downstream Bridge Cross Section Data  
 Station Elevation Data num= 8  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 27.5 17 26.9 29 26 41 21.4 50 22  
 63 26.5 73 27.5 95 27.3

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 29 .05 63 .06

Bank Sta: Left Right Coeff Contr. Expan.  
 29 63 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 28.19 27.2 F  
 60.87 95 27.2 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =

ExpandedLocal.rep

Energy head used in spillway design =  
Spillway height used in design =  
Weir crest shape = Broad Crested

Number of Culverts = 3

Culvert Name      Shape      Rise      Span  
Culvert #3      Pipe Arch      2      3.23  
FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
FHWA Scale # 1 - 90 Degree headwall  
Solution Criteria = Highest U.S. EG  
Culvert Upstrm Dist   Length      Top n      Bottom n      Depth Blocked      Entrance Loss Coef  
Exit Loss Coef  
                         18.5      33      .012      .012      0      .7  
1  
Upstream      Elevation = 23  
                         Centerline Station = 46  
Downstream      Elevation = 22.9  
                         Centerline Station = 39

Culvert Name      Shape      Rise      Span  
Culvert #2      Pipe Arch      3.5      5.74  
FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
FHWA Scale # 1 - 90 Degree headwall  
Solution Criteria = Highest U.S. EG  
Culvert Upstrm Dist   Length      Top n      Bottom n      Depth Blocked      Entrance Loss Coef  
Exit Loss Coef  
                         18.5      33      .012      .012      0      .7  
1  
Upstream      Elevation = 23.1  
                         Centerline Station = 50.5  
Downstream      Elevation = 23  
                         Centerline Station = 44.5

Culvert Name      Shape      Rise      Span  
Culvert #1      Pipe Arch      2      3.23  
FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
FHWA Scale # 1 - 90 Degree headwall  
Solution Criteria = Highest U.S. EG  
Culvert Upstrm Dist   Length      Top n      Bottom n      Depth Blocked      Entrance Loss Coef  
Exit Loss Coef  
                         18.5      33      .012      .012      0      .7  
1  
Upstream      Elevation = 23  
                         Centerline Station = 55  
Downstream      Elevation = 23  
                         Centerline Station = 50

ExpandedLocal.rep

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 41841

INPUT

Description: Data from Survey

Station Elevation Data num= 8

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	27.5	17	26.9	29	26	41	21.4	50	22
63	26.5	73	27.5	95	27.3				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	29	.05	63	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	29	63	1615	1615	1615		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	28.19	27.2	F
60.87	95	27.2	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 40226

INPUT

Description: Data from Survey

Station Elevation Data num= 17

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1281	28.1	0	25.6	15	25.9	31	26.9	44	26.8
53	25.8	57	22.7	62	21.5	68	20.7	73	21
78	25.4	86	26.8	96	27.7	99	26	113	25.7
125	26.2	1142	28.1						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1281	.06	53	.05	78	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.

53 78 1164 1164 1164 .1 .3

CROSS SECTION

RIVER: W-15 Main

REACH: Upper RS: 39062

INPUT

Description: Data from Survey

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-610	28.4	0	25.1	21	25.2	35	25.8	57	25
70	21.3	83	21.1	95	25	120	25.6	147	25.5
1245	29.4								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-610	.06	57	.05	95	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	57	95		196	196		.1	.3

CROSS SECTION

RIVER: W-15 Main

REACH: Upper RS: 38866

INPUT

Description: Data from Survey

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-610	28.4	0	25.3	20	26.2	29	26.8	44	26.6
54	23	64	21.1	79	20.6	84	23	91	26.4
100	25.7	115	25.7	138	25.8	1245	29.4		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-610	.06	44	.05	91	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	44	91		70	70		.1	.3

Ineffective Flow num= 2



ExpandedLocal.rep

Sta L	Sta R	Elev	Permanent
-610	42.5	27.3	F
96.5	1245	27.3	F

CULVERT

RIVER: W-15 Main  
 REACH: Upper RS: 38831

INPUT

Description: Hwy. Department Road  
 W-15 #32  
 Distance from Upstream XS = 17.5  
 Deck/Roadway Width = 35  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 6											
Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord
-610	27.3			0	27.3			69	27.4		
116	27.4			168	27.3			1245	27.3		

Upstream Bridge Cross Section Data

Station Elevation Data num= 14											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-610	28.4	0	25.3	20	26.2	29	26.8	44	26.6		
54	23	60	20.8	79	20.6	84	23	91	26.4		
100	25.7	115	25.7	138	25.8	1245	29.4				

Manning's n Values

num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
-610	.06	44	.05	91	.06

Bank Sta: Left Right Coeff Contr. Expan.  
 44 91 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-610	42.5	27.3	F
96.5	1245	27.3	F

Downstream Deck/Roadway Coordinates

num= 6											
Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord
-610	27.3			0	27.3			64	27.4		

ExpandedLocal.rep

110 27.4 163 27.3 1245 27.3

Downstream Bridge Cross Section Data

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-610	28.4	0	25.3	14	25.5	27	26.1	39	26.5
50	22.9	54	19.9	69	20.7	83	26	99	26.5
114	26.6	125	25.5	1245	29.4				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-610	.06	39	.05	83	.06

Bank Sta: Left Right Coeff Contr. Expan.  
 39 83 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-610	44.25	27.3	F
77.75	1245	27.3	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 3

Culvert Name	Shape	Rise	Span	Exit Loss Coef	
Culvert #3	Box	4	4		
FHWA Chart # 8 - flared wingwalls					
FHWA Scale # 1 - Wingwall flared 30 to 75 deg.					
Solution Criteria = Highest U.S. EG					
Culvert Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef
17.5	35	.012	.012	0	.5

1  
 Upstream Elevation = 20.9  
 Centerline Station = 62  
 Downstream Elevation = 20.8  
 Centerline Station = 55

Culvert Name	Shape	Rise	Span
Culvert #1	Box	4	4

ExpandedLocal.rep

FHWA Chart # 8 - flared wingwalls

FHWA Scale # 1 - Wingwall flared 30 to 75 deg.

Solution Criteria = Highest U.S. EG

Culvert	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
	17.5	35	.012	.012	0	.5	

1

Upstream Elevation = 21  
 Centerline Station = 69  
 Downstream Elevation = 20.7  
 Centerline Station = 61

Culvert Name	Shape	Rise	Span
Culvert #2	Box	4	4

FHWA Chart # 8 - flared wingwalls

FHWA Scale # 1 - Wingwall flared 30 to 75 deg.

Solution Criteria = Highest U.S. EG

Culvert	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
	17.5	35	.012	.012	0	.5	

1

Upstream Elevation = 20.9  
 Centerline Station = 77  
 Downstream Elevation = 20.7  
 Centerline Station = 67

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 38796

INPUT

Description: Data from Survey

Station Elevation Data		num=		13					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-610	28.4	0	25.3	14	25.5	27	26.1	39	26.5
52	22.9	57	19.9	69	21	83	26	99	26.5
114	26.6	125	25.5	1245	29.4				

Manning's n Values		num=		3	
Sta	n Val	Sta	n Val	Sta	n Val
-610	.06	39	.05	83	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	39	83		1854	1854	.1	.3

ExpandedLocal.rep

Ineffective Flow		num=	2
Sta L	Sta R	Elev	Permanent
-610	44.25	27.3	F
77.75	1245	27.3	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 36942

INPUT

Description: Data from Survey

Station Elevation Data		num=	14						
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-1295	28.3	0	24.1	14	25.7	27	27.9	43	24.9
48	21.3	54	19.7	62	20.9	67	25	85	25.6
90	27.3	96	25.1	108	24.9	375	25.5		

Manning's n Values		num=	3		
Sta	n Val	Sta	n Val	Sta	n Val
*****					
-1295	.06	43	.05	67	.06

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
43	67	134	134	134		.1	.3

CULVERT

RIVER: W-15 Main  
 REACH: Upper RS: 36875

INPUT

Description: Hwy. 11  
 W-15 #31

Actually has 14 - 3' span by 3.03' rise  
 culverts but for hec-ras modeling, had to simplify to 1 42' span  
 by 3.03' rise culvert.

Distance from Upstream XS = 46  
 Deck/Roadway Width = 42  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num=	6							
Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord
*****								

ExpandedLocal.rep

-1295	29	0	29	49	29
75	29	130	28.8	375	28.8

Upstream Bridge Cross Section Data

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1295	28.3	0	24.1	14	25.7	27	25	30.5	23.75
48	21.3	54	19.7	62	20	82.5	20	85	25.6
90	27.3	96	25.1	108	24.9	375	25.5		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1295	.06	27	.05	90	.06

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	27	90	.1		.3

Downstream Deck/Roadway Coordinates

num= 8

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-1295	29				0	29				5	29			
63	29				90	29				116	29			
171	28.8				375	28.8								

Downstream Bridge Cross Section Data

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1295	28.8	0	27.1	16	24.9	19.5	23.5	28	22.5
37	20.3	40	19.6	47	21.1	51	21	67	19.7
86	24.8	109	24.3	375	25.5				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1295	.06	16	.05	86	.06

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	16	86	.1		.3

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =

Spillway height used in design =  
Weir crest shape = Broad Crested

Number of Culverts = 2

Culvert Name Shape Rise Span  
Culvert #14 Box 3.03 43

FHWA Chart # 8 - flared wingwalls  
FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
Solution Criteria = Highest U.S. EG

Culvert	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
1	46	42	.012	.012	0		.4

Upstream Elevation = 23.7  
Centerline Station = 53  
Downstream Elevation = 23.6  
Centerline Station = 42

Culvert Name Shape Rise Span  
Culvert #15 Box 3.03 3

FHWA Chart # 8 - flared wingwalls  
FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
Solution Criteria = Highest U.S. EG

Culvert	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
1	46	42	.012	.012	0		.4

Upstream Elevation = 20.1  
Centerline Station = 77.75  
Downstream Elevation = 20  
Centerline Station = 66.75

CROSS SECTION

RIVER: W-15 Main  
REACH: Upper RS: 36808

INPUT

Description: Data from Survey

Station	Elevation	Data num=	13	Sta	Elev	Sta	Elev	Sta	Elev
-1295	28.3	0	27.1	16	24.9	27	24.7	34	23.4
37	20.3	40	19.6	47	21.1	51	22	56	25
86	24.8	109	24.3	375	25.5				

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1295 .06 34 .05 56 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 34 56 102 102 102 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 36792

INPUT

Description: Data from Survey

Station Elevation Data num= 13  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1295 28.3 0 27.1 16 24.9 27 24.7 34 23.4  
 37 20.3 40 19.6 47 21.1 51 22 56 25  
 86 24.8 109 24.3 375 25.5

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1295 .06 34 .05 56 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 34 56 102 102 102 .1 .3

BRIDGE

RIVER: W-15 Main  
 REACH: Upper RS: 36741

INPUT

Description: Railroad Crossing

W-15 #30

Distance from Upstream XS = 44  
 Deck/Roadway Width = 14  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 7  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 -1295 31.3 0 31.3 16 31.4 27.5

ExpandedLocal.rep

99 31.3 27.5 127 31.3 163 31.3  
 375 31.3

Upstream Bridge Cross Section Data

Station Elevation Data num= 13  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1295 28.3 0 27.1 16 24.9 27 24.7 34 23.4  
 37 20.3 40 19.6 47 19.8 51 20 65 20.3  
 86 24 109 24.3 375 25.5

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1295 .06 34 .05 86 .06

Bank Sta: Left Right Coeff Contr. Expan.  
 34 86 .1 .3

Downstream Deck/Roadway Coordinates

num= 7  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 -1295 31.3 0 31.3 16 31.4 27.5  
 99 31.3 27.5 127 31.3 163 31.3  
 375 31.3

Downstream Bridge Cross Section Data

Station Elevation Data num= 13  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1295 28.3 0 24.4 22 24.7 45 24.9 52 21.5  
 56 20.5 59 19.9 62 20.4 70 20.2 73 20  
 87 23 112 24.1 375 25.5

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1295 .06 45 .05 87 .06

Bank Sta: Left Right Coeff Contr. Expan.  
 45 87 .1 .3

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =



Spillway height used in design =  
Weir crest shape = Broad Crested

Number of Piers = 7

Pier Data

Pier Station Upstream= 25 Downstream= 28

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 27.5

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 27.5

Pier Data

Pier Station Upstream= 35 Downstream= 38

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 27.5

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 27.5

Pier Data

Pier Station Upstream= 45.5 Downstream= 49

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 27.5

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1 0 1 27.5

Pier Data

Pier Station Upstream= 56 Downstream= 59

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1.1 0 1.1 27.5

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1.1 0 1.1 27.5

ExpandedLocal.rep

Pier Data

Pier Station      Upstream=      66      Downstream=      70  
Upstream      num=      2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1      0      1      27.5  
Downstream      num=      2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1      0      1      27.5

Pier Data

Pier Station      Upstream=      78      Downstream=      80  
Upstream      num=      2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1.05    0      1.05    27.5  
Downstream      num=      2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1.05    0      1.05    27.5

Pier Data

Pier Station      Upstream=      89      Downstream=      90  
Upstream      num=      2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1      0      1      27.5  
Downstream      num=      2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1      0      1      27.5

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

    Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

    Energy Only

Additional Bridge Parameters

    Add Friction component to Momentum

    Do not add Weight component to Momentum

    Class B flow critical depth computations use critical depth  
        inside the bridge at the upstream end

ExpandedLocal.rep

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 36690

INPUT

Description: Data from Survey

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1295	28.3	0	24.4	22	24.7	45	24.9	52	21.5
56	20.5	59	19.9	62	20.4	70	22.2	73	23.5
87	24	112	24.1	375	25.5				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1295	.06	45	.05	73	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	45	73		362	362		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 36328

INPUT

Description: Data from Survey

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1265	26.4	0	23.9	16	23.2	30	23.2	44	23.4
47	20	51	19.5	57	21	60	23.2	72	24.1
88	23.7	112	23.7	728	29.4				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1265	.06	44	.05	60	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	44	60		887	887		.1	.3

ExpandedLocal.rep

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 35441

INPUT

Description: Data from the survey

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1789	25.6	0	23.3	9	25.4	22	25.3	34	23.7
48	23.2	51	19.5	55	18.6	61	20	65	20.8
67	23.5	77	24.8	92	25.4	97	27.3	133	24.1
825	29.2								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1789	.06	48	.05	67	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	48	67		1266	1266		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 34175

INPUT

Description: Data from Survey

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1524	24.4	0	23.5	20	23.4	25	26.5	32	26.1
36	23.3	45	22.1	49	19.1	53	18.4	57	19.1
61	22.1	75	23.5	81	25.6	91	23.8	118	24.6
1018	24								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1524	.06	45	.05	61	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	45	61		467	467		.1	.3

LATERAL STRUCTURE

RIVER: W-15 Main  
REACH: Upper RS: 34100

INPUT

Description:  
Lateral structure position = Right overbank  
Distance from Upstream XS =  
Deck/Roadway Width = 25  
Weir Coefficient = 2.6  
Weir Flow Reference = Water Surface  
Weir Embankment Coordinates num = 2

Sta	Elev	Sta	Elev
0	24	465	24

Weir crest shape = Broad Crested

CROSS SECTION

RIVER: W-15 Main  
REACH: Upper RS: 33708

INPUT

Description: Data from Survey

Station Elevation Data num= 14									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1027	25.3	0	22.4	13	22.5	24	25.1	32	22.1
43	21.4	46	18.3	48	17.9	54	18.4	56	21.5
82	22.3	88	22.4	108	22.4	250	24		

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
-1027	.06	43	.05	56	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	43	56		677	677	.1	.3

LATERAL STRUCTURE

RIVER: W-15 Main

ExpandedLocal.rep

REACH: Upper

RS: 33500

INPUT

Description: NE Inlet

Lateral structure position = Right overbank

Distance from Upstream XS =

Deck/Roadway Width = 25

Weir Coefficient = 2.6

Weir Flow Reference = Water Surface

Weir Embankment Coordinates num = 6

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	24	10	24	14.4	21.8	49.4	21.8	53.8	24
675	24								

Weir crest shape = Broad Crested

CROSS SECTION

RIVER: W-15 Main

REACH: Upper

RS: 33031

INPUT

Description: Data from Survey

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1027	25.3	0	22.4	13	22.5	24	25.1	32	22.1
43	21.4	46	17.7	48	17.4	54	17.8	56	21.5
82	22.3	88	22.4	108	22.4	348	24		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1027	.06	43	.05	56	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	43	56		853	853	.1	.3

LATERAL STRUCTURE

RIVER: W-15 Main

REACH: Upper

RS: 33000

INPUT

ExpandedLocal.rep

Description: SE Inlet  
Lateral structure position = Right overbank  
Distance from Upstream XS =  
Deck/Roadway Width = 25  
Weir Coefficient = 2.6  
Weir Flow Reference = Water Surface  
Weir Embankment Coordinates num = 2

Sta	Elev	Sta	Elev
0	24	851	24

Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name	Shape	Rise	Span			
Culvert #1	Arch	2.5833	4.25			
FHWA Chart # 41- Arch; Corrugated metal						
FHWA Scale # 1 - 90 Degree headwall						
Solution Criteria = Highest U.S. EG						
Culvert Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
1	96	.012	.012	0		.7

Number of Barrels = 2  
Upstream Elevation = 20.4  
Centerline Stations  
Sta. Sta.  
800 810  
Downstream Elevation = 20  
Centerline Stations  
Sta. Sta.  
800 810

CROSS SECTION

RIVER: W-15 Main  
REACH: Upper RS: 32178

INPUT

Description: Data from Survey  
Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1606	26.2	0	22.2	23	22.2	41	20.5	45	17.4
49	16.8	54	17.4	58	19.6	64	22	98	22.3

ExpandedLocal.rep

127 22.9 325 24

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1606 .085 41 .05 64 .07

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 41 64 20 20 20 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 32158

INPUT

Description: Data from Survey

Station Elevation Data num= 12  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1606 26.2 0 22.2 23 22.2 41 20.5 45 17.4  
 49 16.8 54 17.4 58 19.6 64 22 98 22.3  
 127 22.9 325 24

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1606 .085 41 .05 64 .07

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 41 64 70 70 70 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -1606 21.98 24 F  
 77.02 325 24 F

CULVERT

RIVER: W-15 Main  
 REACH: Upper RS: 32123

INPUT

Description: Haas Road

W-15 #28

Distance from Upstream XS = 21  
 Deck/Roadway Width = 42



ExpandedLocal.rep

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 8

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-1606		24.1			0		24.1			8		24.1		
60		24.1			111		24			162		24.1		
219		24			325		24							

Upstream Bridge Cross Section Data

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1606	26.2	0	22.2	23	22.2	41	20.5	44.5	17.4
49	16.8	54	17.4	58	19.6	64	22	98	22.3
127	22.9	325	24						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1606	.1	41	.05	64	.1

Bank Sta: Left Right Coeff Contr. Expan.  
 41 64 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1606	21.98	24	F
77.02	325	24	F

Downstream Deck/Roadway Coordinates

num= 7

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-101		24.1			0		24.1			42		24.1		
94		24.1			146		24			197		24.1		
2000		24.1												

Downstream Bridge Cross Section Data

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-101	22	0	22.6	23	23.9	51	22.6	58	19.7
62.5	17.7	68	17	73	17.4	76	19.5	88	22.4
122	23.8	161	23.1	2000	24.7				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

-101 .1 51 .05 88 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 51 88 1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -101 50.48 24 F  
 84.52 2000 24 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 2

Culvert Name Shape Rise Span  
 Culvert #1 Pipe Arch 4 6.03  
 FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
 FHWA Scale # 1 - 90 Degree headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 1  
 21 42 .012 .012 0 .7  
 1  
 Upstream Elevation = 17.8  
 Centerline Station = 46  
 Downstream Elevation = 17.7  
 Centerline Station = 64

Culvert Name Shape Rise Span  
 Culvert #2 Pipe Arch 4 6.03  
 FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
 FHWA Scale # 1 - 90 Degree headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 1  
 21 42 .012 .012 0 .7  
 1  
 Upstream Elevation = 17.8  
 Centerline Station = 53  
 Downstream Elevation = 17.7  
 Centerline Station = 71

CROSS SECTION

ExpandedLocal.rep

RIVER: W-15 Main  
 REACH: Upper RS: 32088

INPUT

Description: Data from Survey

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-101	22	0	22.6	23	23.9	51	22.6	58	19.7
63	17.7	68	17	73	17.4	76	19.5	88	22.4
122	22.8	161	23.1	1000	23.8	2000	24.7		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-101	.085	51	.05	88	.07

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	51	88		309	309		1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-101	50.48	24	F
84.52	2000	24	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 31779

INPUT

Description: Data from Survey

Station Elevation Data num= 17

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-101	22	0	22.2	7	22.8	9	26.3	15	23.2
22	23.2	25	22	37	21.4	42	16.9	47	16.8
52	17	55	21	62	21.6	72	26.1	82	21.9
1000	23.8	2000	24.7						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-101	.06	37	.05	55	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.

37 55 824 824 824 .1 .3

CROSS SECTION

RIVER: W-15 Main

REACH: Upper RS: 30955

INPUT

Description: Data from Survey

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-215	23.9	0	21.4	37	21.6	56	21.2	61	17.1
66	16.2	70	16.7	73	20.4	82	22.8	91	24.4
892	24.2	1532	24.4						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-215	.06	56	.05	73	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	56	73		961	961		.1	.3

CROSS SECTION

RIVER: W-15 Main

REACH: Upper RS: 29994

INPUT

Description: Data from Survey

Station Elevation Data num= 17

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-706	23.3	0	21.9	14	21.6	25	20.7	35	16.2
37	15.6	41	15.8	47	20.6	56	22.5	66	22.2
75	20	81	17.2	83	17	87	17.6	90	19.4
106	21	728	24.1						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-706	.06	25	.05	47	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	25	47		1001	1001		.1	.3

ExpandedLocal.rep

Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 66 728 22.2 F

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 28993

INPUT

Description: Data from Survey

Station Elevation Data num= 11  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -580 22.8 0 21.4 12 20.7 13 20.3 17 16  
 22 15.4 27 16.1 38 20.8 49 21.6 70 22.1  
 400 21.5

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -580 .15 13 .015 38 .15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 13 38 530 530 530 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 28463

INPUT

Description: Data from Survey

Station Elevation Data num= 11  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -581 22.8 0 22.2 26 21.8 35 21.4 50 15.8  
 54 15.2 60 16 70 20.5 88 21.3 110 21.3  
 400 21.5

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -581 .15 35 .015 70 .15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

35 70 533 533 533 .1 .3

CROSS SECTION

RIVER: W-15 Main
REACH: Upper RS: 27930

INPUT

Description: Data from Survey

Station Elevation Data num= 9
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
-20 23.4 0 22.8 10 21.5 16 18.1 19 15.2
24 14.4 28 15 42 23.2 85 23.4

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
-20 .15 10 .015 42 .15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
10 42 133 133 133 .1 .3

BRIDGE

RIVER: W-15 Main
REACH: Upper RS: 27864

INPUT

Description: Bluefield Drive

W-15 #26
Distance from Upstream XS = 52
Deck/Roadway Width = 29
Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 5
Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord
-22 23.7 2 23.3 22.9 40 23.5 22.9
62 23.1 118 22.5

Upstream Bridge Cross Section Data

Station Elevation Data num= 9
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
-20 23.4 0 22.8 10 21.5 16 18.1 19 15.2

ExpandedLocal.rep

24 14.4 28 15 42 23.2 85 23.4

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -20 .15 10 .015 42 .15

Bank Sta: Left Right Coeff Contr. Expan.  
 10 42 .1 .3

Downstream Deck/Roadway Coordinates

num= 5  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 0 23.5 13 23.3 22.9 52 23.5 22.9  
 73 23.1 129 22.4

Downstream Bridge Cross Section Data

Station Elevation Data num= 10  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 22.9 20 21.4 28 17.7 35 14.5 38 14.3  
 41 14.6 47 19.4 52 21.8 76 23.4 121 23.2

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .15 20 .015 52 .15

Bank Sta: Left Right Coeff Contr. Expan.  
 20 52 .1 .3

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 3

Pier Data

Pier Station Upstream= 13 Downstream= 23.5  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 .833 0 .833 22.9

```

Downstream      num=      2
  Width  Elev   Width  Elev
*****
  .833    0    .833   22.9

```

Pier Data

Pier Station Upstream= 24 Downstream= 34

```

Upstream      num=      2
  Width  Elev   Width  Elev
*****
  .833    0    .833   22.9

```

```

Downstream    num=      2
  Width  Elev   Width  Elev
*****
  .833    0    .833   22.9

```

Pier Data

Pier Station Upstream= 33 Downstream= 44

```

Upstream      num=      2
  Width  Elev   Width  Elev
*****
  .833    0    .833   22.9

```

```

Downstream    num=      2
  Width  Elev   Width  Elev
*****
  .833    0    .833   22.9

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main

REACH: Upper

RS: 27797



ExpandedLocal.rep

INPUT

Description: Data from Survey

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	22.9	20	21.4	28	17.7	35	14.5	38	14.3
41	14.6	47	19.4	52	21.8	76	23.4	121	23.2

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.15	20	.015	52	.15

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	20	52		789	789		.1	.3

CROSS SECTION

RIVER: W-15 Main

REACH: Upper RS: 27008

INPUT

Description: Data from Survey

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-896	23.1	0	20	28	19.7	50	19.2	56	14.5
60	13.6	64	14.5	69	19.7	92	20.8	119	20.6
175	21.5								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-896	.1	50	.05	69	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	50	69		620	620		.1	.3

CROSS SECTION

RIVER: W-15 Main

REACH: Upper RS: 26388

INPUT

Description: Data from Survey

ExpandedLocal.rep

Station Elevation Data		num= 13		Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1313	22.2	0	19.4	26	19.7	47	19.7	51	15.3		
54	13.5	60	12.6	63	13.3	66	15.1	69	20.1		
85	20.2	113	19.8	348	21.6						

Manning's n Values		num= 3		Sta	n Val	Sta	n Val	Sta	n Val
-1313	.1	47	.05	69	.06				

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	47	69		640	640		.1	.3

CROSS SECTION

RIVER: W-15 Main  
REACH: Upper RS: 25748

INPUT  
Description: Data from Survey

Station Elevation Data		num= 13		Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-951	23.3	0	21.3	51	19.8	100	18.4	103	15.5		
105	12.7	110	12.2	116	13.1	119	15.8	121	19.2		
140	19.9	160	19.7	366	20.1						

Manning's n Values		num= 3		Sta	n Val	Sta	n Val	Sta	n Val
-951	.075	100	.05	121	.06				

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	100	121		650	650		.1	.3

CROSS SECTION

RIVER: W-15 Main  
REACH: Upper RS: 25098

INPUT  
Description: 100' DS confluence with Edens Canal  
Data from Survey

Station Elevation Data		num= 14	
------------------------	--	---------	--

ExpandedLocal.rep

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1624	20.3	0	18.9	31	19.2	47	18.9	54	13.9
59	13.4	61	11.3	64	9.4	69	11.9	71	14.2
76	20.4	96	21.3	116	20.4	300	20.4		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1624	.1	47	.05	76	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	47	76		786	786		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 24312

INPUT

Description: Data from Survey

Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-983	21.7	0	18.6	13	18.1	19	19.2	26	18.7
32	17.1	36	11.3	46	11.1	55	13	58	17.5
62	19.8	74	20.1	100	20.2	131	19.3	175	20.6

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-983	.1	26	.05	62	.15

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	26	62		650	650		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper RS: 23662

INPUT

Description: Data from Survey

Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-----	------	-----	------	-----	------	-----	------	-----	------

ExpandedLocal.rep

-983	21.7	0	19.2	19	19.3	51	16.8	54	14.2
56	11.8	64	9.2	73	11.6	75	15.2	78	18.7
82	20.1	96	20.4	111	20.5	130	19.3	400	21

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-983	.1	51	.05	78	.15

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	51	78		56	56		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-983	41.5	21	F
87.5	400	21	F

BRIDGE

RIVER: W-15 Main  
 REACH: Upper RS: 23634

INPUT

Description:  
 Distance from Upstream XS = 12.5  
 Deck/Roadway Width = 31  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates num= 8

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-983	21.3				-17	21.3				18	21.3			
54	21.15	19.9			75	21.15	19.9			111	21			
164	21.1				400	21.1								

Upstream Bridge Cross Section Data

Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-983	21.7	0	19.2	19	19.3	51	16.8	54	14.2
56	11.8	64	9.2	73	11.6	75	15.2	78	18.7
82	20.1	96	20.4	111	20.5	130	19.3	400	21

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-983	.1	51	.05	78	.15

ExpandedLocal.rep

Bank Sta: Left Right Coeff Contr. Expan.  
 51 78 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -983 41.5 21 F  
 87.5 400 21 F

Downstream Deck/Roadway Coordinates  
 num= 7

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-983	21.3				13	21.3				42	21.15			19.9
63	21.15	19.9			99	21				152	21.1			
400	21.1													

Downstream Bridge Cross Section Data

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-983	21.7	0	19.7	14	19.6	31	19	39	14.6
43	12.2	53	9.6	62	11.5	65	15.7	71	19
85	19.8	110	19.7	400	21				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-983	.1	31	.05	71	.15

Bank Sta: Left Right Coeff Contr. Expan.  
 31 71 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -983 35.75 21 F  
 69.25 400 21 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 2

Pier Data

Pier Station Upstream= 61 Downstream= 48  
 Upstream num= 2

```

Width  Elev  Width  Elev
*****
      1    0    1   19.9
Downstream  num=      2
Width  Elev  Width  Elev
*****
      1    0    1   19.9
    
```

Pier Data

Pier Station Upstream= 68 Downstream= 55

```

Upstream  num=      2
Width  Elev  Width  Elev
*****
      1    0    1   19.9
Downstream  num=      2
Width  Elev  Width  Elev
*****
      1    0    1   19.9
    
```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth  
inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main

REACH: Upper RS: 23606

INPUT

Description: Data from Survey

Station Elevation Data num= 13

```

Sta  Elev  Sta  Elev  Sta  Elev  Sta  Elev  Sta  Elev
*****
-983 21.7   0   19.7  14  19.6  31   19   39  14.6
 43  12.2  53   9.6  62  11.5  65  15.7  71   19
    
```

ExpandedLocal.rep

85 19.8 110 19.7 400 21

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
-983 .1 31 .05 71 .15

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
31 71 144 144 144 .1 .3
Ineffective Flow num= 2
Sta L Sta R Elev Permanent
-983 35.75 21 F
69.25 400 21 F

CROSS SECTION

RIVER: W-15 Main
REACH: Upper RS: 23462

INPUT

Description: Data from Survey
Station Elevation Data num= 12
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
\*\*\*\*\*
-600 21.5 0 20.4 23 19.6 41 17.4 47 11.3
52 10.8 59 11.6 62 14.6 70 18 87 19.5
108 19.5 316 21.45

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
-600 .07 41 .05 70 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
41 70 0 0 0 .1 .3

CROSS SECTION

RIVER: W-15 Main
REACH: Mid RS: 22961

INPUT

Description: Data from Survey
Station Elevation Data num= 12
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
\*\*\*\*\*

ExpandedLocal.rep

-330	20.5	0	19	21	18.5	42	17.9	47	10.7
52	10.6	62	12.6	66	16.4	69	18.6	90	19.8
121	19.8	325	21.3						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-330	.06	42	.05	69	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	42	69		676	676		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 22285

INPUT

Description: Data from Survey

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1200	21.5	0	18.3	23	17.9	47	16.6	52	11
56	10.4	64	11.8	68	16.8	81	17.8	98	17.8
1312	21.7								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1200	.1	47	.05	68	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	47	68		58	58		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1200	-30	23.38	F
142	1312	23.38	F

BRIDGE

RIVER: W-15 Main  
 REACH: Mid RS: 22250

INPUT

Description: Brownsitch Road (SELA Model)  
 Distance from Upstream XS = 14



ExpandedLocal.rep

Deck/Roadway Width = 30

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 5

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-1200		23.38			21	23.38	19.75			35	23.38	20.3		
91	23.38		19.75		1312	23.38								

Upstream Bridge Cross Section Data

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1200	21.5	0	18.3	23	17.9	47	16.6	52	11
56	10.4	64	11.8	68	16.8	81	17.8	98	17.8
1312	21.7								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1200	.1	47	.05	68	.1

Bank Sta: Left Right Coeff Contr. Expan.  
 47 68 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1200	-30	23.38	F
142	1312	23.38	F

Downstream Deck/Roadway Coordinates

num= 5

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-1200		23.38			3	23.38	19.75			17	23.38	20.3		
73	23.38	19.75			1312	23.38								

Downstream Bridge Cross Section Data

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1200	21.5	0	18.2	18	17.3	32	16.1	38	13.3
40	11.4	44	10.5	50	11.3	53	13.9	60	15.9
73	19.4	109	18.6	1312	21.7				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1200	.1	32	.05	60	.1

ExpandedLocal.rep

Bank Sta: Left    Right    Coeff Contr.    Expan.  
                  32       60                   .1           .3

Ineffective Flow    num=       2  
   Sta L    Sta R    Elev Permanent  
   -1200    -26    23.38       F  
       102    1312    23.38       F

Upstream Embankment side slope       =       0 horiz. to 1.0 vertical  
 Downstream Embankment side slope    =       0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow =       .98  
 Elevation at which weir flow begins       =  
 Energy head used in spillway design       =  
 Spillway height used in design           =  
 Weir crest shape                        = Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth  
 inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main

REACH: Mid

RS: 22227

INPUT

Description: Data from Survey

Station Elevation Data    num=       13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1200	21.5	0	18.2	18	17.3	32	16.1	38	13.3
40	11.4	44	10.5	50	11.3	53	13.9	60	15.9
73	19.4	109	18.6	1312	21.7				

Manning's n Values                    num=       3

ExpandedLocal.rep

Sta	n Val	Sta	n Val	Sta	n Val
-1200	.1	32	.05	60	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	32	60		750	750		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1200	-26	23.38	F
102	1312	23.38	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 21477

INPUT

Description: Sela 6.853

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	19.9	25	19.15	48	13.86	55	12.71	58	11.21
78	11.21	81	12.81	83	14.04	95	18.98	120	19.23

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	25	.05	95	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	25	95		148	148		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
0	8	23.25	F

CULVERT

RIVER: W-15 Main  
 REACH: Mid RS: 21400

INPUT

Description: Hammon Exit (Sela)  
 Distance from Upstream XS = 51.5  
 Deck/Roadway Width = 45  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

ExpandedLocal.rep

num= 2

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0		23.25			120		23.25		

Upstream Bridge Cross Section Data

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	19.9	25	19.15	48	13.86	53	11.21	65	11.21
75	11.21	81	11.21	83	11.21	95	18.98	120	19.23

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
0	.1		25	.05		95	.1	

Bank	Sta	Left	Right	Coeff	Contr.	Expan.
	25		95	.1		.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
0	8	23.25	F

Downstream Deck/Roadway Coordinates

num= 2

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0		23.25			120		23.25		

Downstream Bridge Cross Section Data

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	19.9	25	19.15	48	13.86	53	11.1	65	11.1
75	11.1	81	11.1	83	11.21	95	18.98	120	19.23

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
0	.1		25	.05		95	.1	

Bank	Sta	Left	Right	Coeff	Contr.	Expan.
	25		95	.1		.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	28.5	23.25	F
99.5	120	23.25	F

ExpandedLocal.rep

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 3

Culvert Name      Shape      Rise      Span  
 Culvert #1          Box          6          8  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n   Bottom n   Depth Blocked   Entrance Loss Coef  
 Exit Loss Coef  
                          51.5      45      .013      .013      0                   .5  
 1  
 Upstream      Elevation = 11.25  
                          Centerline Station = 57  
 Downstream      Elevation = 11.2  
                          Centerline Station = 57

Culvert Name      Shape      Rise      Span  
 Culvert #2          Box          6          8  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n   Bottom n   Depth Blocked   Entrance Loss Coef  
 Exit Loss Coef  
                          51.5      45      .013      .013      0                   .5  
 1  
 Upstream      Elevation = 11.27  
                          Centerline Station = 68  
 Downstream      Elevation = 11.1  
                          Centerline Station = 68

Culvert Name      Shape      Rise      Span  
 Culvert #3          Box          6          8  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n   Bottom n   Depth Blocked   Entrance Loss Coef  
 Exit Loss Coef  
                          51.5      45      .013      .013      0                   .5  
 1  
 Upstream      Elevation = 11.21

Centerline Station = 79  
Downstream Elevation = 11.17  
Centerline Station = 79

CROSS SECTION

RIVER: W-15 Main  
REACH: Mid RS: 21329

INPUT

Description: Sela 6.825

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	19.9	25	19.15	48	13.86	55	12.71	58	11.1
78	11.1	81	12.81	83	14.04	95	18.98	120	19.23

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	25	.05	95	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	25	95		301	301	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	28.5	23.25	F
99.5	120	23.25	F

CROSS SECTION

RIVER: W-15 Main  
REACH: Mid RS: 21028

INPUT

Description: Sela 6.768

Pilot Channel added for stability

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	19.83	25	17.9	37	12.73	43	10.88	43.1	10
43.3	10	44	10.88	49	12.37	55	12.74	65	13.73
75	15.27	110	18.08						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

ExpandedLocal.rep

\*\*\*\*\*

0 .1 25 .05 75 .1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	25	75		158 158	158		.1	.3
Ineffective Flow			num=	2				
	Sta L	Sta R	Elev	Permanent				
	0	24	26	F				
	62	110	26	F				

CULVERT

RIVER: W-15 Main  
 REACH: Mid RS: 21000

INPUT

Description: I-12 (From Sela model)  
 Distance from Upstream XS = 14  
 Deck/Roadway Width = 130  
 Weir Coefficient = 3  
 Upstream Deck/Roadway Coordinates

num= 2  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

\*\*\*\*\*

0 25.74 110 25.74

Upstream Bridge Cross Section Data

Station Elevation Data			num=	11						
	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****										
	0	19.83	25	17.9	31	10.88	37	10.88	43	10.88
	47	10.88	49	10.88	55	10.88	65	10.88	75	15.27
	110	18.08								

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val

\*\*\*\*\*

0 .1 25 .05 75 .1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	25	75		.1	.3

Ineffective Flow			num=	2	
	Sta L	Sta R	Elev	Permanent	
	0	24	26	F	
	62	110	26	F	

Downstream Deck/Roadway Coordinates

ExpandedLocal.rep

num= 2

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
*****									
0		25.74			110		25.74		

Downstream Bridge Cross Section Data

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
0	19.83	25	17.9	31	10.88	37	10.88	43	10.88
47	10.88	49	10.88	55	10.88	75	15.27	110	18.08

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
*****								
0		.1	25		.05	75		.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	25	75		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	27.5	25.74	F
58.5	110	25.74	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 3

Culvert Name	Shape	Rise	Span
Culvert #1	Box	6	8

FHWA Chart # 8 - flared wingwalls

FHWA Scale # 1 - Wingwall flared 30 to 75 deg.

Solution Criteria = Highest U.S. EG

Culvert Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef
Exit Loss Coef					
	14	130	.013	.013	0
					.5

1  
 Upstream Elevation = 11.03  
 Centerline Station = 34.8  
 Downstream Elevation = 10.67  
 Centerline Station = 34.8





ExpandedLocal.rep

	25	75		43	43	43		.1	.3
Ineffective Flow		num=	2						
Sta L	Sta R	Elev	Permanent						
	0	27.5	25.74	F					
	58.5	110	25.74	F					

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 20827

INPUT

Description: Sela 6.73

Station Elevation Data		num=	9							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	
*****										
	0	20	211	17.52	236	16.26	241	12.59	249	10.54
	250	10.54	258	12.54	263	17.89	288	20.35		

Manning's n Values		num=	3			
Sta	n Val	Sta	n Val	Sta	n Val	
*****						
	0	.1	241	.05	258	.1

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	241	258	179	179	179	.1	.3

Ineffective Flow		num=	1	
Sta L	Sta R	Elev	Permanent	
	0	160	22.33	F

CULVERT

RIVER: W-15 Main  
 REACH: Mid RS: 20700

INPUT

Description: I-12 On Ramp (from Sela)

Distance from Upstream XS = 49.5

Deck/Roadway Width = 80

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num=	2				
Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord
*****					
	0	22.33	288	22.33	

ExpandedLocal.rep

Upstream Bridge Cross Section Data

Station Elevation Data num= 8

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	20	211	17.52	236	16.26	240.9	10.54	250	10.54
258.6	10.54	263	17.89	288	20.35				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	236	.05	263	.1

Bank Sta: Left Right Coeff Contr. Expan.

	236	263	.1	.3
--	-----	-----	----	----

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
0	160	22.33	F

Downstream Deck/Roadway Coordinates

num= 2

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
0	22.33		288	22.33	

Downstream Bridge Cross Section Data

Station Elevation Data num= 8

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	20	211	17.52	236	16.26	240.9	10.48	250	10.48
258.6	10.48	263	17.89	288	20.35				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	236	.05	263	.1

Bank Sta: Left Right Coeff Contr. Expan.

	236	263	.1	.3
--	-----	-----	----	----

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
0	200	22.33	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =

Weir crest shape

Number of Culverts = 3

Culvert Name      Shape      Rise      Span  
 Culvert #1          Box          8          6  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n    Bottom n    Depth Blocked    Entrance Loss Coef  
 Exit Loss Coef  
                          49.5      80      .013      .013      0                   .5  
 1  
 Upstream    Elevation = 10.54  
                          Centerline Station = 243.85  
 Downstream Elevation = 10.48  
                          Centerline Station = 243.85

Culvert Name      Shape      Rise      Span  
 Culvert #2          Box          8          6  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n    Bottom n    Depth Blocked    Entrance Loss Coef  
 Exit Loss Coef  
                          49.5      80      .013      .013      0                   .5  
 1  
 Upstream    Elevation = 10.56  
                          Centerline Station = 249.75  
 Downstream Elevation = 10.49  
                          Centerline Station = 249.75

Culvert Name      Shape      Rise      Span  
 Culvert #3          Box          8          6  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n    Bottom n    Depth Blocked    Entrance Loss Coef  
 Exit Loss Coef  
                          49.5      80      .013      .013      0                   .5  
 1  
 Upstream    Elevation = 10.58  
                          Centerline Station = 255.65  
 Downstream Elevation = 10.49  
                          Centerline Station = 255.65

CROSS SECTION

ExpandedLocal.rep

RIVER: W-15 Main  
 REACH: Mid RS: 20648

INPUT

Description: Sela 6.696

Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	20	211	17.52	236	16.26	241	12.59	249	10.48
250	10.48	258	12.54	263	17.89	288	20.35		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	241	.05	258	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	241	258		651	651		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
0	200	22.33	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 19997

INPUT

Description: Data from Survey

Station Elevation Data num= 23

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	18.3	25	18.6	50	19.4	56	14.7	58	12.7
61	9.3	65	8.7	70	9.7	73	12.5	79	15.4
85	18.5	89	20.8	100	20.8	106	23	112	24.6
118	22.8	125	20.8	167	19	209	19	302	18.8
364	18.2	433	17	500	17				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	50	.05	89	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	50	89		979	979		.1	.3

Ineffective Flow num= 1

ExpandedLocal.rep

Sta L Sta R Elev Permanent  
 112 500 24.6 F

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 19018

INPUT

Description: Data from Survey

Station Elevation Data num= 21

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	18.5	27	18.1	44	18.6	47	16.5	48	15
55	11.2	57	9	62	8.4	68	11.3	71	13.1
76	15.6	79	18.5	86	19.5	95	19.9	108	25.7
125	20.2	149	18.2	194	18.2	277	18.9	346	19.3
579	18.3								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	44	.05	79	.06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 44 79 720 720 720 .1 .3

Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 108 579 25.7 F

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 18298

INPUT

Description: Data from Survey

Station Elevation Data num= 24

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	17.5	27	18	41	17.4	45	14.5	52	11
54	7.9	57	7.5	62	7.6	63	10.1	69	13.9
72	17.9	83	20.2	102	20.4	132	21	135	23
141	20.4	167	19.8	192	19.3	244	19.4	294	19.9
351	19.5	434	19.3	513	17.9	591	16.6		

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 41 .05 72 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 41 72 842 842 842 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 135 591 23 F

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 17456

INPUT

Description: Data from Survey

Station Elevation Data num= 18  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 16.5 6 16.4 11 12.8 16 9.4 17 6.8  
 25 6.4 28 6.8 32 9.7 41 10.4 83 14.5  
 103 14.9 109 15.1 152 15.3 177 15.6 207 16  
 275 16.2 355 16.3 481 16.8

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 6 .05 32 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 6 32 235 235 235 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 17221

INPUT

Description: Copy of SELA 17221

Station Elevation Data num= 11  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 1000 19.13 1020 18.71 1030 15.36 1046 12.82 1067 10.43  
 1074 6.53 1084 6.94 1089 9.52 1096 13.2 1112 18.77

ExpandedLocal.rep

1126 19.81

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 1000 .1 1020 .05 1112 .1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1020	1112		20 20	20	.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 17201

INPUT

Description: Copy of SELA 17201

Station Elevation Data num= 11  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 1000 19.13 1020 18.71 1030 15.36 1046 12.82 1067 10.43  
 1074 6.53 1084 6.94 1089 9.52 1096 13.2 1112 18.77  
 1126 19.81

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 1000 .1 1020 .05 1112 .1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1020	1112		220 220	220	.1	.3

Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 1000 1011 19.13 F

BRIDGE

RIVER: W-15 Main  
 REACH: Mid RS: 17091

INPUT

Description: I-10 Twin Span  
 Distance from Upstream XS = 10  
 Deck/Roadway Width = 200  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates



ExpandedLocal.rep

num= 4

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
1000	19.13				1020	20.75	18.4			1120	20.75	18.4		
1126	19.81													

Upstream Bridge Cross Section Data

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1000	19.13	1020	18.71	1030	15.36	1046	12.82	1067	10.43
1074	6.53	1084	6.94	1089	9.52	1096	13.2	1112	18.77
1126	19.81								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
1000	.1	1020	.05	1112	.1

Bank Sta: Left Right Coeff Contr. Expan.  
 1020 1112 .1 .3

Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 1000 1011 19.13 F

Downstream Deck/Roadway Coordinates

num= 4

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
1000	19.13				1020	20.75	18.4			1120	20.75	18.4		
1126	19.81													

Downstream Bridge Cross Section Data

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1000	19.13	1020	18.71	1030	15.36	1046	12.82	1067	10.43
1074	6.53	1084	6.94	1089	9.52	1096	13.2	1112	18.77
1126	19.81								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
1000	.1	1020	.05	1112	.1

Bank Sta: Left Right Coeff Contr. Expan.  
 1020 1112 .1 .3

Ineffective Flow num= 2

ExpandedLocal.rep

Sta L	Sta R	Elev	Permanent
1000	1016	19.13	F
1114	1126	19.13	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 4

Pier Data

Pier Station Upstream= 1038 Downstream= 1038  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.3 0 1.3 18.4  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.3 0 1.3 18.4

Pier Data

Pier Station Upstream= 1056 Downstream= 1056  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.3 0 1.3 18.4  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.3 0 1.3 18.4

Pier Data

Pier Station Upstream= 1074 Downstream= 1074  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.3 0 1.3 18.4  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.3 0 1.3 18.4

Pier Data

Pier Station Upstream= 1092 Downstream= 1092

Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.3 0 1.3 18.4

Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.3 0 1.3 18.4

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth  
inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main

REACH: Mid

RS: 16981

INPUT

Description: Copy of SELA 16981

Station Elevation Data num= 11  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 1000 19.13 1020 18.71 1030 15.36 1046 12.82 1067 10.43  
 1074 6.53 1084 6.94 1089 9.52 1096 13.2 1112 18.77  
 1126 19.81

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 1000 .1 1020 .05 1112 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1020 1112 55 55 55 .1 .3

ExpandedLocal.rep

Ineffective Flow	num=	2
Sta L	Sta R	Elev Permanent
1000	1016	19.13 F
1114	1126	19.13 F

CROSS SECTION

RIVER: W-15 Main  
 REACH: Mid RS: 16926

INPUT

Description: Copy of SELA 16926

Station Elevation Data	num=	11							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
1000	18.44	1027	18.05	1034	10.35	1045	10.08	1061	6.85
1071	5.7	1078	7.15	1087	8.77	1097	15.84	1105	17.47
1121	18.23								

Manning's n Values	num=	3			
Sta	n Val	Sta	n Val	Sta	n Val
*****					
1000	.1	1027	.05	1097	.1

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
1027	1097	50	50	50		.1	.3

Ineffective Flow	num=	2
Sta L	Sta R	Elev Permanent
1000	1018	18.23 F
1111	1121	18.23 F

BRIDGE

RIVER: W-15 Main  
 REACH: Mid RS: 16901

INPUT

Description: I-10 Service Road

Distance from Upstream XS = 10  
 Deck/Roadway Width = 30  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num=	4							
Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord
*****								
1000	18.44		1027	19.75	17.3	1102	19.75	17.3

ExpandedLocal.rep

1121 18.23

Upstream Bridge Cross Section Data

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1000	18.44	1027	18.05	1034	10.35	1045	10.08	1061	6.85
1071	5.7	1078	7.15	1087	8.77	1097	15.84	1105	17.47
1121	18.23								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
1000	.1	1027	.05	1097	.1

Bank Sta: Left Right Coeff Contr. Expan.

Left	Right	Coeff	Contr.	Expan.
1027	1097		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
1000	1018	18.23	F
1111	1121	18.23	F

Downstream Deck/Roadway Coordinates

num= 4

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
1000	18.44				1055	19.7	17			1130	19.7	17		
1148	17.65													

Downstream Bridge Cross Section Data

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1000	18.44	1030	18.78	1043	18.56	1063	17.37	1075	14.95
1083	10.81	1091	7.01	1098	6.6	1104	7.88	1109	12.32
1111	14.57	1121	16.95	1135	17.82	1148	17.65		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
1000	.1	1075	.05	1111	.1

Bank Sta: Left Right Coeff Contr. Expan.

Left	Right	Coeff	Contr.	Expan.
1075	1111		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
1000	1060	17.65	F
1126	1148	17.65	F

ExpandedLocal.rep

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
Maximum allowable submergence for weir flow = .98  
Elevation at which weir flow begins =  
Energy head used in spillway design =  
Spillway height used in design =  
Weir crest shape = Broad Crested

Number of Piers = 3

Pier Data

Pier Station Upstream= 1057 Downstream= 1081  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
.667 0 .667 17.3  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
.667 0 .667 17.3

Pier Data

Pier Station Upstream= 1071 Downstream= 1098  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
.667 0 .667 17.3  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
.667 0 .667 17.3

Pier Data

Pier Station Upstream= 1088 Downstream= 1115  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
.667 0 .667 17.3  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
.667 0 .667 17.3

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data  
Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method  
Energy Only

Additional Bridge Parameters  
Add Friction component to Momentum  
Do not add Weight component to Momentum  
Class B flow critical depth computations use critical depth  
inside the bridge at the upstream end  
Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main  
REACH: Mid RS: 16876

INPUT

Description: Copy of SELA 16876

Station Elevation Data		num= 14							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1000	18.44	1030	18.78	1043	18.56	1063	17.37	1075	14.95
1083	10.81	1091	7.01	1098	6.6	1104	7.88	1109	12.32
1111	14.57	1121	16.95	1135	17.82	1148	17.65		

Manning's n Values		num= 3			
Sta	n Val	Sta	n Val	Sta	n Val
1000	.1	1075	.05	1111	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1075	1111		394	394		.1	.3

Ineffective Flow		num= 2			
Sta L	Sta R	Elev	Permanent		
1000	1060	17.65	F		
1126	1148	17.65	F		

CROSS SECTION

RIVER: W-15 Main  
REACH: Mid RS: 16482

INPUT

Description:

Station Elevation Data	num= 12
------------------------	---------

ExpandedLocal.rep

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-985	16.6	-487	15.5	0	12.8	8	11.08	14	5.95
18	4.57	21	4.39	24	4.49	25	5.29	28	9
35	11.85	400	14.54						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-985	.1	0	.05	35	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	0	35		0	0		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper1 RS: 16088

INPUT

Description:

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-985	16.6	-487	15.5	0	12.8	8	11.08	14	5.95
18	4.57	21	4.39	24	4.49	25	5.29	28	9
35	11.85	200	13.02						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-985	.1	0	.05	35	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	0	35		295	295		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper1 RS: 15793

INPUT

Description:

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-985	16.6	-487	15.5	0	12.8	8	11.08	14	5.95
18	4.57	21	4.39	24	4.49	25	5.29	28	9
35	11.85	200	13.02						



ExpandedLocal.rep

-985	16.6	-487	15.5	0	12.8	8	11.08	14	5.95
18	4.57	21	4.39	24	4.49	25	5.29	28	9
35	11.85	400	14.54						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-985	.1	0	.05	35	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	0	35		100 100	100		.1	.3

CROSS SECTION

RIVER: W-15 Main  
REACH: Upper1 RS: 15693

INPUT

Description:

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-985	16.6	-487	15.5	0	12.8	8	11.08	14	5.95
18	4.57	21	4.39	24	4.49	25	5.29	28	9
35	11.85	400	14.54						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-985	.1	0	.05	35	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	0	35		394 394	394		.1	.3

CROSS SECTION

RIVER: W-15 Main  
REACH: Upper1 RS: 15299

INPUT

Description:

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1000	15.1	-555	13.89	-200	13.3	0	9.26	5	6.93
9	5.41	11	4.79	15	4.31	18	4.92	20	6.58

ExpandedLocal.rep

24 9.69 73 13.1 86 13.2

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1000 .1 0 .05 24 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 0 24 37 37 37 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -1000 -10 13.13 F  
 34 86 13.13 F

BRIDGE

RIVER: W-15 Main  
 REACH: Upper1 RS: 15280

INPUT

Description: Hidden Oaks Bridge  
 Distance from Upstream XS = 10  
 Deck/Roadway Width = 17  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 11  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 -1000 15.11 -145 15.11 -66 14.91  
 0 15.91 0 15.91 14.58 24 15.77 14.44  
 24 15.77 26 15.77 70 13.7  
 113 13.13 160 13.46

Upstream Bridge Cross Section Data

Station Elevation Data num= 13  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1000 15.1 -555 13.89 -200 13.3 0 9.26 5 6.93  
 9 5.41 11 4.79 15 4.31 18 4.92 20 6.58  
 24 9.69 73 13.1 86 13.2

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1000 .1 0 .05 24 .1

Bank Sta: Left Right Coeff Contr. Expan.

ExpandedLocal.rep

0 24 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -1000 -10 13.13 F  
 34 86 13.13 F

Downstream Deck/Roadway Coordinates

num= 11  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 -1000 15.11 -145 15.11 -66 14.91  
 10 15.91 10 15.91 14.58 34 15.77 14.44  
 34 15.77 36 15.77 70 13.7  
 113 13.13 160 13.46

Downstream Bridge Cross Section Data

Station Elevation Data num= 15  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1000 15.1 -555 13.89 -200 13.3 0 13.39 5 10.44  
 13 8.38 20 7.06 21 5.27 23 4.59 25 4.15  
 27 4.33 29 6.71 37 8.93 73 13.1 86 13.2

Manning's n Values

num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1000 .1 0 .05 37 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 0 37 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -1000 5 13.13 F  
 39 86 13.13 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 2

Pier Data

Pier Station Upstream= 1027 Downstream= 1027  
 Upstream num= 2

```

Width  Elev  Width  Elev
*****
.67    0    .67   19.16
Downstream  num=      2
Width  Elev  Width  Elev
*****
.67    0    .67   19.16

```

Pier Data

```

Pier Station      Upstream=    1041      Downstream=    1041
Upstream      num=      2
Width  Elev  Width  Elev
*****
.67    0    .67   19.16
Downstream      num=      2
Width  Elev  Width  Elev
*****
.67    0    .67   19.16

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

```

Energy
Momentum          Cd   =      2
Yarnell           KVal =    1.25
Selected Low Flow Methods = Highest Energy Answer

```

High Flow Method

```

Pressure and Weir flow
Submerged Inlet Cd          =
Submerged Inlet + Outlet Cd =    .8
Max Low Cord                =

```

Additional Bridge Parameters

```

Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth
inside the bridge at the upstream end
Criteria to check for pressure flow = Upstream energy grade line

```

CROSS SECTION

```

RIVER: W-15 Main
REACH: Upper1          RS: 15262

```

INPUT

Description: Copy of SELA 15261

ExpandedLocal.rep

Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1000	15.1	-555	13.89	-200	13.3	0	13.39	5	10.44
13	8.38	20	7.06	21	5.27	23	4.59	25	4.15
27	4.33	29	6.71	37	8.93	73	13.1	86	13.2

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1000	.1	0	.05	37	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

0	37	1	1	1	.1	.3
---	----	---	---	---	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1000	5	13.13	F
39	86	13.13	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: Upper1 RS: 15261

INPUT

Description:

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1000	15.1	-555	13.89	-200	13.3	0	12.64	8	9.48
15	6.3	18	4.77	20	4.13	22	3.81	29	9.36
73	13.1	86	13.2						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1000	.1	0	.05	29	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

0	29	0	0	0	.1	.3
---	----	---	---	---	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1000	4	13.13	F
40	86	13.13	F

CROSS SECTION

ExpandedLocal.rep

RIVER: W-15 Main  
 REACH: New RS: 800

INPUT

Description:

Station Elevation Data num= 19

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	15.6	15	15.6	35	13.7	41	9.7	48	7.3
55	6	58	6.4	60	9	65	12	71	15.7
86	14.7	140	15.7	170	16.6	197	16	225	15.6
309	16.4	395	15.1	510	15.5	815	15.9		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	35	.04	71	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	35	71		800	800		.1	.3

Cross Section Lid num= 2

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
35	14	10	71	14	10

CROSS SECTION

RIVER: W-15 Main  
 REACH: New RS: 0

INPUT

Description:

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-50	13.33	0	13.33	13	11.3	19	9.3	23	7.5
26	5.2	31	3.01	35	4.5	37	7.7	41	8.8
47	12.2	54	11.8	76	11.8	88	12.4	118	12.9
211	15.4								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-50	.06	13	.04	47	.06

ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 13 47 0 0 0 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 14915

INPUT

Description: DS Confluence Reine Canal

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1200	15.04	-601	13.59	38	12.48	42	10.15	51	6.02
58	5.61	60	3.75	63	3.01	67	3.79	70	7.59
74	10.55	97	11.15	159	14.51	255	14.9		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1200	.1	38	.05	74	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 38 74 345 345 345 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 14570

INPUT

Description: Interpolated Section

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1556	14.9	-743	13.54	-245	12.6	0	12.14	10	7.67
12	5.73	17	4.14	19	3.72	25	7.99	31	10.88
66	11.79	196	14.5						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1556	.1	0	.05	31	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 0 31 346 346 346 .1 .3

ExpandedLocal.rep

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 14224

INPUT

Description: Interpolated Section

Station Elevation Data num= 27

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1159	13.53	-350	12.91	184	12.68	193.16	9.89	193.23	9.87
193.36	9.83	195.36	9.22	195.55	9.16	197.42	8.59	199.14	7.73
200.11	7.22	205.52	5.67	206.82	5.38	208.3	5.12	208.5	5.08
209.5	4.91	210.36	5.17	210.53	5.23	212.94	5.97	220.5	8.77
221.53	9.08	221.7	9.14	223.42	9.66	223.59	9.72	231.5	12.14
588	13.7	1020	14.03						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1159	.1	184	.05	231.5	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 184 231.5 346 346 346 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 13878

INPUT

Description: 10' US Pearl Street Bridge

Station Elevation Data num= 106

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3511	18.761	-3482	18.085	3432.74	18.75	3383.48	18.693	3283.61	17.946
-3236.36	17.29	3141.85	16.591	3094.59	17.022	3038.69	16.801	3000.08	17.072
-2940.09	17.081	2890.68	16.829	2862.78	17.038	2742.44	17.607	2639.37	17.843
-2610.1	17.764	2532.71	17.789	2455.33	16.785	2431.08	16.544	2340.96	14.963
-2324.83	14.817	2303.79	14.945	2229.43	14.966	-2000.6	16.278	1900.34	15.846
-1830.72	15.641	1621.88	15.667	1587.07	15.545	1552.27	15.682	1225.99	15.945
-1202.26	15.829	1156.86	15.842	1003.88	15.592	946.979	15.599	892.837	15.491
-801.101	15.513	781.786	15.59	587.638	15.101	517.118	15.143	446.598	14.903
-376.078	15.379	340.818	15.204	-93.799	14.584	227.897	13.955	368	13.22
379.5	10.69	379.58	10.6724	379.75	10.635	382.25	10.085	382.5	10.03



ExpandedLocal.rep

387	9.04	395	6.89	398.5	6.33	398.75	6.29	400	6.09
401.25	6.29	401.5	6.33	405	6.89	417.5	9.9039	417.75	9.9642
420.25	10.56694	420.5	10.62722	432	13.4	752.758	13.547	894.301	13.656
936.47	13.5971	1036.097	13.6581	1055.156	13.5641	1107.003	13.6261	1213.361	13.462
1426.079	13.51496	96.985	13.71515	32.438	14.05115	67.891	13.75916	73.459	13.536
1882.261	12.9022	337.294	12.4762	372.486	12.3432	407.679	12.48126	18.834	12.858
2637.375	12.7982	2654.026	12.6132	2666.311	12.7172	2689.219	12.72724	411	12.832
2865.182	13.0482	2910.935	13.2882	2963.939	13.2023	112.767	14.1893	144.956	13.436
3148.254	13.4473	183.742	15.8013	204.102	16.121	3219.23	16.1153	254.717	16.375
3290.205	16.5223	472.827	16.5873	515.927	16.6883	559.027	16.5633	602.127	16.307
3906.977	16.7564	052.924	16.8264	193.123	17.2124	298.185	17.7274	340.531	18.056
4431.836	18.178								

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -3511 .1 368 .05 432 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 368 432 56 56 56 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 4404431.836 13.45 F

BRIDGE

RIVER: W-15 Main  
 REACH: South RS: 13850

INPUT

Description: Pearl Street Bridge  
 Distance from Upstream XS = 10  
 Deck/Roadway Width = 36  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 4

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
368	13.22	12.57	379.58	13.5	12.85	420.5	13.5	12.85						
432	13.4	12.75												

Upstream Bridge Cross Section Data

Station Elevation Data num= 106

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3511	18.761	-3482	18.085-3432.74	18.75-3383.48	18.693-3283.61	17.946			
-3236.36	17.29-3141.85	16.591-3094.59	17.022-3038.69	16.801-3000.08	17.072				

ExpandedLocal.rep

-2940.09	17.081-2890.68	16.829-2862.78	17.038-2742.44	17.607-2639.37	17.843
-2610.1	17.764-2532.71	17.789-2455.33	16.785-2431.08	16.544-2340.96	14.963
-2324.83	14.817-2303.79	14.945-2229.43	14.966 -2000.6	16.278-1900.34	15.846
-1830.72	15.641-1621.88	15.667-1587.07	15.545-1552.27	15.682-1225.99	15.945
-1202.26	15.829-1156.86	15.842-1003.88	15.592-946.979	15.599-892.837	15.491
-801.101	15.513-781.786	15.59-587.638	15.101-517.118	15.143-446.598	14.903
-376.078	15.379-340.818	15.204 -93.799	14.584 227.897	13.955 368	13.22
379.5	10.69 379.58	10.6724 379.75	10.635 382.25	10.085 382.5	10.03
387	9.04 395	6.89 398.5	6.33 398.75	6.29 400	6.09
401.25	6.29 401.5	6.33 405	6.89 417.5	9.9039 417.75	9.9642
420.2510.56694	420.510.62722	432	13.4 752.758	13.547 894.301	13.656
936.47	13.5971036.097	13.6581055.156	13.5641107.003	13.6261213.361	13.462
1426.079	13.51496.985	13.7151532.438	14.0511567.891	13.7591673.459	13.536
1882.261	12.9022337.294	12.4762372.486	12.3432407.679	12.4812618.834	12.858
2637.375	12.7982654.026	12.6132666.311	12.7172689.219	12.72724.411	12.832
2865.182	13.0482910.935	13.2882963.939	13.2023112.767	14.1893144.956	13.436
3148.254	13.4473183.742	15.8013204.102	16.121 3219.23	16.1153254.717	16.375
3290.205	16.5223472.827	16.5873515.927	16.6883559.027	16.5633602.127	16.307
3906.977	16.7564052.924	16.8264193.123	17.2124298.185	17.7274340.531	18.056
4431.836	18.178				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3511	.1	368	.05	432	.1

Bank Sta: Left Right Coeff Contr. Expan.

368	432	.1	.3
-----	-----	----	----

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
4404431.836	13.45	F	

Downstream Deck/Roadway Coordinates

num= 4

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
368	13.22	12.57	379.58	13.5	12.85	420.5	13.5	12.85	
432	13.4	12.75							

Downstream Bridge Cross Section Data

Station Elevation Data num= 106

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3511	18.761	-3482	18.085-3432.74	18.75-3383.48	18.693-3283.61	17.946			
-3236.36	17.29-3141.85	16.591-3094.59	17.022-3038.69	16.801-3000.08	17.072				
-2940.09	17.081-2890.68	16.829-2862.78	17.038-2742.44	17.607-2639.37	17.843				
-2610.1	17.764-2532.71	17.789-2455.33	16.785-2431.08	16.544-2340.96	14.963				
-2324.83	14.817-2303.79	14.945-2229.43	14.966 -2000.6	16.278-1900.34	15.846				

ExpandedLocal.rep

```

-1830.72 15.641-1621.88 15.667-1587.07 15.545-1552.27 15.682-1225.99 15.945
-1202.26 15.829-1156.86 15.842-1003.88 15.592-946.979 15.599-892.837 15.491
-801.101 15.513-781.786 15.59-587.638 15.101-517.118 15.143-446.598 14.903
-376.078 15.379-340.818 15.204 -93.799 14.584 227.897 13.955 368 13.22
 379.5 10.69 379.58 10.6724 379.75 10.635 382.25 10.085 382.5 10.03
 387 9.04 395 6.89 398.5 6.33 398.75 6.29 400 6.09
 401.25 6.29 401.5 6.33 405 6.89 417.5 9.9039 417.75 9.9642
 420.2510.56694 420.510.62722 432 13.4 752.758 13.547 894.301 13.656
 936.47 13.5971036.097 13.6581055.156 13.5641107.003 13.6261213.361 13.462
1426.079 13.51496.985 13.7151532.438 14.0511567.891 13.7591673.459 13.536
1882.261 12.9022337.294 12.4762372.486 12.3432407.679 12.4812618.834 12.858
2637.375 12.7982654.026 12.6132666.311 12.7172689.219 12.72724.411 12.832
2865.182 13.0482910.935 13.2882963.939 13.2023112.767 14.1893144.956 13.436
3148.254 13.4473183.742 15.8013204.102 16.121 3219.23 16.1153254.717 16.375
3290.205 16.5223472.827 16.5873515.927 16.6883559.027 16.5633602.127 16.307
3906.977 16.7564052.924 16.8264193.123 17.2124298.185 17.7274340.531 18.056
4431.836 18.178

```

```

Manning's n Values          num=          3
  Sta   n Val      Sta   n Val      Sta   n Val
*****
-3511      .1      368      .05      432      .1

```

```

Bank Sta: Left   Right   Coeff Contr.   Expan.
           368     432           .1           .3
Ineffective Flow   num=          1
  Sta L   Sta R   Elev Permanent
  4354431.836  13.45      F

```

```

Upstream Embankment side slope      =      0 horiz. to 1.0 vertical
Downstream Embankment side slope     =      0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =      .98
Elevation at which weir flow begins   =     13.22
Energy head used in spillway design   =
Spillway height used in design        =
Weir crest shape                      = Broad Crested

```

Number of Piers = 3

```

Pier Data
Pier Station   Upstream=   381   Downstream=   381
Upstream       num=          3
  Width Elev   Width Elev   Width Elev
*****
   2.5  1.5    2.5 11.45    3  11.45
Downstream     num=          3
  Width Elev   Width Elev   Width Elev
*****

```

2.5 1.5 2.5 11.45 3 11.45

Pier Data

Pier Station Upstream= 400 Downstream= 400

Upstream num= 3

Width Elev Width Elev Width Elev

\*\*\*\*\*

2.5 1.5 2.5 11.45 3 11.45

Downstream num= 3

Width Elev Width Elev Width Elev

\*\*\*\*\*

2.5 1.5 2.5 11.45 3 11.45

Pier Data

Pier Station Upstream= 419 Downstream= 419

Upstream num= 3

Width Elev Width Elev Width Elev

\*\*\*\*\*

2.5 1.5 2.5 11.45 3 11.45

Downstream num= 3

Width Elev Width Elev Width Elev

\*\*\*\*\*

2.5 1.5 2.5 11.45 3 11.45

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Momentum Cd = 2

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Pressure and Weir flow

Submerged Inlet Cd =

Submerged Inlet + Outlet Cd = .8

Max Low Cord =

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main

ExpandedLocal.rep

REACH: South

RS: 13822

INPUT

Description: 10' DS Pearl Street Bridge

Station Elevation Data num= 106

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3511	18.761	-3482	18.085	3432.74	18.75	3383.48	18.693	3283.61	17.946
-3236.36	17.29	3141.85	16.591	3094.59	17.022	3038.69	16.801	3000.08	17.072
-2940.09	17.081	2890.68	16.829	2862.78	17.038	2742.44	17.607	2639.37	17.843
-2610.1	17.764	2532.71	17.789	2455.33	16.785	2431.08	16.544	2340.96	14.963
-2324.83	14.817	2303.79	14.945	2229.43	14.966	-2000.6	16.278	1900.34	15.846
-1830.72	15.641	1621.88	15.667	1587.07	15.545	1552.27	15.682	1225.99	15.945
-1202.26	15.829	1156.86	15.842	1003.88	15.592	946.979	15.599	892.837	15.491
-801.101	15.513	781.786	15.59	587.638	15.101	517.118	15.143	446.598	14.903
-376.078	15.379	340.818	15.204	-93.799	14.584	227.897	13.955	368	13.22
379.5	10.69	379.58	10.6724	379.75	10.635	382.25	10.085	382.5	10.03
387	9.04	395	6.89	398.5	6.33	398.75	6.29	400	6.09
401.25	6.29	401.5	6.33	405	6.89	417.5	9.9039	417.75	9.9642
420.25	10.56694	420.51	10.62722	432	13.4	752.758	13.547	894.301	13.656
936.47	13.5971	1036.097	13.6581	1055.156	13.5641	1107.003	13.6261	1213.361	13.462
1426.079	13.51496	985	13.7151	1532.438	14.0511	1567.891	13.7591	1673.459	13.536
1882.261	12.9022	337.294	12.4762	372.486	12.3432	407.679	12.4812	618.834	12.858
2637.375	12.7982	2654.026	12.6132	2666.311	12.7172	2689.219	12.7272	24.411	12.832
2865.182	13.0482	2910.935	13.2882	2963.939	13.2023	112.767	14.1893	144.956	13.436
3148.254	13.4473	183.742	15.8013	204.102	16.121	3219.23	16.1153	254.717	16.375
3290.205	16.5223	472.827	16.5873	515.927	16.6883	559.027	16.5633	602.127	16.307
3906.977	16.7564	052.924	16.8264	193.123	17.2124	298.185	17.7274	340.531	18.056
4431.836	18.178								

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3511	.1	368	.05	432	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 368 432 370 370 370 .1 .3

Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 4354431.836 13.45 F

CROSS SECTION

RIVER: W-15 Main

REACH: South

RS: 13452

INPUT

ExpandedLocal.rep

Description: Interpolated Section

Station Elevation Data num= 192									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-3366.6	18.49	3336.96	17.86	3317.52	18.03	3286.62	18.27	3236.28	18.07
-3219.35	17.92	3157.14	17.32	3134.21	17.12	3123.74	16.97	3090.33	16.53
-3085.92	16.49	3056.92	16.37	3023.8	16.19	2989.33	16.04	2979.1	16.14
-2941.04	16.39	2934.4	16.36	2883.91	16.13	2845	16.3	2844.45	16.3
-2783.14	16.3	2732.64	16.09	2704.13	16.27	2621.5	16.58	2581.14	16.77
-2532.1	16.89	2475.81	16.99	2458.11	16.95	2445.9	16.9	2424.99	16.86
-2366.8	16.97	2341.47	16.75	2287.72	16.24	2262.94	16.07	2259.39	16.03
-2226.27	15.56	2193.15	15.13	2170.84	14.79	2154.35	14.65	2144.56	14.69
-2132.85	14.75	2056.86	14.75	2049.88	14.78	2020.62	14.87	1847.54	15.63
-1823	15.72	1720.53	15.3	1649.38	15.08	1578.15	15.04	1461.82	15.01
-1435.95	15.02	1426.42	14.99	1400.38	14.86	1391.73	14.87	1364.81	14.92
-1344.3	14.91	1291.79	14.8	1165.74	15.1	1134.23	15.09	1039.7	15.16
-1031.36	15.16	1007.11	15.04	960.71	15.02	913.66	14.93	850.63	14.87
-817.32	14.85	804.37	14.83	756.1	14.82	746.22	14.8	724.59	14.71
-700.68	14.63	690.89	14.63	614.47	14.8	597.13	14.79	577.39	14.85
-576.15	14.85	520.16	14.74	461.2	14.61	384.76	14.39	378.98	14.37
-346.26	14.32	306.91	14.42	274.15	14.39	247.2	14.32	234.84	14.31
-162.77	14.8	126.73	14.71	16.5	14.64	14.28	14.56	29.64	14.55
50.34	14.49	75.78	14.35	86.39	14.33	121.92	14.12	125.72	14.11
168.06	14.01	194.55	13.92	214.2	13.88	230.6	13.8	300.26	13.64
368.21	13.61	452.92	13.5	454.48	13.49	501.06	13.25	597.67	12.77
599.05	12.44	609.36	10.03	609.44	10.01	609.62	9.97	612.16	9.37
612.41	9.32	613.59	9.04	614.98	8.72	616.99	8.24	625.12	6.02
628.68	5.36	628.94	5.31	630.21	5.08	630.46	5.08	633.21	5.08
633.46	5.08	636.38	5.08	636.62	5.08	637.79	5.31	638.02	5.36
641.27	6.02	652.87	9.21	653.1	9.27	655.42	9.91	655.66	9.98
663.89	12.24	666.33	12.92	860.38	13.18	974.81	13.23	1110.93	13.32
1151.49	13.27	1247.3	13.32	1265.63	13.25	1315.49	13.3	1417.78	13.16
1470.61	13.17	1601.16	13.22	1622.35	13.23	1690.54	13.45	1724.64	13.75
1736.4	13.67	1758.73	13.51	1860.26	13.32	1870.9	13.3	2061.07	12.72
2225.38	12.52	2314	12.44	2498.68	12.32	2532.52	12.22	2566.37	12.34
2757.11	12.67	2769.44	12.68	2787.27	12.62	2803.28	12.46	2815.1	12.54
2837.13	12.52	2845.42	12.54	2870.97	12.62	3006.36	12.81	3050.36	13.02
3065.53	12.99	3101.33	12.97	3109.55	13.02	3153.57	13.26	3244.46	13.8
3275.42	13.18	3278.59	13.19	3312.72	15.16	3332.3	15.43	3346.85	15.43
3380.98	15.66	3415.11	15.79	3424.74	15.79	3590.74	15.93	3602.14	15.96
3632.19	16.05	3673.64	15.98	3715.09	15.8	3943.61	16.29	4008.26	16.44
4148.62	16.64	4206.16	16.83	4283.45	17.07	4384.49	17.56	4424.94	17.86
4425.22	17.86	4513.03	17.97						

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
*****					
-3366.6	.1	597.67	.05	666.33	.1

ExpandedLocal.rep

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
597.67	666.33	369	369	369		.1	.3
Ineffective Flow	num=	1					
Sta L	Sta R	Elev	Permanent				
851	4513.03	13.4	F				

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 13083

INPUT

Description: Interpolated Section

Station Elevation Data	num=	192							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-3222.2	18.22	-3191.92	17.63	-3172.06	17.71	-3140.5	17.8	-3089.07	17.45
-3071.78	17.26	-3008.24	16.52	-2984.81	16.29	-2974.11	16.14	-2939.99	15.71
-2935.48	15.69	-2905.86	15.66	-2872.03	15.54	-2836.82	15.49	-2826.36	15.59
-2787.48	15.75	-2780.7	15.72	-2729.12	15.45	-2689.38	15.52	-2688.82	15.52
-2626.19	15.53	-2574.61	15.36	-2545.48	15.49	-2461.07	15.74	-2419.85	15.92
-2369.75	16.06	-2312.25	16.14	-2294.17	16.11	-2281.69	16.03	-2260.34	15.95
-2200.9	16.16	-2175.02	16.03	-2120.12	15.7	-2094.8	15.6	-2091.17	15.57
-2057.34	15.21	-2023.51	14.91	-2000.72	14.62	-1983.88	14.49	-1973.87	14.51
-1961.91	14.55	-1884.29	14.53	-1877.16	14.55	-1847.27	14.58	-1670.46	15.11
-1645.4	15.17	-1540.73	14.74	-1468.05	14.51	-1395.28	14.42	-1276.45	14.35
-1250.03	14.37	-1240.29	14.35	-1213.69	14.18	-1204.85	14.16	-1177.36	14.16
-1156.41	14.11	-1102.76	13.87	-974	14.37	-941.82	14.33	-845.25	14.38
-836.73	14.37	-811.96	14.26	-764.56	14.21	-716.5	14.09	-652.12	14.07
-618.09	14.09	-604.86	14.07	-555.55	14.04	-545.46	13.99	-523.36	13.86
-498.94	13.75	-488.93	13.78	-410.87	14.08	-393.16	14.07	-373	14.11
-371.73	14.11	-314.53	14.04	-254.3	13.91	-176.23	13.66	-170.32	13.63
-136.89	13.52	-96.7	13.69	-63.23	13.74	-35.71	13.7	-23.08	13.71
50.54	14.23	87.35	14.22	199.96	14.35	231.4	14.26	247.09	14.27
268.23	14.22	294.22	13.99	305.06	13.97	341.35	13.65	345.23	13.63
388.49	13.52	415.55	13.38	435.62	13.34	452.38	13.22	523.53	13.02
592.94	13.09	679.47	13.03	681.07	13.03	728.65	12.79	827.33	12.31
828.74	11.96	839.22	9.37	839.31	9.35	839.48	9.3	842.07	8.66
842.32	8.6	843.52	8.3	844.93	7.96	846.98	7.45	855.25	5.14
858.87	4.38	859.12	4.33	860.42	4.06	860.92	4.06	866.42	4.06
866.92	4.06	872.75	4.06	873.25	4.06	874.32	4.33	874.54	4.38
877.53	5.14	888.24	8.52	888.46	8.58	890.6	9.26	890.81	9.33
898.41	11.72	900.67	12.43	1086.98	12.87	1196.86	12.91	1327.57	12.99
1366.51	12.95	1458.51	12.99	1476.1	12.93	1523.98	12.97	1622.2	12.86
1672.92	12.87	1798.28	12.93	1818.62	12.96	1884.1	13.19	1916.84	13.45
1928.14	13.4	1949.58	13.27	2047.06	13.11	2057.28	13.09	2239.88	12.54

ExpandedLocal.rep

2397.65	12.3	2482.74	12.23	2660.06	12.17	2692.56	12.1	2725.06	12.2
2908.21	12.5	2920.05	12.5	2937.17	12.45	2952.54	12.31	2963.89	12.36
2985.04	12.33	2993	12.34	3017.54	12.41	3147.53	12.58	3189.78	12.74
3204.35	12.73	3238.72	12.74	3246.62	12.78	3288.88	12.96	3376.16	13.42
3405.88	12.93	3408.93	12.94	3441.7	14.52	3460.5	14.75	3474.47	14.75
3507.24	14.94	3540.01	15.05	3549.26	15.06	3708.64	15.28	3719.6	15.31
3748.44	15.41	3788.24	15.4	3828.04	15.3	4047.47	15.92	4109.55	16.12
4244.32	16.45	4299.56	16.68	4373.78	16.93	4470.8	17.4	4509.64	17.67
4509.9	17.67	4594.22	17.75						

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -3222.2 .1 827.33 .05 900.67 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 827.33 900.67 370 370 370 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 1271 4594.22 13.4 F

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 12713

INPUT

Description: Interpolated Section  
 Station Elevation Data num= 192  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -3077.79 17.95-3046.88 17.4 -3026.6 17.4-2994.37 17.32-2941.87 16.83  
 -2924.22 16.61-2859.33 15.73-2835.41 15.46-2824.49 15.3-2789.64 14.89  
 -2785.04 14.89 -2754.8 14.95-2720.25 14.89 -2684.3 14.94-2673.63 15.04  
 -2633.93 15.11 -2627 15.08-2574.34 14.78-2533.76 14.75-2533.18 14.75  
 -2469.24 14.75-2416.57 14.62-2386.83 14.72-2300.64 14.91-2258.55 15.08  
 -2207.4 15.24-2148.69 15.29-2130.23 15.26-2117.49 15.17-2095.68 15.04  
 -2034.99 15.35-2008.57 15.32-1952.51 15.16-1926.66 15.13-1922.96 15.11  
 -1888.41 14.85-1853.87 14.69 -1830.6 14.44 -1813.4 14.33-1803.19 14.33  
 -1790.98 14.36-1711.71 14.31-1704.44 14.32-1673.91 14.29-1493.39 14.6  
 -1467.79 14.62-1360.92 14.19-1286.71 13.95-1212.41 13.81-1091.08 13.69  
 -1064.1 13.72-1054.15 13.71-1026.99 13.5-1017.97 13.46 -989.9 13.4  
 -968.51 13.32 -913.73 12.93 -782.27 13.63 -749.4 13.56 -650.8 13.6  
 -642.1 13.58 -616.81 13.48 -568.41 13.39 -519.33 13.25 -453.6 13.27  
 -418.86 13.33 -405.35 13.3 -355 13.26 -344.69 13.19 -322.14 13.01  
 -297.2 12.87 -286.98 12.92 -207.27 13.37 -189.2 13.36 -168.61 13.37  
 -167.31 13.37 -108.91 13.33 -47.41 13.21 32.31 12.94 38.34 12.9



ExpandedLocal.rep

72.47	12.71	113.51	12.96	147.68	13.1	175.79	13.08	188.68	13.11
263.85	13.66	301.44	13.72	416.41	14.05	448.52	13.96	464.54	14
486.12	13.95	512.66	13.63	523.73	13.62	560.79	13.17	564.75	13.16
608.91	13.03	636.54	12.85	657.04	12.8	674.15	12.64	746.8	12.41
817.67	12.58	906.03	12.57	907.66	12.57	956.24	12.33	1057	11.86
1058.43	11.49	1069.08	8.71	1069.17	8.69	1069.35	8.64	1071.97	7.95
1072.24	7.89	1073.45	7.57	1074.89	7.2	1076.96	6.65	1085.37	4.27
1089.05	3.41	1089.31	3.35	1090.62	3.05	1091.38	3.05	1099.62	3.05
1100.38	3.05	1109.12	3.05	1109.88	3.05	1110.86	3.35	1111.05	3.41
1113.8	4.27	1123.62	7.82	1123.81	7.89	1125.77	8.61	1125.97	8.68
1132.93	11.2	1135	11.95	1313.59	12.56	1418.92	12.59	1544.2	12.65
1581.53	12.62	1669.71	12.66	1686.58	12.61	1732.47	12.64	1826.61	12.56
1875.23	12.57	1995.39	12.65	2014.9	12.69	2077.66	12.92	2109.04	13.15
2119.87	13.12	2140.42	13.02	2233.86	12.9	2243.66	12.88	2418.68	12.36
2569.92	12.08	2651.48	12.01	2821.45	12.02	2852.6	11.97	2883.75	12.06
3059.3	12.34	3070.65	12.33	3087.06	12.27	3101.8	12.15	3112.67	12.19
3132.95	12.15	3140.58	12.15	3164.1	12.21	3288.7	12.34	3329.2	12.47
3343.17	12.46	3376.12	12.5	3383.68	12.55	3424.2	12.66	3507.85	13.03
3536.34	12.68	3539.26	12.69	3570.67	13.89	3588.69	14.06	3602.08	14.06
3633.5	14.22	3664.91	14.31	3673.78	14.32	3826.55	14.62	3837.05	14.66
3864.7	14.77	3902.85	14.81	3941	14.79	4151.33	15.55	4210.84	15.8
4340.02	16.27	4392.97	16.52	4464.12	16.78	4557.11	17.24	4594.34	17.48
4594.59	17.48	4675.41	17.54						

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -3077.79 .1 1057 .05 1135 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1057 1135 370 370 370 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 2253 4675.41 12.3 F

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 12343

INPUT

Description: Interpolated Section  
 Station Elevation Data num= 192  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -2933.39 17.68-2901.84 17.18-2881.14 17.08-2848.25 16.84-2794.66 16.21  
 -2776.65 15.96-2710.42 14.93-2686.01 14.63-2674.86 14.47 -2639.3 14.07

ExpandedLocal.rep

-2634.61	14.09-2603.73	14.25-2568.48	14.23-2531.79	14.39-2520.89	14.5
-2480.37	14.48-2473.31	14.45-2419.56	14.1-2378.14	13.98-2377.55	13.98
-2312.29	13.97-2258.53	13.88-2228.18	13.95-2140.22	14.07-2097.26	14.24
-2045.05	14.41-1985.13	14.44-1966.28	14.42-1953.28	14.3-1931.03	14.13
-1869.09	14.53-1842.12	14.6 -1784.9	14.62-1758.52	14.66-1754.74	14.66
-1719.49	14.5-1684.23	14.47-1660.48	14.27-1642.93	14.17 -1632.5	14.15
-1620.04	14.16-1539.14	14.09-1531.71	14.09-1500.56	13.99-1316.32	14.08
-1290.19	14.06-1181.12	13.64-1105.38	13.38-1029.54	13.19 -905.71	13.03
-878.17	13.07 -868.02	13.07 -840.3	12.81 -831.09	12.75 -802.44	12.64
-780.61	12.53 -724.7	11.99 -590.53	12.89 -556.98	12.79 -456.35	12.81
-447.47	12.79 -421.66	12.69 -372.27	12.57 -322.17	12.42 -255.09	12.47
-219.63	12.56 -205.84	12.54 -154.45	12.49 -143.93	12.39 -120.91	12.16
-95.46	12 -85.03	12.06 -3.68	12.66 14.77	12.64 35.79	12.64
37.11	12.63 96.71	12.63 159.48	12.52 240.84	12.21 247	12.16
281.84	11.91 323.72	12.23 358.6	12.46 387.28	12.46 400.45	12.52
477.17	13.08 515.53	13.23 632.87	13.76 665.64	13.66 681.99	13.72
704.02	13.67 731.1	13.27 742.4	13.26 780.22	12.7 784.26	12.68
829.34	12.54 857.54	12.31 878.46	12.26 895.92	12.06 970.07	11.79
1042.4	12.07 1132.58	12.11 1134.25	12.1 1183.83	11.87 1286.67	11.41
1288.12	11.01 1298.95	8.05 1299.03	8.02 1299.21	7.97 1301.88	7.24
1302.15	7.17 1303.39	6.83 1304.84	6.44 1306.95	5.86 1315.49	3.39
1319.23	2.44 1319.5	2.37 1320.83	2.03 1321.83	2.03 1332.83	2.03
1333.83	2.03 1345.5	2.03 1346.5	2.03 1347.39	2.37 1347.57	2.44
1350.07	3.39 1358.99	7.13 1359.17	7.2 1360.95	7.95 1361.13	8.03
1367.46	10.68 1369.33	11.47 1540.2	12.25 1640.97	12.28 1760.83	12.32
1796.54	12.3 1880.91	12.32 1897.05	12.29 1940.96	12.31 2031.03	12.26
2077.55	12.27 2192.51	12.37 2211.17	12.42 2271.22	12.66 2301.24	12.85
2311.6	12.85 2331.26	12.78 2420.66	12.69 2430.03	12.68 2597.49	12.18
2742.18	11.86 2820.22	11.8 2982.83	11.87 3012.64	11.85 3042.44	11.92
3210.4	12.17 3221.26	12.15 3236.96	12.1 3251.06	12 3261.46	12.01
3280.86	11.96 3288.17	11.96 3310.66	12 3429.88	12.1 3468.62	12.2
3481.98	12.19 3513.51	12.27 3520.75	12.31 3559.51	12.36 3639.54	12.65
3666.8	12.43 3669.6	12.43 3699.65	13.25 3716.89	13.37 3729.7	13.38
3759.76	13.5 3789.81	13.58 3798.29	13.59 3944.46	13.97 3954.51	14
3980.96	14.13 4017.46	14.23 4053.96	14.29 4255.19	15.19 4312.12	15.48
4435.72	16.08 4486.38	16.37 4554.45	16.64 4643.42	17.07 4679.04	17.29
4679.28	17.29 4756.6	17.33			

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2933.39 .1 1286.67 .05 1369.33 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1286.67 1369.33 369 369 369 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -2933.39 541 12.3 F

2117 4756.6 12.3 F

CROSS SECTION

RIVER: W-15 Main

REACH: South

RS: 11974

INPUT

Description: Interpolated Section

Station Elevation Data num= 192

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2788.99	17.41	-2756.8	16.95	-2735.69	16.77	-2702.13	16.37	-2647.46	15.59
-2629.08	15.31	-2561.52	14.14	-2536.61	13.8	-2525.24	13.63	-2488.95	13.25
-2484.17	13.29	-2452.67	13.54	-2416.7	13.58	-2379.27	13.84	-2368.16	13.95
-2326.82	13.84	-2319.61	13.81	-2264.77	13.43	-2222.52	13.2	-2221.92	13.2
-2155.34	13.2	-2100.49	13.15	-2069.53	13.18	-1979.79	13.23	-1935.96	13.4
-1882.7	13.58	-1821.56	13.58	-1802.34	13.57	-1789.08	13.44	-1766.37	13.22
-1703.18	13.72	-1675.67	13.88	-1617.3	14.08	-1590.38	14.19	-1586.53	14.2
-1550.56	14.14	-1514.59	14.25	-1490.36	14.1	-1472.45	14	-1461.82	13.97
-1449.1	13.97	-1366.57	13.87	-1358.99	13.87	-1327.21	13.7	-1139.24	13.57
-1112.59	13.51	-1001.31	13.09	-924.04	12.82	-846.67	12.58	-720.34	12.38
-692.25	12.42	-681.89	12.43	-653.61	12.13	-644.22	12.04	-614.99	11.87
-592.71	11.74	-535.68	11.06	-398.79	12.16	-364.57	12.02	-261.9	12.03
-252.85	12.01	-226.51	11.91	-176.12	11.75	-125.01	11.58	-56.57	11.67
-20.39	11.8	-6.32	11.78	46.1	11.71	56.83	11.59	80.32	11.31
106.28	11.12	116.92	11.21	199.92	11.95	218.74	11.92	240.18	11.9
241.53	11.89	302.34	11.93	366.37	11.82	449.38	11.48	455.67	11.43
491.2	11.11	533.94	11.5	569.51	11.81	598.78	11.84	612.21	11.92
690.48	12.51	729.61	12.73	849.33	13.47	882.76	13.36	899.44	13.45
921.91	13.4	949.55	12.91	961.07	12.91	999.65	12.22	1003.78	12.21
1049.76	12.05	1078.54	11.78	1099.87	11.72	1117.69	11.48	1193.34	11.18
1267.13	11.55	1359.13	11.65	1360.83	11.64	1411.42	11.41	1516.33	10.95
1517.81	10.53	1528.81	7.39	1528.89	7.36	1529.08	7.31	1531.79	6.53
1532.06	6.46	1533.32	6.1	1534.8	5.67	1536.94	5.06	1545.62	2.52
1549.41	1.47	1549.69	1.39	1551.04	1.02	1552.29	1.02	1566.04	1.02
1567.29	1.02	1581.88	1.02	1583.12	1.02	1583.93	1.39	1584.09	1.47
1586.33	2.52	1594.36	6.44	1594.52	6.51	1596.12	7.3	1596.28	7.38
1601.98	10.16	1603.67	10.98	1766.81	11.95	1863.02	11.96	1977.47	11.98
2011.56	11.97	2092.12	11.99	2107.53	11.97	2149.45	11.98	2235.45	11.96
2279.86	11.96	2389.63	12.09	2407.44	12.15	2464.78	12.39	2493.44	12.55
2503.33	12.57	2522.11	12.53	2607.47	12.48	2616.41	12.47	2776.3	11.99
2914.45	11.64	2988.95	11.59	3144.22	11.72	3172.67	11.72	3201.13	11.78
3361.5	12	3371.86	11.98	3386.85	11.92	3400.32	11.85	3410.25	11.84
3428.77	11.78	3435.75	11.76	3457.23	11.79	3571.05	11.87	3608.04	11.92
3620.8	11.92	3650.9	12.04	3657.81	12.07	3694.82	12.06	3771.24	12.26
3797.27	12.17	3799.93	12.18	3828.63	12.61	3845.09	12.68	3857.32	12.7

ExpandedLocal.rep

3886.01	12.78	3914.71	12.84	3922.81	12.85	4062.37	13.32	4071.96	13.35
4097.22	13.49	4132.07	13.65	4166.92	13.78	4359.05	14.82	4413.41	15.17
4531.42	15.89	4579.79	16.21	4644.78	16.5	4729.73	16.91	4763.74	17.1
4763.96	17.1	4837.79	17.12						

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2788.99 .1 1516.33 .05 1603.67 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1516.33 1603.67 370 370 370 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -2788.99 1140 12.3 F  
 1982 4837.79 12.3 F

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 11604

INPUT

Description: 10' US Amber Street  
 Station Elevation Data num= 91  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -2644.59 17.134-2590.23 16.455-2481.51 14.655-2412.61 13.34-2375.61 12.8  
 -2338.61 12.432-2301.61 12.829-2264.93 12.931-2215.42 13.403-2165.91 13.171  
 -2066.9 12.431-1819.36 12.392-1720.35 12.756 -1638.4 12.726-1601.72 12.306  
 -1509.22 13.164-1418.31 13.745-1381.63 13.788-1344.95 14.036-1291.13 13.793  
 -1186.27 13.639-1153.86 13.403-962.167 13.057-663.804 11.962 -534.97 11.718  
 -495.759 11.786-457.337 11.335-404.815 10.944-346.649 10.122 -207.05 11.419  
 -172.15 11.248 -67.451 11.253 72.147 10.743 141.947 10.866 178.838 11.041  
 246.646 10.931 281.546 10.462 308.025 10.238 403.513 11.234 445.951 11.155  
 507.963 11.221 573.264 11.122 657.917 10.758 700.565 10.308 780.428 11.166  
 810.274 11.2181065.783 13.1741099.877 13.0661116.885 13.1731139.808 13.122  
 1167.987 12.5481179.739 12.551219.089 11.751270.191 11.5571299.532 11.243  
 1321.293 11.1771339.463 10.9021416.608 10.5611491.864 11.041585.687 11.186  
 1639.008 10.947 1746 10.5 1747.510.05319 1763.255.361702 1764.754.914894  
 1781.25 0 1782.75 0 1799.25 0 1800.75 0 1818.25 0  
 1819.75 0 1836.59.636986 1838 10.51993.417 11.6362482.176 11.663  
 2586.743 11.812695.065 12.2952802.789 12.2653086.711 11.4223157.691 11.372  
 3512.593 11.8363583.327 11.5693759.619 11.6573794.878 11.8363830.136 11.759  
 4047.327 12.1174189.415 12.6984462.914 14.4524673.197 16.0564848.433 16.906  
 4918.982 16.904

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2644.59 .1 1746 .05 1838 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1746 1838 50 50 50 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -2644.59 1740 12.3 F  
 18464918.982 12.3 F

BRIDGE

RIVER: W-15 Main  
 REACH: South RS: 11579

INPUT

Description: Amber Street Bridge  
 Distance from Upstream XS = 10  
 Deck/Roadway Width = 30  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 4  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 1116 12.9 1746 12.9 9.4 1850 12.9 9.4  
 2695.06 12.3

Upstream Bridge Cross Section Data

Station Elevation Data num= 91  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -2644.59 17.134-2590.23 16.455-2481.51 14.655-2412.61 13.34-2375.61 12.8  
 -2338.61 12.432-2301.61 12.829-2264.93 12.931-2215.42 13.403-2165.91 13.171  
 -2066.9 12.431-1819.36 12.392-1720.35 12.756 -1638.4 12.726-1601.72 12.306  
 -1509.22 13.164-1418.31 13.745-1381.63 13.788-1344.95 14.036-1291.13 13.793  
 -1186.27 13.639-1153.86 13.403-962.167 13.057-663.804 11.962 -534.97 11.718  
 -495.759 11.786-457.337 11.335-404.815 10.944-346.649 10.122 -207.05 11.419  
 -172.15 11.248 -67.451 11.253 72.147 10.743 141.947 10.866 178.838 11.041  
 246.646 10.931 281.546 10.462 308.025 10.238 403.513 11.234 445.951 11.155  
 507.963 11.221 573.264 11.122 657.917 10.758 700.565 10.308 780.428 11.166  
 810.274 11.2181065.783 13.1741099.877 13.0661116.885 13.1731139.808 13.122  
 1167.987 12.5481179.739 12.551219.089 11.751270.191 11.5571299.532 11.243  
 1321.293 11.1771339.463 10.9021416.608 10.5611491.864 11.041585.687 11.186  
 1639.008 10.947 1746 10.5 1747.510.05319 1763.255.361702 1764.754.914894  
 1781.25 0 1782.75 0 1799.25 0 1800.75 0 1818.25 0

ExpandedLocal.rep

1819.75	0	1836.59.636986	1838	10.51993.417	11.6362482.176	11.663
2586.743	11.812695.065	12.2952802.789	12.2653086.711	11.4223157.691	11.372	
3512.593	11.8363583.327	11.5693759.619	11.6573794.878	11.8363830.136	11.759	
4047.327	12.1174189.415	12.6984462.914	14.4524673.197	16.0564848.433	16.906	
4918.982	16.904					

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2644.59	.1	1746	.05	1838	.1

Bank Sta: Left Right Coeff Contr. Expan.

1746	1838	.1	.3
------	------	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-2644.59	1740	12.3	F
18464918.982		12.3	F

Downstream Deck/Roadway Coordinates

num= 4

Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord
1116	12.9		1746	12.9	9.4	1850	12.9	9.4
2695.06	12.3							

Downstream Bridge Cross Section Data

Station Elevation Data num= 91

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2644.59	17.134-2590.23	16.455-2481.51	14.655-2412.61	13.34-2375.61	12.8				
-2338.61	12.432-2301.61	12.829-2264.93	12.931-2215.42	13.403-2165.91	13.171				
-2066.9	12.431-1819.36	12.392-1720.35	12.756 -1638.4	12.726-1601.72	12.306				
-1509.22	13.164-1418.31	13.745-1381.63	13.788-1344.95	14.036-1291.13	13.793				
-1186.27	13.639-1153.86	13.403-962.167	13.057-663.804	11.962 -534.97	11.718				
-495.759	11.786-457.337	11.335-404.815	10.944-346.649	10.122 -207.05	11.419				
-172.15	11.248 -67.451	11.253 72.147	10.743 141.947	10.866 178.838	11.041				
246.646	10.931 281.546	10.462 308.025	10.238 403.513	11.234 445.951	11.155				
507.963	11.221 573.264	11.122 657.917	10.758 700.565	10.308 780.428	11.166				
810.274	11.2181065.783	13.1741099.877	13.0661116.885	13.1731139.808	13.122				
1167.987	12.5481179.739	12.551219.089	11.751270.191	11.5571299.532	11.243				
1321.293	11.1771339.463	10.9021416.608	10.5611491.864	11.041585.687	11.186				
1639.008	10.947 1746	10.5 1747.510.05319	1763.255.361702	1764.754.914894					
1781.25	0 1782.75	0 1799.25	0 1800.75	0 1818.25	0				
1819.75	0 1836.59.636986	1838	10.51993.417	11.6362482.176	11.663				
2586.743	11.812695.065	12.2952802.789	12.2653086.711	11.4223157.691	11.372				
3512.593	11.8363583.327	11.5693759.619	11.6573794.878	11.8363830.136	11.759				
4047.327	12.1174189.415	12.6984462.914	14.4524673.197	16.0564848.433	16.906				
4918.982	16.904								

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2644.59 .1 1746 .05 1838 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 1746 1838 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -2644.59 1745 12.3 F  
 18414918.982 12.3 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 4

Pier Data  
 Pier Station Upstream= 1764 Downstream= 1764  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.5 0 1.5 9.4  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.5 0 1.5 9.4

Pier Data  
 Pier Station Upstream= 1782 Downstream= 1782  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.5 0 1.5 9.4  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.5 0 1.5 9.4

Pier Data  
 Pier Station Upstream= 1800 Downstream= 1800  
 Upstream num= 2

```

Width  Elev  Width  Elev
*****
1.5    0     1.5    9.4
Downstream  num=      2
Width  Elev  Width  Elev
*****
1.5    0     1.5    9.4

```

Pier Data

Pier Station Upstream= 1819 Downstream= 1819

```

Upstream  num=      2
Width  Elev  Width  Elev
*****
1.5    0     1.5    9.4
Downstream  num=      2
Width  Elev  Width  Elev
*****
1.5    0     1.5    9.4

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

```

Energy
Momentum Cd = 1.2
Selected Low Flow Methods = Highest Energy Answer

```

High Flow Method

Energy Only

Additional Bridge Parameters

- Add Friction component to Momentum
- Do not add Weight component to Momentum
- Class B flow critical depth computations use critical depth inside the bridge at the upstream end
- Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 11554

INPUT

Description: 10' DS Amber Street

```

Station Elevation Data num= 91
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
*****
-2644.59 17.134-2590.23 16.455-2481.51 14.655-2412.61 13.34-2375.61 12.8

```



ExpandedLocal.rep

-2338.61	12.432-2301.61	12.829-2264.93	12.931-2215.42	13.403-2165.91	13.171
-2066.9	12.431-1819.36	12.392-1720.35	12.756 -1638.4	12.726-1601.72	12.306
-1509.22	13.164-1418.31	13.745-1381.63	13.788-1344.95	14.036-1291.13	13.793
-1186.27	13.639-1153.86	13.403-962.167	13.057-663.804	11.962 -534.97	11.718
-495.759	11.786-457.337	11.335-404.815	10.944-346.649	10.122 -207.05	11.419
-172.15	11.248 -67.451	11.253 72.147	10.743 141.947	10.866 178.838	11.041
246.646	10.931 281.546	10.462 308.025	10.238 403.513	11.234 445.951	11.155
507.963	11.221 573.264	11.122 657.917	10.758 700.565	10.308 780.428	11.166
810.274	11.2181065.783	13.1741099.877	13.0661116.885	13.1731139.808	13.122
1167.987	12.5481179.739	12.551219.089	11.751270.191	11.5571299.532	11.243
1321.293	11.1771339.463	10.9021416.608	10.5611491.864	11.041585.687	11.186
1639.008	10.947 1746	10.5 1747.510	0.05319 1763.255	0.361702 1764.754	0.914894
1781.25	0 1782.75	0 1799.25	0 1800.75	0 1818.25	0
1819.75	0 1836.59	0.636986 1838	10.51993.417	11.6362482.176	11.663
2586.743	11.812695.065	12.2952802.789	12.2653086.711	11.4223157.691	11.372
3512.593	11.8363583.327	11.5693759.619	11.6573794.878	11.8363830.136	11.759
4047.327	12.1174189.415	12.6984462.914	14.4524673.197	16.0564848.433	16.906
4918.982	16.904				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2644.59	.1	1746	.05	1838	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1746	1838		114	114	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-2644.59	1745	12.3	F
18414918.982	18414918.982	12.3	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 11440

INPUT

Description: Interpolated Section

Station Elevation Data num= 175

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2819.37	17.1-2783.25	16.63	-2765.8	16.43	-2674.88	15.15	-2658.66	14.9	
-2601.13	13.93-2590.76	13.55	-2576.17	13.05	-2560.56	12.79	-2554.3	12.79	
-2523.12	12.88-2517.84	12.83	-2481.38	12.99	-2479.45	12.99	-2445.23	13.09	
-2398.32	13.43-2396.44	13.44	-2347.65	13.2	-2250.08	12.52	-2154.95	12.32	
-2045.53	12.24-2006.15	12.17	-1908.58	12.25	-1871.03	12.18	-1827.82	12.2	
-1791.67	11.95 -1789.9	11.96	-1761.87	12.33	-1710.93	12.84	-1700.52	12.9	

ExpandedLocal.rep

-1669.54	12.99	-1635.34	13.18	-1612.84	13.39	-1610.93	13.4	-1574.78	13.39
-1538.64	13.52	-1485.6	13.3	-1453.54	13.24	-1408.55	13	-1386.07	13.08
-1382.27	13.06	-1370.76	12.96	-1350.33	12.92	-1329.36	12.97	-1295.16	12.73
-1161.43	12.8	-1159.28	12.8	-1102.59	12.67	-954.42	12.09	-867.4	11.81
-740.44	11.56	-701.8	11.58	-686.83	11.45	-663.94	11.34	-654.48	11.33
-612.18	10.96	-598.65	10.78	-554.86	10.29	-533.93	10.38	-419.25	10.74
-417.3	10.76	-382.9	10.73	-315.88	10.89	-279.73	11.07	-270.07	11.09
-142.16	10.8	-84.72	10.88	-73.38	10.88	-37.02	10.95	29.8	10.79
63.56	10.45	64.19	10.44	90.28	10.1	95.28	10.1	109.81	10.18
184.38	10.92	226.2	10.99	249.05	11.07	287.31	11.11	351.66	11.05
360.38	11.03	397.48	10.72	434.59	10.52	435.08	10.52	477.11	10.25
555.81	10.88	585.22	10.94	657.23	11.36	837.01	12.29	870.61	12.21
887.37	12.28	909.96	12.25	937.73	11.87	949.31	11.87	988.09	11.33
1031.97	11.22	1038.45	11.21	1067.36	11.02	1088.81	11	1106.71	10.83
1178.02	10.68	1182.73	10.68	1215.32	10.9	1256.9	11.02	1289.93	11
1349.35	11.09	1401.85	10.95	1401.9	10.95	1437.76	11.06	1476.42	10.6
1507.33	10.38	1509.35	10.01	1519.87	8.08	1525.81	6.19	1530.58	5.22
1532.4	4.85	1532.6	4.82	1539	3.85	1544.28	2.72	1549.56	1.29
1554.83	.49	1555.83	.49	1566.83	.49	1567.83	.49	1579.5	.49
1580.5	.49	1584.16	1.7	1585.73	2.68	1588.35	3.6	1590.45	4.23
1593.06	4.92	1598.3	6.85	1606.15	8.8	1611.25	10	1614	10.65
1637.39	10.87	1758.33	11.47	1764.3	11.47	1892.22	11.55	2212.23	11.95
2309.34	12.17	2325.6	12.24	2409.93	12.56	2455.62	12.58	2509.98	12.56
2632.58	12.27	2773.65	11.92	2839.56	11.86	2939.14	11.91	2955.02	11.85
3000.96	12	3046.9	11.92	3092.84	11.97	3138.79	12.14	3169.15	12.14
3234.84	11.9	3272.55	11.88	3318.94	12.06	3398.56	11.97	3431.3	12.04
3439.46	12.01	3461.19	12.05	3464.05	12.05	3564.64	12.13	3648.1	12.34
3665.75	12.36	3797.7	12.73	3812.56	12.8	4040.06	14.24	4051.69	14.32
4246.98	15.86	4351.84	16.47	4409.71	16.94	4440.92	17.08	4475.23	17.1

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
*****								
-2819.37	.1	1507.33	.05	1614	.1			

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1507.33	1614		114	114	114		.1	.3
Ineffective Flow			num=	2					
Sta L	Sta R	Elev	Permanent						
-2819.37	1449	12.3	F						
1674	4475.23	12.3	F						

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 11326

ExpandedLocal.rep

INPUT

Description: Interpolated Section

Station Elevation Data

num= 175

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2994.14	17.06	-2958.56	16.58	-2941.37	16.4	-2851.79	15.37	-2835.81	15.15
-2779.13	14.32	-2768.91	13.76	-2754.54	12.98	-2739.16	12.68	-2732.99	12.77
-2702.27	13.27	-2697.07	13.22	-2661.15	13.15	-2659.24	13.14	-2625.53	13.24
-2579.32	13.48	-2577.46	13.48	-2529.39	13.22	-2433.27	12.6	-2339.54	12.23
-2231.74	12.09	-2192.93	11.96	-2096.8	11.75	-2059.81	11.62	-2017.24	11.68
-1981.62	11.59	-1979.88	11.6	-1952.26	12.06	-1902.08	12.62	-1891.82	12.63
-1861.29	12.61	-1827.6	12.77	-1805.44	13.05	-1803.55	13.05	-1767.94	12.99
-1732.33	13	-1680.07	12.81	-1648.48	12.73	-1604.16	12.33	-1582.01	12.51
-1578.27	12.48	-1566.92	12.36	-1546.8	12.45	-1526.14	12.57	-1492.45	12.15
-1360.68	12.54	-1358.57	12.55	-1302.71	12.5	-1156.73	11.89	-1071	11.66
-945.92	11.4	-907.85	11.37	-893.09	11.28	-870.55	11.35	-861.23	11.39
-819.55	10.97	-806.22	10.81	-763.08	10.45	-742.45	10.45	-629.47	10.08
-627.54	10.09	-593.66	10.21	-527.63	10.53	-492.01	10.88	-482.49	10.96
-356.47	10.85	-299.88	10.91	-288.7	10.89	-252.89	10.86	-187.05	10.66
-153.79	10.42	-153.17	10.41	-127.46	9.97	-122.53	9.92	-108.22	9.92
-34.75	10.61	6.45	10.82	28.97	10.96	66.66	10.99	130.06	10.98
138.65	10.97	175.21	10.51	211.76	10.28	212.25	10.28	253.66	10.19
331.2	10.6	360.17	10.66	431.12	10.95	608.25	11.4	641.35	11.36
657.86	11.4	680.12	11.38	707.48	11.18	718.89	11.18	757.09	10.91
800.33	10.85	806.71	10.86	835.19	10.8	856.32	10.82	873.96	10.76
944.21	10.78	948.86	10.79	980.97	11.03	1021.93	10.99	1054.48	10.91
1113.02	10.99	1164.74	10.96	1164.79	10.96	1200.12	11.32	1238.21	10.56
1268.67	10.26	1271.21	9.96	1284.43	8.43	1291.9	5.97	1297.91	5.08
1300.2	4.75	1300.45	4.73	1308.5	4.19	1315.14	3.1	1321.78	1.42
1328.42	.97	1328.92	.97	1334.42	.97	1334.92	.97	1340.75	.97
1341.25	.97	1346.58	2.25	1348.87	3.72	1352.68	4.74	1355.72	5.34
1359.53	5.9	1367.15	8.13	1378.57	9.56	1385.99	10.37	1390	10.8
1411.6	11.06	1523.25	11.3	1528.75	11.3	1646.86	11.45	1942.28	12.24
2031.93	12.53	2046.95	12.59	2124.8	12.83	2166.98	12.88	2217.16	12.85
2330.35	12.67	2460.58	12.41	2521.44	12.34	2613.36	12.32	2628.03	12.17
2670.44	12.4	2712.85	12.17	2755.26	12.21	2797.68	12.49	2825.71	12.45
2886.36	12.24	2921.17	12.17	2964	12.51	3037.5	12.28	3067.73	12.24
3075.26	12.21	3095.32	12.34	3097.96	12.33	3190.83	12.33	3267.87	12.59
3284.17	12.6	3405.99	12.77	3419.7	12.8	3629.73	14.1	3640.47	14.19
3820.76	15.65	3917.56	16.34	3970.99	16.97	3999.8	17.26	4031.48	17.3

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2994.14	.1	1268.67	.05	1390	.1

Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	1268.67	1390	114	114	114	.1	.3	

ExpandedLocal.rep

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 11212

INPUT

Description: 10' US Gause Blvd Bridge

Station Elevation Data num= 89

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3168.92	17.025	-3133.87	16.527	-3028.7	15.59	-2957.13	14.716	-2932.91	12.906
-2917.76	12.578	-2881.42	13.657	-2839.04	13.3	-2760.31	13.535	-2524.13	12.138
-2417.94	11.935	-2248.59	11.064	-2169.86	11.236	-2142.65	11.802	-2093.22	12.402
-2053.05	12.231	-2019.86	12.358	-1998.03	12.71	-1843.43	12.229	-1799.77	11.649
-1777.95	11.941	-1763.09	11.769	-1722.92	12.169	-1689.73	11.581	-1557.86	12.298
-1502.84	12.328	-1359.05	11.699	-1099.36	11.123	-1067.97	11.453	-1013.79	10.838
-950.977	10.516	-839.683	9.418	-739.372	10.174	-694.907	10.837	-515.033	10.94
-371.134	10.398	-340.348	9.731	-326.251	9.659	-191.118	10.853	-83.085	10.913
-47.073	10.305	-11.062	10.042	205.006	10.54	568.679	10.488	710.409	10.877
746.613	11.153	819.022	10.818	927.634	10.963	962.48	11.588	1000	10.53
1030	10.14	1049	8.78	1058	5.74	1068	4.64	1078	4.54
1086	3.49	1094	1.55	1102	1.46	1109	2.8	1112	4.76
1117	5.88	1121	6.45	1126	6.88	1136	9.4	1151	10.32
1166	10.95	1185.8	11.253	1293.209	11.131	1401.488	11.359	1768.296	12.945
1878.338	13.186	2028.12	13.064	2287.588	12.718	2301.031	12.484	2339.916	12.801
2378.8	12.422	2417.685	12.444	2456.569	12.844	2569.791	12.462	2609.054	12.959
2711.061	12.408	2729.451	12.622	2817.014	12.519	2887.65	12.847	3026.847	12.802
3219.401	13.969	3483.289	16.207	3558.686	17.439	3587.729	17.502		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3168.92	.1	1030	.05	1166	.1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1030	1166		100	100	100		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-3168.92	1039	10.14	F
11463587.729		10.14	F

BRIDGE

RIVER: W-15 Main  
 REACH: South RS: 11162

ExpandedLocal.rep

INPUT

Description: Gause Blvd Bridge  
 Distance from Upstream XS = 10  
 Deck/Roadway Width = 80  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 6

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
1000	10.53				1030	10.14				1049	12.3	11.3		
1136	12.3	11.3			1151	10.32				1166	10.95			

Upstream Bridge Cross Section Data

Station Elevation Data num= 89

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3168.92	17.025	-3133.87	16.527	-3028.7	15.59	-2957.13	14.716	-2932.91	12.906
-2917.76	12.578	-2881.42	13.657	-2839.04	13.3	-2760.31	13.535	-2524.13	12.138
-2417.94	11.935	-2248.59	11.064	-2169.86	11.236	-2142.65	11.802	-2093.22	12.402
-2053.05	12.231	-2019.86	12.358	-1998.03	12.71	-1843.43	12.229	-1799.77	11.649
-1777.95	11.941	-1763.09	11.769	-1722.92	12.169	-1689.73	11.581	-1557.86	12.298
-1502.84	12.328	-1359.05	11.699	-1099.36	11.123	-1067.97	11.453	-1013.79	10.838
-950.977	10.516	-839.683	9.418	-739.372	10.174	-694.907	10.837	-515.033	10.94
-371.134	10.398	-340.348	9.731	-326.251	9.659	-191.118	10.853	-83.085	10.913
-47.073	10.305	-11.062	10.042	205.006	10.54	568.679	10.488	710.409	10.877
746.613	11.153	819.022	10.818	927.634	10.963	962.48	11.588	1000	10.53
1030	10.14	1049	8.78	1058	5.74	1068	4.64	1078	4.54
1086	3.49	1094	1.55	1102	1.46	1109	2.8	1112	4.76
1117	5.88	1121	6.45	1126	6.88	1136	9.4	1151	10.32
1166	10.95	1185.8	11.253	1293.209	11.131	1401.488	11.359	1768.296	12.945
1878.338	13.186	2028.12	13.064	2287.588	12.718	2301.031	12.484	2339.916	12.801
2378.8	12.422	2417.685	12.444	2456.569	12.844	2569.791	12.462	2609.054	12.959
2711.061	12.408	2729.451	12.622	2817.014	12.519	2887.65	12.847	3026.847	12.802
3219.401	13.969	3483.289	16.207	3558.686	17.439	3587.729	17.502		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3168.92	.1	1030	.05	1166	.1

Bank Sta: Left Right Coeff Contr. Expan.  
 1030 1166 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-3168.92	1039	10.14	F
11463587.729	10.14		F

ExpandedLocal.rep

Downstream Deck/Roadway Coordinates

num= 6

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
1000	11.23				1024	11.21				1047	12.3			11.3
1117	12.3		11.3		1128	10.69				1146	11.14			

Downstream Bridge Cross Section Data

Station Elevation Data num= 85

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3168.92	17.025	-3133.87	16.527	-3028.7	15.59	-2957.13	14.716	-2932.91	12.906
-2917.76	12.578	-2881.42	13.657	-2839.04	13.3	-2760.31	13.535	-2524.13	12.138
-2417.94	11.935	-2248.59	11.064	-2169.86	11.236	-2142.65	11.802	-2093.22	12.402
-2053.05	12.231	-2019.86	12.358	-1998.03	12.71	-1843.43	12.229	-1799.77	11.649
-1777.95	11.941	-1763.09	11.769	-1722.92	12.169	-1689.73	11.581	-1557.86	12.298
-1502.84	12.328	-1359.05	11.699	-1099.36	11.123	-1067.97	11.453	-1013.79	10.838
-950.977	10.516	-839.683	9.418	-739.372	10.174	-694.907	10.837	-515.033	10.94
-371.134	10.398	-340.348	9.731	-326.251	9.659	-191.118	10.853	-83.085	10.913
-47.073	10.305	-11.062	10.042	205.006	10.54	568.679	10.488	710.409	10.877
746.613	11.153	819.022	10.818	927.634	10.963	962.48	11.588	1000	11.23
1024	11.21	1047	8.42	1057	6.92	1067	3.17	1075	.37
1086	-1.12	1096	1.02	1108	5.64	1117	7.8	1128	10.69
1146	11.141	1149.997	11.661	1185.8	11.253	1293.209	11.131	1401.488	11.359
1768.296	12.945	1878.338	13.186	2028.12	13.064	2287.588	12.718	2301.031	12.484
2339.916	12.801	2378.8	12.422	2417.685	12.444	2456.569	12.844	2569.791	12.46
2609.054	12.959	2711.061	12.408	2729.451	12.622	2817.014	12.519	2887.65	12.847
3026.847	12.802	3219.401	13.969	3483.289	16.207	3558.686	17.439	3587.729	17.502

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3168.92	.1	1024	.05	1128	.1

Bank Sta: Left Right Coeff Contr. Expan.

1024 1128 .1 .3

Ineffective Flow

num= 2

Sta L	Sta R	Elev	Permanent
-3168.92	1039	11.21	F
11223587.729	11.21	F	

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

ExpandedLocal.rep

Number of Piers = 3

Pier Data

Pier Station      Upstream=    1070      Downstream=    1070  
Upstream      num=        2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1.3      -4      1.3     11.3  
Downstream      num=        2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1.3      -4      1.3     11.3

Pier Data

Pier Station      Upstream=    1090      Downstream=    1090  
Upstream      num=        2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1.3      -4      1.3     11.3  
Downstream      num=        2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1.3      -4      1.3     11.3

Pier Data

Pier Station      Upstream=    1110      Downstream=    1110  
Upstream      num=        2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1.3      -4      1.3     11.3  
Downstream      num=        2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1.3      -4      1.3     11.3

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

    Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

    Energy Only

Additional Bridge Parameters

    Add Friction component to Momentum

    Do not add Weight component to Momentum

ExpandedLocal.rep

Class B flow critical depth computations use critical depth  
inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main

REACH: South

RS: 11112

INPUT

Description: 10' DS Gause Blvd. Bridge

Station Elevation Data num= 85

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-3168.92	17.025	3133.87	16.527	-3028.7	15.59	2957.13	14.716	2932.91	12.906
-2917.76	12.578	2881.42	13.657	2839.04	13.3	2760.31	13.535	2524.13	12.138
-2417.94	11.935	2248.59	11.064	2169.86	11.236	2142.65	11.802	2093.22	12.402
-2053.05	12.231	2019.86	12.358	1998.03	12.71	1843.43	12.229	1799.77	11.649
-1777.95	11.941	1763.09	11.769	1722.92	12.169	1689.73	11.581	1557.86	12.298
-1502.84	12.328	1359.05	11.699	1099.36	11.123	1067.97	11.453	1013.79	10.838
-950.977	10.516	839.683	9.418	739.372	10.174	694.907	10.837	515.033	10.94
-371.134	10.398	340.348	9.731	326.251	9.659	191.118	10.853	-83.085	10.913
-47.073	10.305	-11.062	10.042	205.006	10.54	568.679	10.488	710.409	10.877
746.613	11.153	819.022	10.818	927.634	10.963	962.48	11.588	1000	11.23
1024	11.21	1047	8.42	1057	6.92	1067	3.17	1075	.37
1086	-1.12	1096	1.02	1108	5.64	1117	7.8	1128	10.69
1146	11.141	1149.997	11.661	1185.8	11.253	1293.209	11.131	11401.488	11.359
1768.296	12.945	1878.338	13.186	2028.12	13.064	2287.588	12.718	2301.031	12.484
2339.916	12.801	2378.8	12.422	2417.685	12.444	2456.569	12.844	2569.791	12.46
2609.054	12.959	2711.061	12.408	2729.451	12.622	2817.014	12.519	2887.65	12.847
3026.847	12.802	3219.401	13.969	3483.289	16.207	3558.686	17.439	3587.729	17.502

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-3168.92	.1	1024	.05	1128	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	1024	1128		474	474	.1	.3

Ineffective Flow

num= 2

Sta L	Sta R	Elev	Permanent
-3168.92	1039	11.21	F
11223587.729	1121	11.21	F

CROSS SECTION



ExpandedLocal.rep

RIVER: W-15 Main

REACH: South

RS: 10638

INPUT

Description: Interpolated Section

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2991	16.58-2984.16	16.49-2957.44	16.12-2956.07	16.11-2899.74	15.62				
-2861.85	15.29-2856.77	15.25-2815.33	14.76-2788.25	14.44-2765.07	12.76				
-2750.56	12.46-2746.18	12.58-2730.91	13.02-2720.64	13.32-2715.78	13.46				
-2675.21	13.13 -2646.5	13.22-2599.84	13.35-2579.44	13.24-2562.08	13.14				
-2536.29	12.99-2477.67	12.65-2438.23	12.43-2393.25	12.17-2373.74	12.06				
-2326.4	11.97-2308.84	11.93-2297.02	11.91-2272.09	11.86-2224.42	11.62				
-2155.82	11.28-2140.01	11.2-2116.51	11.08-2109.97	11.05-2055.59	11.16				
-2034.6	11.2-2014.61	11.6-2008.56	11.73-1971.18	12.16-1961.24	12.28				
-1922.78	12.12-1906.62	12.17-1891.01	12.23-1886.76	12.3 -1873.4	12.5				
-1870.11	12.55-1802.35	12.33 -1737.1	12.14-1732.35	12.12-1722.11	12.09				
-1717.72	12.04-1693.46	11.72-1680.32	11.55-1659.43	11.82-1645.21	11.65				
-1632.37	11.78-1606.75	12.02-1595.54	11.82-1574.98	11.47-1547.02	11.61				
-1466.53	12.03-1461.67	12.06-1458.74	12.07-1448.74	12.13-1396.07	12.16				
-1376.32	12.07-1321.94	11.84-1290.97	11.71-1258.42	11.57-1239.61	11.53				
-1205.62	11.46-1185.13	11.42-1120.27	11.28-1048.33	11.14-1034.92	11.11				
-1012.69	11.06-1009.82	11.06 -979.77	11.36 -927.91	10.79 -911.53	10.7				
-867.78	10.49 -864.23	10.45 -785.77	9.7 -778.88	9.64 -774.72	9.6				
-761.23	9.47 -693.53	9.95 -665.21	10.16 -637.92	10.56 -622.64	10.79				
-608.18	10.8 -558.84	10.84 -522.83	10.87 -501.12	10.88 -450.45	10.93				
-437.48	10.89 -364.31	10.63 -352.13	10.59 -331.92	10.51 -312.7	10.44				
-283.22	9.82 -269.73	9.76 -266.78	9.78 -227.51	10.12 -183.16	10.5				
-181.47	10.51 -140.37	10.86 -118.77	10.87 -98.14	10.88 -81.55	10.88				
-36.95	10.9 -14.81	10.53 -2.47	10.33 32	10.08 68.18	10.15				
68.52	10.15 68.8	10.15 151.85	10.31 219.15	10.45 235.18	10.48				
238.84	10.49 255.12	10.48 318.51	10.46 369.5	10.46 401.85	10.45				
442.06	10.42 485.18	10.38 519.85	10.37 568.51	10.34 586.98	10.33				
629	10.42 651.84	10.47 670.2	10.52 722.66	10.63 735.17	10.72				
757.32	10.87 815.94	10.58 818.5	10.57 820.56	10.56 826.63	10.53				
839.5	10.54 930.61	10.59 963.96	11.15 970.91	11.08 999.88	10.78				
1003.81	10.77 1022.86	10.76 1025.81	10.33 1044.74	7.75 1052.36	6.5				
1054.26	6.22 1063.78	2.73 1071.39	.12 1073.01	-.1 1081.86	-1.27				
1091.65	1.03 1095.57	2.59 1103.41	5.5 1106.54	6.23 1109.29	6.92				
1112.22	7.6 1123	10.32 1139.85	10.74 1143.59	11.22 1177.11	10.86				
1277.67	10.77 1379.04	11.02 1474.93	11.46 1649.83	12.28 1678.21	12.41				
1717.58	12.59 1722.46	12.62 1825.48	12.88 1965.71	12.82 1986.59	12.8				
2180.47	12.56 2208.63	12.52 2221.21	12.3 2257.62	12.6 2294.02	12.25				
2294.95	12.25 2330.42	12.27 2366.83	12.64 2453.78	12.35 2472.83	12.29				
2509.59	12.75 2603.33	12.25 2605.09	12.25 2622.3	12.44 2704.28	12.35				
2711.11	12.39 2770.41	12.66 2900.73	12.62 2911.69	12.69 3081	13.71				
3190	14.62 3241.75	15.06 3328.06	15.78 3375.36	16.55 3398.65	16.93				

ExpandedLocal.rep

3425.84 16.98

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2991 .1 1022.86 .05 1123 .1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1022.86	1123		474	474	474		.1	.3
Ineffective Flow		num=	2						
	Sta L	Sta R	Elev	Permanent					
	-2991	802	11.21	F					
	1359	3425.84	11.21	F					

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 10164

INPUT

Description: Interpolated Section

Station Elevation Data	num=	201							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-2813.07	16.13-2806.54	16.05-2781.02	15.71	-2779.7	15.7-2725.89	15.25			
-2689.69	14.94-2684.83	14.9-2645.24	14.45	-2619.37	14.16-2597.22	12.61			
-2583.37	12.33-2579.18	12.45-2564.59	12.86	-2554.78	13.13-2550.13	13.26			
-2511.37	12.96-2483.94	13.04-2439.36	13.17	-2419.87	13.06 -2403.3	12.97			
-2378.65	12.84-2322.65	12.53-2284.97	12.32	-2242	12.08-2223.36	11.98			
-2178.13	11.89-2161.35	11.86-2150.06	11.84	-2126.24	11.79 -2080.7	11.57			
-2015.15	11.25-2000.05	11.17 -1977.6	11.06	-1971.35	11.03 -1919.4	11.13			
-1899.35	11.17-1880.24	11.54-1874.46	11.65	-1838.75	12.05-1829.25	12.15			
-1792.51	12-1777.08	12.05-1762.16	12.1	-1758.1	12.16-1745.34	12.35			
-1742.19	12.4-1677.45	12.18-1615.12		12-1610.58	11.99 -1600.8	11.96			
-1596.6	11.91-1573.42	11.61-1560.87	11.45	-1540.91	11.69-1527.32	11.54			
-1515.06	11.65-1490.58	11.86-1479.88	11.68	-1460.23	11.35-1433.52	11.48			
-1356.62	11.87-1351.98	11.89-1349.18	11.91	-1339.62	11.96 -1289.3	11.98			
-1270.43	11.91-1218.48	11.69-1188.89	11.57	-1157.79	11.45-1139.82	11.41			
-1107.35	11.35-1087.77	11.31-1025.81	11.19	-957.08	11.06 -944.27	11.03			
-923.02	10.99 -920.28	10.99 -891.57	11.27	-842.02	10.74 -826.37	10.66			
-784.57	10.45 -781.18	10.42 -706.22	9.73	-699.64	9.67 -695.67	9.64			
-682.79	9.51 -618.1	9.95 -591.04	10.15	-564.97	10.52 -550.38	10.74			
-536.56	10.75 -489.42	10.81 -455.01	10.84	-434.27	10.86 -385.86	10.92			
-373.47	10.89 -303.57	10.66 -291.93	10.62	-272.62	10.55 -254.26	10.49			
-226.1	9.92 -213.21	9.85 -210.39	9.88	-172.87	10.19 -130.5	10.53			
-128.89	10.55 -89.62	10.87 -68.98	10.87	-49.27	10.88 -33.42	10.88			
9.19	10.89 30.34	10.54 42.13	10.35	75.06	10.11 109.62	10.17			

ExpandedLocal.rep

109.95	10.17	110.22	10.17	189.57	10.29	253.86	10.4	269.18	10.43
272.67	10.44	288.23	10.43	348.79	10.38	397.51	10.4	428.41	10.39
466.83	10.34	508.02	10.26	541.15	10.24	587.63	10.19	605.28	10.17
645.43	10.23	667.25	10.27	684.79	10.31	734.91	10.38	746.86	10.46
768.02	10.59	824.03	10.29	826.47	10.28	828.44	10.27	834.24	10.24
846.53	10.23	933.58	10.22	965.45	10.71	972.08	10.64	999.76	10.33
1003.52	10.32	1021.71	10.32	1024.51	9.83	1042.49	7.08	1049.71	5.78
1051.52	5.52	1060.55	2.28	1067.78	-.13	1069.31	-.33	1077.71	-1.43
1087.31	1.05	1091.14	2.63	1098.82	5.36	1101.89	6.06	1104.57	6.76
1107.45	7.4	1118	9.94	1133.7	10.34	1137.19	10.79	1168.43	10.46
1262.13	10.42	1356.6	10.68	1445.95	11.12	1608.94	11.94	1635.39	12.08
1672.08	12.27	1676.62	12.29	1772.62	12.58	1903.29	12.58	1922.75	12.57
2103.43	12.36	2129.66	12.33	2141.39	12.13	2175.32	12.4	2209.24	12.07
2210.11	12.07	2243.16	12.09	2277.09	12.44	2358.12	12.17	2375.87	12.12
2410.12	12.55	2497.47	12.09	2499.11	12.08	2515.16	12.27	2591.55	12.19
2597.92	12.22	2653.18	12.48	2774.62	12.44	2784.83	12.5	2942.61	13.44
3044.17	14.29	3092.4	14.69	3172.83	15.36	3216.91	16.07	3238.61	16.41
3263.95	16.47								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2813.07	.1	1021.71	.05	1118	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1021.71	1118		474	474		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
-2813.07	565	11.21	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 9690

INPUT

Description: Interpolated Section

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2635.15	15.69	-2628.92	15.61	-2604.59	15.3	-2603.34	15.29	-2552.04	14.88
-2517.53	14.6	-2512.9	14.56	-2475.16	14.15	-2450.5	13.88	-2429.38	12.46
-2416.17	12.21	-2412.18	12.32	-2398.27	12.69	-2388.92	12.94	-2384.49	13.06
-2347.54	12.79	-2321.39	12.87	-2278.89	12.99	-2260.31	12.89	-2244.51	12.81
-2221.02	12.69	-2167.62	12.4	-2131.7	12.21	-2090.74	11.99	-2072.97	11.89
-2029.85	11.82	-2013.86	11.79	-2003.1	11.77	-1980.39	11.72	-1936.98	11.51
-1874.49	11.21	-1860.09	11.14	-1838.69	11.04	-1832.73	11.01	-1783.21	11.1

ExpandedLocal.rep

-1764.09	11.13-1745.88	11.47-1740.37	11.57-1706.32	11.94-1697.27	12.03
-1662.25	11.88-1647.53	11.93-1633.31	11.97-1629.44	12.03-1617.27	12.2
-1614.28	12.24-1552.56	12.02-1493.13	11.86 -1488.8	11.85-1479.48	11.83
-1475.48	11.78-1453.38	11.5-1441.42	11.35-1422.39	11.57-1409.44	11.42
-1397.75	11.52-1374.41	11.71-1364.21	11.54-1345.48	11.23-1320.01	11.35
-1246.71	11.71-1242.28	11.73-1239.61	11.74 -1230.5	11.79-1182.53	11.81
-1164.54	11.74-1115.01	11.55-1086.81	11.44-1057.16	11.32-1040.03	11.29
-1009.08	11.23 -990.41	11.2 -931.34	11.09 -865.82	10.99 -853.61	10.96
-833.35	10.93 -830.74	10.92 -803.38	11.17 -756.14	10.69 -741.22	10.61
-701.37	10.42 -698.14	10.4 -626.68	9.76 -620.4	9.71 -616.62	9.68
-604.34	9.56 -542.67	9.95 -516.88	10.14 -492.02	10.49 -478.11	10.69
-464.94	10.71 -420	10.78 -387.2	10.81 -367.43	10.84 -321.28	10.91
-309.47	10.89 -242.83	10.69 -231.73	10.66 -213.32	10.59 -195.82	10.53
-168.98	10.01 -156.69	9.95 -154	9.97 -118.23	10.26 -77.84	10.57
-76.3	10.58 -38.87	10.87 -19.19	10.88 -.41	10.89 14.7	10.87
55.33	10.87 75.49	10.56 86.72	10.38 118.12	10.14 151.07	10.19
151.39	10.19 151.64	10.19 227.28	10.28 288.57	10.36 303.18	10.38
306.51	10.38 321.33	10.37 379.07	10.31 425.51	10.34 454.97	10.32
491.6	10.25 530.87	10.14 562.45	10.11 606.76	10.03 623.59	10.01
661.86	10.04 682.66	10.07 699.38	10.1 747.16	10.14 758.55	10.2
778.72	10.31 832.12	10 834.45	9.99 836.32	9.98 841.86	9.94
853.57	9.93 936.55	9.85 966.93	10.27 973.26	10.21 999.65	9.88
1003.23	9.87 1020.57	9.87 1023.22	9.34 1040.23	6.41 1047.07	5.06
1048.78	4.81 1057.33	1.84 1064.17	-.38 1065.62	-.57 1073.57	-1.58
1082.96	1.06 1086.71	2.66 1094.22	5.22 1097.23	5.88 1099.86	6.61
1102.67	7.2 1113	9.57 1127.56	9.94 1130.79	10.35 1159.74	10.06
1246.6	10.06 1334.16	10.34 1416.97	10.78 1568.04	11.61 1592.56	11.76
1626.57	11.94 1630.77	11.96 1719.76	12.27 1840.88	12.34 1858.92	12.34
2026.38	12.16 2050.7	12.13 2061.57	11.95 2093.02	12.2 2124.46	11.9
2125.27	11.9 2155.9	11.92 2187.35	12.23 2262.45	11.99 2278.9	11.94
2310.65	12.34 2391.62	11.93 2393.14	11.92 2408.01	12.09 2478.82	12.03
2484.72	12.05 2535.94	12.29 2648.5	12.26 2657.97	12.32 2804.21	13.18
2898.35	13.95 2943.06	14.32 3017.6	14.93 3058.46	15.58 3078.57	15.9
3102.06	15.95				

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2635.15 .1 1020.57 .05 1113 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1020.57 1113 473 473 473 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 -2635.15 328 11.21 F

CROSS SECTION

ExpandedLocal.rep

RIVER: W-15 Main  
REACH: South

RS: 9217

INPUT

Description: Interpolated Section

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2457.23	15.24	-2451.3	15.17	-2428.17	14.89	-2426.97	14.88	-2378.19	14.5
-2345.37	14.25	-2340.96	14.22	-2305.07	13.85	-2281.62	13.61	-2261.54	12.32
-2248.97	12.09	-2245.18	12.18	-2231.95	12.52	-2223.06	12.76	-2218.84	12.86
-2183.7	12.62	-2158.84	12.69	-2118.42	12.81	-2100.75	12.72	-2085.72	12.65
-2063.38	12.54	-2012.6	12.28	-1978.44	12.1	-1939.48	11.9	-1922.59	11.81
-1881.58	11.74	-1866.37	11.71	-1856.13	11.69	-1834.54	11.65	-1793.25	11.46
-1733.83	11.18	-1720.13	11.12	-1699.78	11.02	-1694.12	11	-1647.01	11.07
-1628.83	11.1	-1611.52	11.4	-1606.27	11.5	-1573.9	11.82	-1565.29	11.91
-1531.98	11.77	-1517.98	11.81	-1504.46	11.85	-1500.78	11.9	-1489.21	12.05
-1486.36	12.09	-1427.66	11.87	-1371.15	11.72	-1367.03	11.71	-1358.17	11.69
-1354.36	11.65	-1333.35	11.39	-1321.97	11.25	-1303.87	11.44	-1291.55	11.31
-1280.44	11.4	-1258.24	11.56	-1248.54	11.4	-1230.72	11.12	-1206.51	11.22
-1136.79	11.54	-1132.58	11.56	-1130.04	11.58	-1121.38	11.62	-1075.76	11.64
-1058.66	11.58	-1011.55	11.4	-984.73	11.3	-956.53	11.2	-940.24	11.17
-910.8	11.11	-893.05	11.09	-836.88	10.99	-774.56	10.91	-762.95	10.89
-743.69	10.86	-741.2	10.85	-715.18	11.08	-670.25	10.63	-656.07	10.57
-618.17	10.39	-615.1	10.37	-547.14	9.79	-541.17	9.75	-537.57	9.72
-525.89	9.61	-467.24	9.94	-442.71	10.12	-419.08	10.45	-405.84	10.64
-393.31	10.66	-350.58	10.74	-319.39	10.79	-300.58	10.81	-256.7	10.9
-245.46	10.89	-182.09	10.72	-171.53	10.69	-154.03	10.63	-137.38	10.58
-111.85	10.1	-100.16	10.05	-97.61	10.07	-63.59	10.33	-25.18	10.61
-23.72	10.62	11.89	10.88	30.6	10.88	48.46	10.89	62.83	10.87
101.46	10.86	120.64	10.57	131.32	10.4	161.18	10.18	192.52	10.2
192.82	10.2	193.06	10.2	265	10.26	323.29	10.31	337.17	10.33
340.34	10.33	354.44	10.32	409.35	10.24	453.51	10.28	481.53	10.26
516.36	10.17	553.71	10.02	583.75	9.98	625.89	9.88	641.89	9.84
678.29	9.86	698.06	9.87	713.97	9.89	759.41	9.89	770.24	9.94
789.43	10.02	840.21	9.71	842.42	9.7	844.2	9.69	849.47	9.65
860.61	9.63	939.52	9.48	968.42	9.84	974.43	9.77	999.53	9.44
1002.93	9.42	1019.43	9.42	1021.93	8.84	1037.98	5.74	1044.43	4.33
1046.04	4.11	1054.11	1.4	1060.56	-.63	1061.93	-.8	1069.43	-1.74
1078.61	1.08	1082.29	2.69	1089.63	5.08	1092.57	5.71	1095.14	6.45
1097.9	7	1108	9.2	1121.41	9.54	1124.38	9.92	1151.05	9.67
1231.06	9.71	1311.71	10	1388	10.44	1527.15	11.27	1549.73	11.43
1581.06	11.61	1584.93	11.64	1666.9	11.97	1778.47	12.1	1795.08	12.11
1949.34	11.96	1971.74	11.94	1981.75	11.77	2010.71	11.99	2039.68	11.72
2040.42	11.72	2068.64	11.74	2097.61	12.03	2166.79	11.82	2181.94	11.77
2211.19	12.13	2285.77	11.77	2287.17	11.76	2300.87	11.91	2366.09	11.86
2371.52	11.89	2418.7	12.1	2522.39	12.08	2531.11	12.13	2665.81	12.92

ExpandedLocal.rep

2752.53 13.62 2793.71 13.95 2862.37 14.51 2900.01 15.1 2918.53 15.39  
 2940.17 15.43

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2457.23 .1 1019.43 .05 1108 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1019.43 1108 474 474 474 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 -2457.23 91 11.21 F

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 8743

INPUT

Description: Interpolated Section

Station Elevation Data num= 201  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -2279.31 14.8-2273.69 14.73-2251.74 14.48-2250.61 14.47-2204.34 14.13  
 -2173.2 13.91-2169.03 13.88-2134.98 13.54-2112.74 13.33-2093.69 12.17  
 -2081.78 11.96-2078.17 12.05-2065.63 12.36 -2057.2 12.57 -2053.2 12.67  
 -2019.87 12.45-1996.28 12.52-1957.95 12.62-1941.19 12.55-1926.93 12.48  
 -1905.74 12.38-1857.58 12.15-1825.18 11.99-1788.23 11.81 -1772.2 11.73  
 -1733.31 11.67-1718.88 11.64-1709.17 11.62-1688.69 11.58-1649.53 11.4  
 -1593.16 11.15-1580.18 11.09-1560.87 11 -1555.5 10.98-1510.82 11.04  
 -1493.58 11.06-1477.15 11.34-1472.18 11.42-1441.47 11.71 -1433.3 11.78  
 -1401.71 11.65-1388.44 11.69-1375.61 11.72-1372.12 11.76-1361.14 11.9  
 -1358.44 11.93-1302.77 11.71-1249.16 11.58-1245.26 11.57-1236.85 11.56  
 -1233.24 11.52-1213.31 11.28-1202.52 11.15-1185.35 11.32-1173.67 11.2  
 -1163.12 11.27-1142.08 11.41-1132.87 11.26-1115.97 11-1093.01 11.09  
 -1026.88 11.38-1022.89 11.4-1020.48 11.41-1012.26 11.45 -968.99 11.47  
 -952.77 11.41 -908.09 11.25 -882.65 11.16 -855.9 11.07 -840.45 11.05  
 -812.53 11 -795.69 10.98 -742.41 10.9 -683.3 10.84 -672.29 10.81  
 -654.02 10.79 -651.67 10.78 -626.98 10.99 -584.37 10.58 -570.91 10.52  
 -534.97 10.36 -532.05 10.34 -467.59 9.83 -461.93 9.78 -458.52 9.76  
 -447.44 9.66 -391.81 9.94 -368.55 10.11 -346.13 10.41 -333.58 10.59  
 -321.69 10.62 -281.16 10.71 -251.57 10.76 -233.74 10.79 -192.11 10.9  
 -181.45 10.89 -121.35 10.75 -111.34 10.73 -94.73 10.67 -78.94 10.62  
 -54.73 10.19 -43.64 10.15 -41.22 10.16 -8.96 10.4 27.48 10.65  
 28.87 10.66 62.64 10.88 80.38 10.88 97.33 10.89 110.96 10.87  
 147.6 10.85 165.79 10.58 175.92 10.42 204.24 10.21 233.97 10.22

ExpandedLocal.rep

234.25	10.22	234.48	10.22	302.71	10.24	358	10.27	371.17	10.28
374.17	10.28	387.55	10.26	439.63	10.17	481.52	10.22	508.09	10.2
541.13	10.08	576.55	9.91	605.04	9.85	645.01	9.73	660.19	9.68
694.71	9.67	713.47	9.67	728.56	9.68	771.66	9.64	781.93	9.68
800.13	9.74	848.3	9.43	850.39	9.41	852.08	9.4	857.08	9.36
867.64	9.33	942.5	9.11	969.9	9.4	975.6	9.33	999.41	8.99
1002.64	8.96	1018.29	8.97	1020.64	8.34	1035.72	5.07	1041.79	3.61
1043.3	3.41	1050.88	.95	1056.95	-.88	1058.24	-1.04	1065.29	-1.89
1074.27	1.09	1077.86	2.72	1085.04	4.94	1087.91	5.53	1090.43	6.29
1093.12	6.8	1103	8.82	1115.26	9.14	1117.98	9.48	1142.37	9.27
1215.52	9.35	1289.27	9.66	1359.02	10.1	1486.26	10.94	1506.91	11.1
1535.55	11.28	1539.09	11.31	1614.04	11.66	1716.06	11.86	1731.25	11.88
1872.29	11.77	1892.77	11.74	1901.93	11.59	1928.41	11.79	1954.9	11.55
1955.58	11.55	1981.38	11.57	2007.86	11.83	2071.12	11.64	2084.98	11.6
2111.72	11.93	2179.91	11.6	2181.19	11.6	2193.72	11.74	2253.36	11.7
2258.33	11.72	2301.47	11.92	2396.27	11.9	2404.25	11.95	2527.42	12.65
2606.71	13.28	2644.36	13.58	2707.15	14.08	2741.55	14.61	2758.5	14.87
2778.28	14.91								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2279.31	.1	1018.29	.05	1103	.1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1018.29	1103		474	474	474		.1	.3
Ineffective Flow			num=	1					
	Sta L	Sta R	Elev	Permanent					
	-2279.31	-146	11.21	F					

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 8269

INPUT

Description: Interpolated Section

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2101.38	14.35	-2096.07	14.29	-2075.31	14.07	-2074.24	14.06	-2030.48	13.76
-2001.04	13.56	-1997.09	13.53	-1964.9	13.24	-1943.86	13.05	-1925.85	12.02
-1914.58	11.84	-1911.17	11.92	-1899.31	12.19	-1891.33	12.38	-1887.55	12.47
-1856.03	12.28	-1833.73	12.34	-1797.48	12.44	-1781.62	12.38	-1768.14	12.32
-1748.1	12.23	-1702.56	12.03	-1671.92	11.88	-1636.97	11.72	-1621.81	11.65
-1585.03	11.59	-1571.39	11.56	-1562.21	11.55	-1542.83	11.51	-1505.8	11.35
-1452.5	11.12	-1440.22	11.06	-1421.96	10.99	-1416.88	10.96	-1374.63	11.01

ExpandedLocal.rep

-1358.32	11.03-1342.79	11.27-1338.08	11.34-1309.04	11.59-1301.32	11.66
-1271.44	11.54-1258.89	11.56-1246.76	11.59-1243.46	11.63-1233.08	11.75
-1230.52	11.78-1177.87	11.56-1127.18	11.44-1123.49	11.43-1115.54	11.42
-1112.12	11.39-1093.27	11.17-1083.06	11.05-1066.84	11.2-1055.78	11.08
-1045.81	11.14-1025.91	11.25 -1017.2	11.12-1001.22	10.89 -979.5	10.96
-916.97	11.22 -913.19	11.23 -910.91	11.24 -903.14	11.28 -862.22	11.3
-846.88	11.25 -804.62	11.1 -780.57	11.02 -755.27	10.95 -740.66	10.93
-714.25	10.88 -698.33	10.86 -647.94	10.8 -592.05	10.76 -581.63	10.74
-564.35	10.72 -562.13	10.72 -538.78	10.9 -498.48	10.53 -485.76	10.48
-451.77	10.33 -449.01	10.31 -388.05	9.86 -382.7	9.82 -379.47	9.8
-368.99	9.71 -316.39	9.94 -294.38	10.1 -273.18	10.37 -261.31	10.54
-250.07	10.57 -211.74	10.67 -183.76	10.73 -166.89	10.76 -127.53	10.89
-117.45	10.88 -60.61	10.78 -51.14	10.76 -35.44	10.71 -20.5	10.67
2.4	10.28 12.88	10.24 15.17	10.26 45.68	10.47 80.14	10.69
81.45	10.69 113.39	10.89 130.17	10.89 146.2	10.89 159.08	10.86
193.74	10.83 210.94	10.59 220.52	10.45 247.31	10.24 275.41	10.24
275.68	10.24 275.9	10.24 340.42	10.22 392.71	10.22 405.17	10.22
408.01	10.23 420.66	10.21 469.91	10.1 509.52	10.16 534.65	10.13
565.9	10 599.4	9.79 626.34	9.71 664.14	9.57 678.49	9.52
711.14	9.48 728.88	9.46 743.15	9.47 783.91	9.4 793.63	9.42
810.83	9.46 856.38	9.14 858.37	9.13 859.97	9.11 864.69	9.07
874.68	9.03 945.47	8.74 971.39	8.96 976.78	8.89 999.29	8.54
1002.35	8.51 1017.14	8.53 1019.34	7.84 1033.47	4.4 1039.14	2.89
1040.56	2.71 1047.66	.51 1053.34	-1.13 1054.54	-1.27 1061.14	-2.05
1069.92	1.11 1073.43	2.76 1080.45	4.8 1083.26	5.36 1085.71	6.13
1088.35	6.6 1098	8.45 1109.11	8.74 1111.58	9.04 1133.68	8.87
1199.98	8.99 1266.82	9.32 1330.04	9.75 1445.37	10.6 1464.08	10.77
1490.04	10.96 1493.25	10.98 1561.18	11.36 1653.64	11.61 1667.41	11.65
1795.25	11.57 1813.81	11.54 1822.11	11.41 1846.11	11.59 1870.12	11.37
1870.73	11.37 1894.12	11.39 1918.12	11.63 1975.46	11.46 1988.02	11.43
2012.25	11.72 2074.06	11.44 2075.22	11.43 2086.57	11.56 2140.63	11.53
2145.13	11.55 2184.23	11.73 2270.16	11.72 2277.38	11.77 2389.02	12.39
2460.88	12.95 2495.01	13.21 2551.92	13.66 2583.1	14.13 2598.46	14.36
2616.39	14.4				

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2101.38 .1 1017.14 .05 1098 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1017.14 1098 474 474 474 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 -2101.38 -383 11.21 F

CROSS SECTION



ExpandedLocal.rep

RIVER: W-15 Main  
 REACH: South

RS: 7795

INPUT

Description: Interpolated Section

Station Elevation Data num= 201

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1923.46	13.91	1918.45	13.85	1898.89	13.66	1897.88	13.65	1856.63	13.39
-1828.88	13.21	1825.16	13.19	1794.81	12.94	1774.98	12.77	-1758	11.88
-1747.38	11.72	1744.17	11.79	1732.99	12.03	1725.47	12.19	1721.91	12.27
-1692.2	12.11	1671.17	12.17	-1637	12.26	1622.06	12.2	1609.35	12.15
-1590.47	12.08	1547.54	11.9	1518.65	11.78	1485.72	11.63	1471.43	11.57
-1436.76	11.51	-1423.9	11.49	1415.24	11.47	1396.98	11.44	1362.08	11.29
-1311.83	11.09	1300.26	11.04	1283.05	10.97	1278.26	10.95	1238.44	10.98
-1223.07	11	1208.42	11.2	1203.99	11.27	1176.62	11.48	1169.34	11.54
-1141.18	11.42	1129.34	11.44	1117.91	11.46	-1114.8	11.5	1105.01	11.6
-1102.6	11.62	1052.98	11.4	-1005.2	11.3	1001.72	11.3	-994.22	11.29
-991	11.26	-973.24	11.06	-963.61	10.95	-948.32	11.07	-937.9	10.97
-928.5	11.01	-909.74	11.1	-901.53	10.98	-886.47	10.77	-866	10.82
-807.05	11.05	-803.49	11.07	-801.35	11.08	-794.02	11.1	-755.45	11.13
-740.99	11.08	-701.16	10.96	-678.49	10.89	-654.64	10.82	-640.87	10.81
-615.98	10.77	-600.97	10.75	-553.48	10.71	-500.79	10.68	-490.97	10.67
-474.69	10.65	-472.59	10.65	-450.58	10.8	-412.6	10.48	-400.61	10.43
-368.56	10.3	-365.96	10.28	-308.51	9.89	-303.46	9.86	-300.42	9.84
-290.54	9.75	-240.96	9.94	-220.22	10.09	-200.23	10.34	-189.05	10.49
-178.45	10.52	-142.32	10.64	-115.95	10.7	-100.05	10.74	-62.94	10.88
-53.44	10.88	.14	10.81	9.06	10.8	23.86	10.75	37.94	10.71
59.52	10.38	69.4	10.34	71.56	10.35	100.32	10.54	132.8	10.72
134.04	10.73	164.14	10.9	179.96	10.89	195.06	10.9	207.21	10.86
239.87	10.82	256.09	10.6	265.12	10.47	290.37	10.28	316.86	10.26
317.11	10.26	317.32	10.26	378.14	10.2	427.42	10.18	439.17	10.17
441.84	10.17	453.76	10.15	500.19	10.02	537.53	10.09	561.22	10.07
590.67	9.91	622.24	9.67	647.64	9.58	683.27	9.42	696.8	9.36
727.57	9.29	744.29	9.26	757.74	9.26	796.16	9.15	805.32	9.16
821.54	9.17	864.47	8.85	866.34	8.84	867.85	8.82	872.3	8.78
881.72	8.73	948.44	8.37	972.87	8.52	977.95	8.46	999.17	8.09
1002.05	8.06	1016	8.08	1018.05	7.34	1031.21	3.73	1036.5	2.17
1037.82	2.01	1044.44	.07	1049.73	-1.38	1050.85	-1.51	1057	-2.2
1065.57	1.12	1069	2.79	1075.86	4.67	1078.6	5.18	1081	5.97
1083.57	6.4	1093	8.07	1102.96	8.34	1105.18	8.61	1124.99	8.48
1184.45	8.64	1244.38	8.98	1301.07	9.41	1404.47	10.27	1421.26	10.44
1444.53	10.63	1447.41	10.65	1508.32	11.05	1591.23	11.37	1603.58	11.41
1718.2	11.37	1734.85	11.35	1742.29	11.23	1763.81	11.39	1785.34	11.2
1785.89	11.2	1806.86	11.22	1828.38	11.42	1879.79	11.28	1891.05	11.25
1912.79	11.52	1968.21	11.28	1969.25	11.27	1979.43	11.38	2027.89	11.37
2031.93	11.39	2066.99	11.55	2144.04	11.54	2150.52	11.58	2250.62	12.12

ExpandedLocal.rep

2315.06 12.62 2345.66 12.85 2396.69 13.23 2424.65 13.65 2438.42 13.85  
 2454.5 13.88

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1923.46 .1 1016 .05 1093 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1016 1093 474 474 474 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 7321

INPUT  
 Description: Interpolated Section

Station Elevation Data num= 192  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1745.54 13.46-1740.83 13.42-1722.46 13.25-1721.52 13.24-1682.78 13.02  
 -1656.72 12.87-1653.22 12.85-1624.73 12.63-1606.11 12.5-1590.16 11.73  
 -1580.19 11.59-1577.17 11.65-1566.67 11.86-1559.61 12.01-1556.26 12.07  
 -1528.36 11.94-1508.62 12-1476.53 12.08 -1462.5 12.03-1450.57 11.99  
 -1432.83 11.93-1392.51 11.78-1365.39 11.67-1334.46 11.54-1321.04 11.49  
 -1288.48 11.44-1276.41 11.42-1268.28 11.4-1251.13 11.37-1218.35 11.24  
 -1171.17 11.05 -1160.3 11.01-1144.14 10.95-1139.64 10.93-1102.24 10.95  
 -1087.81 10.96-1074.06 11.14 -1069.9 11.19-1044.19 11.37-1037.35 11.41  
 -1010.91 11.31 -999.8 11.32 -989.06 11.34 -986.14 11.36 -976.95 11.45  
 -974.69 11.47 -928.08 11.24 -883.21 11.16 -879.94 11.16 -872.91 11.15  
 -869.88 11.13 -853.2 10.95 -844.16 10.85 -829.8 10.95 -820.01 10.85  
 -811.19 10.89 -793.57 10.95 -785.86 10.84 -771.72 10.65 -752.49 10.69  
 -697.14 10.89 -693.8 10.9 -691.78 10.91 -684.9 10.93 -648.68 10.95  
 -635.1 10.92 -597.7 10.81 -576.4 10.75 -554.02 10.7 -541.08 10.68  
 -517.71 10.65 -503.62 10.64 -459.01 10.61 -409.53 10.61 -400.31 10.59  
 -385.02 10.58 -383.05 10.58 -362.38 10.71 -326.71 10.43 -315.45 10.39  
 -285.36 10.27 -282.92 10.25 -228.96 9.92 -224.22 9.89 -221.37 9.88  
 -212.09 9.8 -165.53 9.94 -146.05 10.07 -127.29 10.3 -116.78 10.44  
 -106.83 10.48 -72.9 10.61 -48.14 10.68 -33.21 10.71 1.64 10.87  
 10.56 10.88 60.88 10.84 69.26 10.83 83.16 10.79 96.38 10.76  
 116.64 10.47 125.92 10.44 127.95 10.45 154.96 10.61 185.46 10.76  
 186.62 10.77 214.89 10.9 229.74 10.89 243.93 10.9 255.34 10.85  
 286.01 10.81 301.24 10.61 309.72 10.49 333.43 10.31 358.31 10.28  
 358.54 10.28 358.74 10.28 415.85 10.19 462.13 10.13 473.16 10.12  
 475.68 10.12 486.87 10.1 530.47 9.95 565.53 10.03 587.78 10  
 615.43 9.83 645.09 9.55 668.93 9.45 702.39 9.27 715.1 9.2

ExpandedLocal.rep

744	9.1	759.7	9.06	772.33	9.05	808.41	8.9	817.01	8.9
832.24	8.89	872.56	8.56	874.32	8.55	875.73	8.54	879.91	8.49
888.76	8.43	951.41	8	974.36	8.09	979.13	8.02	999.06	7.64
1001.76	7.61	1014.86	7.63	1016.49	7.63	1046.43	-2.35	1056.43	-2.35
1086.37	7.63	1087.57	7.63	1088	7.7	1096.82	7.94	1098.77	8.17
1116.31	8.08	1168.91	8.28	1221.94	8.64	1272.09	9.07	1363.58	9.93
1378.43	10.12	1399.02	10.3	1401.57	10.33	1455.46	10.75	1528.82	11.13
1539.74	11.18	1641.16	11.17	1655.89	11.15	1662.47	11.05	1681.51	11.19
1700.56	11.02	1701.04	11.02	1719.6	11.04	1738.64	11.22	1784.13	11.1
1794.09	11.08	1813.32	11.31	1862.35	11.11	1863.27	11.11	1872.28	11.21
1915.16	11.2	1918.74	11.22	1949.76	11.36	2017.93	11.36	2023.66	11.4
2112.22	11.86	2169.24	12.28	2196.31	12.48	2241.46	12.81	2266.2	13.16
2278.38	13.34	2292.61	13.36						

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
-1745.54	.1	1016.49	.03	1086.37	.1			

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1016.49	1086.37		474	474	474		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 6847

INPUT

Description: Interpolated Section

Station Elevation Data num= 188

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1567.61	13.01	-1563.22	12.98	-1546.04	12.84	-1545.15	12.83	-1508.93	12.65
-1484.56	12.52	-1481.29	12.51	-1454.64	12.33	-1437.23	12.22	-1422.32	11.58
-1412.99	11.47	-1410.17	11.52	-1400.35	11.69	-1393.75	11.82	-1390.62	11.87
-1364.53	11.77	-1346.07	11.82	-1316.06	11.89	-1302.94	11.86	-1291.78	11.83
-1275.19	11.78	-1237.49	11.65	-1212.13	11.56	-1183.2	11.45	-1170.66	11.41
-1140.21	11.36	-1128.92	11.34	-1121.32	11.33	-1105.28	11.3	-1074.63	11.18
-1030.51	11.02	-1020.34	10.98	-1005.23	10.93	-1001.02	10.91	-966.05	10.92
-952.55	10.93	-939.69	11.07	-935.8	11.11	-911.76	11.25	-905.37	11.29
-880.64	11.19	-870.25	11.2	-860.21	11.21	-857.48	11.23	-848.88	11.3
-846.77	11.31	-803.19	11.09	-761.23	11.02	-758.17	11.02	-751.59	11.02
-748.77	11	-733.16	10.84	-724.71	10.75	-711.28	10.82	-702.13	10.74
-693.88	10.76	-677.4	10.8	-670.19	10.7	-656.97	10.54	-638.99	10.56
-587.23	10.72	-584.1	10.74	-582.21	10.74	-575.78	10.76	-541.91	10.78
-529.21	10.75	-494.23	10.66	-474.32	10.61	-453.39	10.57	-441.29	10.56
-419.43	10.53	-406.26	10.53	-364.54	10.51	-318.28	10.53	-309.65	10.52

ExpandedLocal.rep

-295.35	10.52	-293.51	10.51	-274.19	10.62	-240.83	10.38	-230.3	10.34
-202.16	10.24	-199.88	10.23	-149.42	9.95	-144.99	9.93	-142.32	9.92
-133.64	9.85	-90.1	9.93	-71.89	10.06	-54.34	10.26	-44.51	10.39
-35.21	10.43	-3.48	10.57	19.68	10.65	33.64	10.69	66.22	10.86
74.57	10.88	121.62	10.87	129.45	10.87	142.45	10.83	154.81	10.8
173.77	10.56	182.45	10.54	184.34	10.55	209.6	10.68	238.12	10.8
239.21	10.8	265.64	10.91	279.53	10.89	292.8	10.9	303.46	10.85
332.15	10.79	346.39	10.62	354.32	10.52	376.49	10.35	399.75	10.3
399.98	10.3	400.16	10.3	453.57	10.17	496.85	10.09	507.16	10.07
509.51	10.07	519.98	10.04	560.75	9.88	593.54	9.97	614.34	9.94
640.2	9.74	667.93	9.43	690.23	9.32	721.52	9.12	733.4	9.04
760.42	8.92	775.11	8.86	786.92	8.84	820.66	8.66	828.7	8.64
842.94	8.61	880.65	8.27	882.29	8.26	883.61	8.25	887.52	8.2
895.79	8.13	954.39	7.63	975.84	7.65	980.3	7.58	1013.71	7.19
1014.26	7.19	1043.36	-2.51	1053.36	-2.51	1082.78	7.3	1083	7.33
1090.67	7.54	1092.37	7.73	1153.37	7.93	1199.49	8.3	1243.12	8.73
1322.69	9.6	1335.6	9.79	1353.52	9.97	1355.73	10	1402.6	10.44
1466.4	10.89	1475.9	10.95	1564.11	10.97	1576.92	10.96	1582.65	10.87
1599.21	10.98	1615.78	10.85	1616.2	10.85	1632.34	10.86	1648.9	11.02
1688.46	10.93	1697.13	10.91	1713.85	11.1	1756.5	10.95	1757.3	10.95
1765.13	11.03	1802.43	11.04	1805.54	11.06	1832.52	11.17	1891.81	11.18
1896.8	11.21	1973.83	11.6	2023.42	11.95	2046.96	12.11	2086.23	12.39
2107.75	12.68	2118.35	12.82	2130.72	12.84				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1567.61	.1	1013.71	.03	1083	.1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1013.71	1083		474	474	474		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 6373

INPUT

Description: Interpolated Section

Station Elevation Data num= 189

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1389.69	12.57	-1385.6	12.54	-1369.61	12.43	-1368.79	12.42	-1335.08	12.27
-1312.4	12.17	-1309.35	12.16	-1284.55	12.02	-1268.35	11.94	-1254.47	11.43
-1245.79	11.35	-1243.17	11.39	-1234.03	11.53	-1227.89	11.63	-1224.97	11.68
-1200.69	11.6	-1183.51	11.65	-1155.59	11.71	-1143.38	11.69	-1132.99	11.66
-1117.55	11.62	-1082.47	11.53	-1058.86	11.45	-1031.95	11.36	-1020.27	11.32

ExpandedLocal.rep

-991.94	11.29	-981.43	11.27	-974.35	11.26	-959.43	11.23	-930.9	11.13
-889.84	10.99	-880.38	10.96	-866.32	10.91	-862.4	10.89	-829.86	10.89
-817.3	10.89	-805.33	11	-801.71	11.04	-779.34	11.14	-773.39	11.17
-750.37	11.08	-740.7	11.08	-731.36	11.08	-728.82	11.1	-720.82	11.15
-718.85	11.16	-678.29	10.93	-639.24	10.88	-636.4	10.88	-630.27	10.88
-627.65	10.87	-613.12	10.73	-605.26	10.66	-592.76	10.7	-584.24	10.62
-576.56	10.63	-561.23	10.64	-554.52	10.56	-542.21	10.42	-525.48	10.43
-477.31	10.56	-474.4	10.57	-472.65	10.58	-466.66	10.59	-435.14	10.61
-423.32	10.59	-390.77	10.51	-372.24	10.47	-352.76	10.45	-341.5	10.44
-321.16	10.42	-308.9	10.42	-270.08	10.42	-227.02	10.46	-219	10.45
-205.69	10.45	-203.97	10.44	-185.99	10.53	-154.95	10.33	-145.14	10.3
-118.96	10.21	-116.83	10.2	-69.88	9.98	-65.75	9.97	-63.27	9.96
-55.19	9.9	-14.67	9.93	2.28	10.05	18.61	10.22	27.75	10.34
36.41	10.39	65.94	10.54	87.49	10.62	100.48	10.66	130.81	10.85
138.57	10.88	182.36	10.9	189.65	10.9	201.75	10.87	213.25	10.84
230.89	10.65	238.97	10.63	240.73	10.64	264.24	10.74	290.78	10.84
291.79	10.84	316.39	10.91	329.32	10.9	341.66	10.9	351.59	10.85
378.29	10.78	391.54	10.63	398.92	10.54	419.55	10.38	441.2	10.32
441.41	10.32	441.58	10.32	491.28	10.15	531.56	10.04	541.16	10.02
543.34	10.02	553.09	9.99	591.03	9.81	621.54	9.91	640.9	9.88
664.97	9.66	690.77	9.31	711.53	9.19	740.65	8.96	751.7	8.88
776.85	8.73	790.52	8.66	801.51	8.63	832.9	8.41	840.39	8.38
853.65	8.33	888.74	7.98	890.26	7.97	891.5	7.96	895.13	7.91
902.83	7.83	957.36	7.25	977.32	7.21	981.48	7.14	998.82	6.74
1001.17	6.7	1012.1	6.74	1040.29	-2.66	1050.29	-2.66	1079.23	6.99
1084.52	7.14	1085.97	7.3	1098.93	7.29	1137.83	7.57	1177.05	7.96
1214.14	8.39	1281.8	9.27	1292.78	9.46	1308.01	9.65	1309.89	9.67
1349.75	10.14	1403.99	10.65	1412.07	10.72	1487.07	10.77	1497.96	10.76
1502.83	10.69	1516.91	10.78	1531	10.67	1531.36	10.67	1545.08	10.69
1559.16	10.81	1592.8	10.75	1600.17	10.74	1614.39	10.9	1650.65	10.79
1651.33	10.78	1657.99	10.86	1689.7	10.88	1692.34	10.89	1715.28	10.99
1765.69	11.01	1769.94	11.03	1835.43	11.33	1877.59	11.61	1897.61	11.74
1931	11.96	1949.3	12.2	1958.31	12.31	1968.83	12.33		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1389.69	.1	1012.1	.03	1079.23	.1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1012.1	1079.23		473	473	473		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 5900

ExpandedLocal.rep

INPUT

Description: Interpolated Section

Station Elevation Data

num= 189

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1211.77	12.12	-1207.98	12.1	-1193.18	12.02	-1192.42	12.02	-1161.22	11.9
-1140.24	11.83	-1137.42	11.82	-1114.47	11.72	-1099.47	11.66	-1086.63	11.29
-1078.6	11.23	-1076.17	11.26	-1067.71	11.36	-1062.02	11.44	-1059.33	11.48
-1036.86	11.43	-1020.96	11.47	-995.11	11.53	-983.81	11.51	-974.2	11.5
-959.92	11.47	-927.45	11.4	-905.6	11.34	-880.69	11.27	-869.88	11.24
-843.66	11.21	-833.93	11.19	-827.39	11.18	-813.58	11.16	-787.18	11.07
-749.18	10.96	-740.42	10.93	-727.41	10.89	-723.79	10.88	-693.67	10.86
-682.04	10.86	-670.97	10.94	-667.61	10.96	-646.91	11.03	-641.4	11.04
-620.1	10.96	-611.15	10.95	-602.51	10.95	-600.15	10.96	-592.75	11
-590.93	11	-553.4	10.78	-517.26	10.75	-514.63	10.74	-508.96	10.75
-506.53	10.74	-493.09	10.62	-485.81	10.56	-474.24	10.57	-466.36	10.51
-459.25	10.51	-445.06	10.49	-438.85	10.42	-427.46	10.31	-411.98	10.3
-367.4	10.4	-364.71	10.41	-363.08	10.41	-357.54	10.42	-328.37	10.44
-317.43	10.42	-287.31	10.37	-270.16	10.34	-252.13	10.32	-241.71	10.32
-222.89	10.3	-211.54	10.31	-175.61	10.32	-135.76	10.38	-128.34	10.37
-116.02	10.38	-114.43	10.38	-97.79	10.43	-69.06	10.28	-59.99	10.25
-35.76	10.18	-33.79	10.17	9.67	10.01	13.48	10	15.78	10
23.25	9.95	60.76	9.93	76.44	10.04	91.56	10.19	100.02	10.29
108.03	10.34	135.36	10.51	155.3	10.59	167.33	10.64	195.39	10.84
202.58	10.88	243.1	10.93	249.85	10.94	261.05	10.91	271.69	10.89
288.02	10.75	295.49	10.73	297.12	10.74	318.87	10.81	343.44	10.88
344.37	10.88	367.14	10.92	379.11	10.9	390.53	10.91	399.72	10.84
424.42	10.77	436.69	10.64	443.52	10.56	462.61	10.41	482.65	10.34
482.84	10.34	482.99	10.33	529	10.13	566.27	10	575.15	9.97
577.18	9.96	586.19	9.93	621.31	9.74	649.55	9.85	667.46	9.81
689.74	9.57	713.62	9.19	732.82	9.06	759.77	8.81	770.01	8.72
793.28	8.54	805.93	8.46	816.1	8.42	845.15	8.16	852.08	8.12
864.35	8.04	896.82	7.69	898.24	7.68	899.38	7.67	902.74	7.62
909.87	7.53	960.33	6.88	978.81	6.77	982.65	6.71	998.7	6.3
1000.88	6.25	1009.91	6.28	1037.22	-2.82	1047.22	-2.82	1075.66	6.66
1078.37	6.74	1079.56	6.86	1090.25	6.89	1122.3	7.21	1154.6	7.62
1185.16	8.05	1240.91	8.93	1249.95	9.13	1262.5	9.32	1264.05	9.35
1296.89	9.83	1341.58	10.41	1348.23	10.49	1410.03	10.58	1419	10.57
1423.01	10.51	1434.61	10.58	1446.21	10.5	1446.51	10.5	1457.82	10.51
1469.42	10.61	1497.13	10.57	1503.2	10.56	1514.92	10.69	1544.79	10.62
1545.36	10.62	1550.84	10.68	1576.97	10.71	1579.15	10.72	1598.05	10.8
1639.58	10.83	1643.07	10.84	1697.03	11.07	1731.77	11.28	1748.27	11.37
1775.77	11.54	1790.85	11.71	1798.27	11.8	1806.94	11.81		

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1211.77	.1	1009.91	.03	1075.66	.1

ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1009.91 1075.66 474 474 474 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 5426

INPUT

Description: Interpolated Section

Station Elevation Data num= 189

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1033.85	11.68	-1030.36	11.66	-1016.76	11.61	-1016.06	11.61	-987.37	11.53
-968.07	11.48	-965.49	11.48	-944.38	11.42	-930.59	11.38	-918.79	11.14
-911.4	11.1	-909.17	11.12	-901.39	11.2	-896.16	11.26	-893.68	11.28
-873.02	11.26	-858.4	11.3	-834.64	11.35	-824.25	11.34	-815.41	11.34
-802.28	11.32	-772.42	11.28	-752.34	11.23	-729.43	11.18	-719.5	11.16
-695.39	11.14	-686.44	11.12	-680.43	11.11	-667.73	11.09	-643.45	11.01
-608.52	10.93	-600.46	10.9	-588.5	10.87	-585.17	10.86	-557.47	10.83
-546.78	10.83	-536.6	10.87	-533.52	10.88	-514.48	10.91	-509.42	10.92
-489.84	10.84	-481.61	10.83	-473.66	10.82	-471.49	10.83	-464.69	10.85
-463.01	10.85	-428.5	10.62	-395.28	10.61	-392.86	10.6	-387.64	10.61
-385.41	10.61	-373.05	10.51	-366.36	10.46	-355.72	10.45	-348.48	10.39
-341.94	10.38	-328.89	10.34	-323.19	10.28	-312.71	10.19	-298.48	10.17
-257.48	10.23	-255.01	10.24	-253.52	10.24	-248.42	10.25	-221.6	10.27
-211.54	10.26	-183.85	10.22	-168.08	10.2	-151.5	10.2	-141.92	10.2
-124.61	10.19	-114.18	10.2	-81.14	10.22	-44.51	10.31	-37.68	10.3
-26.35	10.31	-24.89	10.31	-9.59	10.34	16.82	10.23	25.16	10.21
47.45	10.15	49.25	10.14	89.21	10.04	92.72	10.04	94.83	10.04
101.7	9.99	136.18	9.93	150.61	10.02	164.5	10.15	172.28	10.24
179.65	10.29	204.78	10.47	223.12	10.57	234.17	10.61	259.98	10.83
266.58	10.88	303.84	10.96	310.05	10.97	320.34	10.95	330.13	10.93
345.14	10.84	352.01	10.83	353.51	10.83	373.51	10.88	396.1	10.91
396.96	10.92	417.89	10.93	428.89	10.9	439.4	10.91	447.85	10.84
470.56	10.75	481.84	10.65	488.12	10.59	505.67	10.45	524.1	10.35
524.27	10.35	524.41	10.35	566.71	10.11	600.98	9.95	609.15	9.92
611.01	9.91	619.3	9.88	651.59	9.66	677.55	9.79	694.02	9.75
714.5	9.49	736.46	9.07	754.12	8.93	778.9	8.66	788.31	8.56
809.71	8.35	821.34	8.26	830.69	8.21	857.4	7.92	863.78	7.86
875.05	7.76	904.91	7.41	906.21	7.39	907.26	7.38	910.35	7.33
916.91	7.22	963.31	6.51	980.29	6.34	983.83	6.27	998.59	5.85
1000.59	5.8	1007.75	5.83	1034.15	-2.97	1044.15	-2.97	1072.07	6.34
1072.22	6.34	1073.16	6.42	1081.56	6.49	1106.76	6.86	1132.16	7.28
1156.19	7.71	1200.01	8.6	1207.13	8.8	1216.99	8.99	1218.21	9.02
1244.03	9.53	1279.17	10.16	1284.4	10.26	1332.98	10.38	1340.04	10.37

ExpandedLocal.rep

1343.19	10.34	1352.31	10.38	1361.43	10.32	1361.67	10.32	1370.56	10.34
1379.68	10.41	1401.47	10.39	1406.24	10.39	1415.45	10.48	1438.94	10.46
1439.38	10.46	1443.7	10.5	1464.24	10.55	1465.95	10.56	1480.81	10.62
1513.46	10.65	1516.21	10.66	1558.64	10.81	1585.95	10.94	1598.92	11
1620.54	11.11	1632.4	11.23	1638.23	11.28	1645.05	11.29		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1033.85	.1	1007.75	.03	1072.07	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1007.75	1072.07		474	474		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 4952

INPUT

Description: Interpolated Section

Station Elevation Data num= 187

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-855.92	11.23	-852.74	11.22	-840.33	11.2	-839.69	11.2	-813.52	11.16
-795.91	11.14	-793.55	11.13	-774.3	11.11	-761.72	11.11	-750.94	10.99
-744.2	10.98	-742.17	10.99	-735.07	11.03	-730.3	11.07	-728.04	11.08
-709.19	11.09	-695.85	11.13	-674.17	11.17	-664.69	11.17	-656.63	11.17
-644.64	11.17	-617.4	11.15	-599.08	11.12	-578.18	11.09	-569.11	11.08
-547.11	11.06	-538.95	11.05	-533.46	11.04	-521.88	11.01	-499.73	10.96
-467.85	10.89	-460.51	10.87	-449.59	10.85	-446.55	10.84	-421.28	10.81
-411.53	10.79	-402.24	10.8	-399.42	10.81	-382.06	10.8	-377.44	10.79
-359.57	10.73	-352.06	10.71	-344.81	10.7	-342.83	10.7	-336.63	10.7
-335.1	10.69	-303.61	10.47	-273.29	10.47	-271.08	10.47	-266.33	10.48
-264.29	10.48	-253.01	10.4	-246.91	10.36	-237.2	10.33	-230.59	10.28
-224.63	10.25	-212.72	10.19	-207.52	10.13	-197.96	10.07	-184.97	10.04
-147.57	10.07	-145.31	10.08	-143.95	10.08	-139.3	10.08	-114.83	10.09
-105.65	10.09	-80.38	10.07	-66	10.06	-50.87	10.07	-42.13	10.08
-26.34	10.07	-16.82	10.09	13.32	10.13	46.75	10.23	52.98	10.23
63.31	10.24	64.64	10.24	78.61	10.25	102.71	10.18	110.32	10.16
130.65	10.12	132.3	10.11	168.75	10.07	171.95	10.08	173.88	10.08
180.15	10.04	211.61	9.93	224.77	10.01	237.45	10.11	244.55	10.19
251.27	10.25	274.2	10.44	290.93	10.54	301.02	10.59	324.56	10.82
330.59	10.88	364.58	10.98	370.25	11.01	379.64	10.98	388.57	10.98
402.26	10.93	408.53	10.93	409.9	10.93	428.15	10.95	448.76	10.95
449.54	10.95	468.64	10.93	478.68	10.91	488.26	10.91	495.97	10.83
516.7	10.74	526.98	10.66	532.72	10.61	548.73	10.48	565.54	10.37



ExpandedLocal.rep

565.7	10.37	565.83	10.37	604.42	10.1	635.69	9.91	643.15	9.87
644.84	9.86	652.41	9.82	681.86	9.59	705.56	9.73	720.59	9.69
739.27	9.4	759.31	8.95	775.42	8.8	798.03	8.5	806.61	8.4
826.14	8.16	836.75	8.05	845.28	8	869.65	7.67	875.47	7.6
885.76	7.48	913	7.12	914.19	7.1	915.14	7.09	917.97	7.03
923.94	6.92	966.28	6.14	981.78	5.9	985	5.83	998.47	5.4
1000.29	5.34	1005.55	5.38	1031.07	-3.13	1041.07	-3.13	1068.53	6.02
1072.87	6.1	1091.22	6.5	1109.72	6.94	1127.21	7.36	1159.12	8.26
1164.3	8.47	1171.48	8.66	1172.37	8.69	1191.17	9.23	1216.75	9.92
1220.56	10.02	1255.94	10.18	1261.07	10.17	1263.37	10.16	1270.01	10.18
1276.65	10.15	1276.82	10.15	1283.3	10.16	1289.94	10.2	1305.8	10.21
1309.28	10.22	1315.98	10.28	1333.09	10.3	1333.41	10.3	1336.55	10.33
1351.51	10.38	1352.75	10.39	1363.57	10.43	1387.35	10.47	1389.35	10.47
1420.24	10.54	1440.13	10.61	1449.57	10.63	1465.32	10.69	1473.95	10.74
1478.19	10.77	1483.16	10.77						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-855.92	.1	1005.55	.03	1068.53	.1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1005.55	1068.53		474	474	474		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 4478

INPUT

Description:

Station Elevation Data num= 115

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-678	10.79	-675.13	10.79	-663.33	10.79	-639.67	10.79	-623.75	10.79
-604.21	10.81	-575.16	10.86	-568.75	10.86	-564.44	10.88	-533.29	10.95
-505.13	11	-497.84	11.01	-487	11.02	-462.38	11.02	-445.81	11.02
-426.92	11.01	-398.84	10.98	-391.46	10.97	-386.5	10.97	-356.01	10.9
-327.19	10.86	-320.55	10.85	-310.68	10.83	-285.09	10.78	-267.87	10.74
-249.63	10.69	-222.51	10.59	-214.17	10.56	-208.56	10.55	-178.71	10.31
-151.31	10.33	-149.31	10.33	-143.17	10.35	-132.98	10.29	-107.32	10.13
-91.85	9.99	-71.47	9.91	-37.66	9.91	-35.62	9.91	-34.38	9.91
.24	9.93	23.08	9.92	36.09	9.92	57.66	9.96	71.94	9.95
80.54	9.98	107.79	10.03	138.01	10.16	143.64	10.15	152.98	10.18
195.47	10.11	215.34	10.09	248.3	10.1	251.19	10.11	252.93	10.12
287.04	9.92	310.4	10.07	322.89	10.2	343.62	10.41	358.74	10.51
367.86	10.56	394.59	10.88	425.33	11.01	430.44	11.05	438.93	11.02

ExpandedLocal.rep

466.3	11.02	482.79	11.02	501.42	10.99	502.13	10.99	528.47	10.91
537.13	10.91	544.1	10.83	572.13	10.68	606.99	10.39	607.14	10.39
607.25	10.39	642.14	10.08	670.41	9.86	677.14	9.82	685.52	9.77
712.14	9.52	733.56	9.67	747.15	9.62	764.04	9.31	782.15	8.83
796.72	8.67	817.15	8.35	842.56	7.97	852.16	7.85	859.87	7.79
887.16	7.34	921.09	6.83	922.16	6.82	923.02	6.8	930.98	6.62
986.18	5.39	1003.41	4.92	1028	-3.28	1038	-3.28	1065.04	5.73
1098.23	7.02	1118.23	7.93	1121.47	8.15	1125.97	8.34	1156.73	9.79
1178.89	9.98	1191.98	9.97	1210.14	10.03	1227.23	10.13	1239.56	10.22
1262.49	10.29	1294.3	10.27	1300.22	10.27	1315.49	10.26	1321.27	10.26

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-678	.1	1003.41	.03	1065.04	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1003.41	1065.04		384	384		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 4094

INPUT  
 Description:

Station Elevation Data num= 38

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
623.14	10.52	657.36	10.72	662.08	10.78	714.41	10.86	759.36	10.3
771.46	10.03	788.61	9.59	828.51	8.5	838.91	8.31	856.65	7.86
874.87	7.36	885.56	6.95	926.56	5.47	942.61	4.94	953.93	4.53
1000	4.42	1004	4.11	1026.08	3.93	1044	-2.04	1054	-2.04
1077.49	5.79	1080	5.97	1092.02	6.1	1098.73	6.29	1130.04	7.09
1153.68	7.66	1165.18	7.9	1180.42	8.12	1200.32	8.3	1215.34	8.39
1262.1	8.77	1277	8.85	1305.73	8.91	1338.65	9	1340.86	9.01
1343.79	9.01	1400.31	9.07	1411.14	9.06				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
623.14	.1	1026.08	.03	1080	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1026.08	1080		398	398		.1	.3

CROSS SECTION

ExpandedLocal.rep

RIVER: W-15 Main  
 REACH: South RS: 3696

INPUT

Description:

Station Elevation Data num= 42

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
619.21	9.98	646.29	10.51	661.02	10.52	670.14	10.52	704.36	10.72
709.08	10.78	761.41	10.86	806.36	10.3	818.46	10.03	835.61	9.59
875.51	8.5	885.91	8.31	903.65	7.86	921.87	7.36	932.56	6.95
973.56	5.47	989.61	4.94	1000	2.81	1011	2.21	1021	3.7
1022.44	3.7	1036	-.82	1046	-.82	1059.56	3.7	1061	4.07
1071	5.25	1092.02	6.1	1098.73	6.29	1130.04	7.09	1153.68	7.66
1165.18	7.9	1180.42	8.12	1200.32	8.3	1215.34	8.39	1262.1	8.77
1277	8.85	1305.73	8.91	1338.65	9	1340.86	9.01	1343.79	9.01
1400.31	9.07	1411.14	9.06						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
619.21	.1	1022.44	.03	1061	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1022.44	1061		197	197		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
619.21	803	12.09	F
1314	1411.14	12.09	F

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 3499

INPUT

Description: 10' US Military Road Bridge

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
891	11.67	932	11.61	988	11.17	1000	8.29	1015	5.57
1024	2.4	1033	.22	1053	-1.03	1073	-.88	1094	2.62
1103	4.24	1111	6.21	1118	8.62	1127	11.74	1159	11.05
1169	11.17								

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 891 .1 988 .03 1127 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 988 1127 45 45 45 .1 .3

BRIDGE

RIVER: W-15 Main  
 REACH: South RS: 3477

INPUT

Description: Military Road Bridge  
 Distance from Upstream XS = 10  
 Deck/Roadway Width = 25  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 9  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 891 11.67 932 11.61 988 11.17  
 1000 11.75 8 1038 12.09 8 1104 11.74 8  
 1127 11.08 8 1159 11.05 1169 11.17

Upstream Bridge Cross Section Data

Station Elevation Data num= 16  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 891 11.67 932 11.61 988 11.17 1000 8.29 1015 5.57  
 1024 2.4 1033 .22 1053 -1.03 1073 -.88 1094 2.62  
 1103 4.24 1111 6.21 1118 8.62 1127 11.74 1159 11.05  
 1169 11.17

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 891 .1 988 .03 1127 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 988 1127 .1 .3

Downstream Deck/Roadway Coordinates

num= 9  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*

ExpandedLocal.rep

891	11.67		932	11.61		988	11.17	
1000	11.75	8	1038	12.09	8	1104	11.74	8
1127	11.08		1159	11.05		1169	11.17	

Downstream Bridge Cross Section Data

Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
891	11.67	932	11.61	988	11.17	1000	8.65	1006	5.68
1016	2.21	1038	-.66	1058	-.07	1082	2.67	1093	6.2
1097	8.16	1104	11.74	1127	11.08	1159	11.05	1169	11.17

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
891	.1	988	.03	1104	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	988	1104		.1	.3

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 4

Pier Data

Pier Station Upstream= 1020 Downstream= 1020

Upstream num= 2

Width	Elev	Width	Elev
1	-2	1	8

Downstream num= 2

Width	Elev	Width	Elev
1	-2	1	8

Pier Data

Pier Station Upstream= 1040 Downstream= 1040

Upstream num= 2

Width	Elev	Width	Elev
1	-2	1	8

Downstream num= 2

```

Width  Elev  Width  Elev
*****
      1   -2     1     8

```

Pier Data

Pier Station Upstream= 1060 Downstream= 1060

Upstream num= 2

```

Width  Elev  Width  Elev
*****
      1   -2     1     8

```

Downstream num= 2

```

Width  Elev  Width  Elev
*****
      1   -2     1     8

```

Pier Data

Pier Station Upstream= 1080 Downstream= 1080

Upstream num= 2

```

Width  Elev  Width  Elev
*****
      1   -2     1     8

```

Downstream num= 2

```

Width  Elev  Width  Elev
*****
      1   -2     1     8

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Momentum Cd = 1.2

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Pressure and Weir flow

Submerged Inlet Cd =

Submerged Inlet + Outlet Cd = .8

Max Low Cord =

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

ExpandedLocal.rep

RIVER: W-15 Main  
 REACH: South RS: 3454

INPUT

Description: 10' DS Military Road Bridge

Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
891	11.67	932	11.61	988	11.17	1000	8.65	1006	5.68
1016	2.21	1038	-.66	1058	-.07	1082	2.67	1093	6.2
1097	8.16	1104	11.74	1127	11.08	1159	11.05	1169	11.17

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
891	.1	988	.03	1104	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	988	1104		295	295	.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 3159

INPUT

Description: Interpolated Section

Station Elevation Data num= 54

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
787.58	10.94	792.55	10.91	821.95	10.82	823.78	10.82	825.54	10.81
856.32	10.57	858.53	10.56	875.53	10.38	890.69	10.19	891.52	10.18
907.95	10	924.51	9.63	925.06	9.62	957.5	9.04	990.35	8.72
995.67	8.9	995.72	8.89	996.59	8.89	1030	-1.22	1090	-1.22
1120.51	8.95	1128.27	8.95	1138.16	8.9	1145.14	8.88	1149.61	8.86
1163.52	8.79	1173.79	8.76	1188.31	8.83	1202.72	8.84	1208.31	8.89
1209.92	8.9	1213.1	8.93	1221.66	8.99	1231.65	9.07	1237.89	9.13
1260.58	9.33	1262.68	9.35	1275.06	9.47	1287.47	9.6	1288.41	9.61
1289.51	9.62	1312.27	9.84	1318.44	9.91	1337.06	10.09	1341.82	10.13
1347.37	10.17	1361.85	10.25	1375.83	10.32	1376.3	10.33	1386.64	10.38
1405.23	10.44	1411.43	10.46	1421.92	10.47	1427.68	10.48		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
787.58	.1	996.59	.03	1120.51	.1

ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 996.59 1120.51 294 294 294 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 2865

INPUT

Description: Interpolated Section

Station Elevation Data num= 55

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
684.16	10.21	691.79	10.15	736.88	10	739.69	10	742.39	9.97
789.6	9.53	792.99	9.49	819.07	9.15	842.32	8.83	843.59	8.82
868.79	8.51	894.2	7.84	895.04	7.82	944.8	6.76	995.17	6.26
1000.92	6.51	1030.5	-1.77	1090.5	-1.77	1114.66	6.28	1116.01	6.29
1121.22	6.3	1126.65	6.31	1145.28	6.37	1163.16	6.33	1175.78	6.33
1183.85	6.3	1208.99	6.24	1227.54	6.25	1253.79	6.47	1279.82	6.57
1289.93	6.69	1292.83	6.71	1298.59	6.77	1314.06	6.9	1332.11	7.07
1343.39	7.18	1384.39	7.59	1388.19	7.62	1410.56	7.87	1432.99	8.13
1434.69	8.15	1436.67	8.17	1477.79	8.63	1488.95	8.76	1522.59	9.12
1531.19	9.21	1541.23	9.29	1567.39	9.45	1592.66	9.59	1593.51	9.6
1612.19	9.68	1645.8	9.76	1656.99	9.78	1675.95	9.78	1686.35	9.79

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
684.16	.1	1000.92	.03	1114.66	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1000.92 1114.66 295 295 295 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 2570

INPUT

Description:

Station Elevation Data num= 53

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
580.74	9.48	591.02	9.4	651.81	9.18	655.6	9.18	659.23	9.13
722.87	8.48	727.45	8.43	793.94	7.47	795.66	7.45	829.63	7.01



ExpandedLocal.rep

863.88	6.04	865.01	6.02	932.09	4.49	1000	3.79	1010.29	4.31
1013.68	3.32	1033	-2.33	1093	-2.33	1110.64	3.55	1119.95	3.62
1127.49	3.65	1135.35	3.68	1162.3	3.78	1188.16	3.75	1206.42	3.77
1218.1	3.75	1254.46	3.69	1281.3	3.73	1319.27	4.1	1356.93	4.29
1371.55	4.49	1384.08	4.62	1406.45	4.81	1432.56	5.07	1448.89	5.23
1508.19	5.85	1513.7	5.9	1546.06	6.27	1578.51	6.66	1580.96	6.69
1583.83	6.72	1643.31	7.41	1659.46	7.61	1708.12	8.15	1720.57	8.29
1735.09	8.4	1772.93	8.65	1810.73	8.87	1837.74	8.98	1886.36	9.09
1902.55	9.1	1929.98	9.1	1945.03	9.1				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
580.74	.1	1010.29	.03	1110.64	.1

\*\*\*\*\*

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
1010.29	1110.64	235	235	235	.1	.3	
Ineffective Flow	num=	1					
Sta L	Sta R	Elev	Permanent				
1563	1945.03	7.88	F				

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 2335

INPUT

Description:

Station Elevation Data num= 43

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
750.74	9.48	761.02	9.4	821.81	9.18	825.6	9.18	829.23	9.13
892.87	8.48	897.45	8.43	1000	7.07	1013	7.58	1021	3.52
1034.2	3.57	1044.7	-2.69	1104.7	-2.69	1124.06	3.76	1129.42	3.77
1141.1	3.75	1177.46	3.69	1204.3	3.73	1242.27	4.1	1279.93	4.29
1294.55	4.49	1307.08	4.62	1329.45	4.81	1355.56	5.07	1371.89	5.23
1431.19	5.85	1436.7	5.9	1469.06	6.27	1501.51	6.66	1503.96	6.69
1506.83	6.72	1566.31	7.41	1582.46	7.61	1631.12	8.15	1643.57	8.29
1658.09	8.4	1695.93	8.65	1733.73	8.87	1760.74	8.98	1809.36	9.09
1825.55	9.1	1852.98	9.1	1868.03	9.1				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
750.74	.1	1034.2	.03	1124.06	.1

\*\*\*\*\*

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
----------------	-------	---------------	---------	-------	-------	--------	--------

ExpandedLocal.rep

1034.2	1124.06		243	243	243		.1	.3
Ineffective Flow		num=	1					
Sta L	Sta R	Elev	Permanent					
1328	1868.03	7.88	F					

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 2092

INPUT

Description: 10' US Old River Road

Station Elevation Data		num=	47							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	
*****										
0	10.62	40.9	10.57	51.85	10.55	86.88	10.36	104.59	10.35	
124.96	10.18	157.32	9.75	163.03	9.66	177.85	9.7	210.06	9.8	
239.18	9.63	262.79	9.49	314.8	9.35	315.33	9.34	315.53	9.34	
353.4	9.09	368.26	9	391.47	8.85	421	8.66	429.55	8.6	
451.75	8.47	467.62	8.37	473.73	8.34	487.5	8.29	526.47	8.11	
545.43	8.06	572.12	8.05	584.21	8.04	614.84	8.06	644.76	8.07	
656.58	8.06	684.97	7.96	705.32	7.93	741.04	7.85	765.87	7.79	
825.5	7.64	826.42	7.63	861.31	7.56	886.98	7.56	896.57	7.54	
909.96	7.54	947.53	7.69	983.47	7.96	1025	-2.22	1085	-2.22	
1115.22	7.85	1640	7.33							

Manning's n Values		num=	3		
Sta	n Val	Sta	n Val	Sta	n Val
*****					
0	.1	983.47	.03	1115.22	.1

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
983.47	1115.22	54	54	54		.1	.3

Ineffective Flow		num=	2	
Sta L	Sta R	Elev	Permanent	
0	974	7.88	F	
1120	1640	7.88	F	

BRIDGE

RIVER: W-15 Main  
 REACH: South RS: 2065

INPUT

Description: Old River Road Bridge  
 Distance from Upstream XS = 10

ExpandedLocal.rep

Deck/Roadway Width = 34

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 4

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
984	7.96	6.65	1000	8.14	6.65	1079	8.14	6.65						
1090	7.88	6.65												

Upstream Bridge Cross Section Data

Station Elevation Data num= 47

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	10.62	40.9	10.57	51.85	10.55	86.88	10.36	104.59	10.35
124.96	10.18	157.32	9.75	163.03	9.66	177.85	9.7	210.06	9.8
239.18	9.63	262.79	9.49	314.8	9.35	315.33	9.34	315.53	9.34
353.4	9.09	368.26	9	391.47	8.85	421	8.66	429.55	8.6
451.75	8.47	467.62	8.37	473.73	8.34	487.5	8.29	526.47	8.11
545.43	8.06	572.12	8.05	584.21	8.04	614.84	8.06	644.76	8.07
656.58	8.06	684.97	7.96	705.32	7.93	741.04	7.85	765.87	7.79
825.5	7.64	826.42	7.63	861.31	7.56	886.98	7.56	896.57	7.54
909.96	7.54	947.53	7.69	983.47	7.96	1025	-2.22	1085	-2.22
1115.22	7.85	1640	7.33						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	983.47	.03	1115.22	.1

Bank Sta: Left Right Coeff Contr. Expan.  
 983.47 1115.22 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	974	7.88	F
1120	1640	7.88	F

Downstream Deck/Roadway Coordinates

num= 4

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
984	7.44	6.65	1000	8.14	6.65	1079	8.14	6.65						
1095	7.17	6.65												

Downstream Bridge Cross Section Data

Station Elevation Data num= 48

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	10.618	40.899	10.567	51.853	10.553	86.882	10.358	104.588	10.348

ExpandedLocal.rep

124.956	10.175	157.323	9.75	163.03	9.657	177.849	9.704	210.058	9.799
239.178	9.629	262.793	9.49	314.799	9.347	315.326	9.344	315.528	9.342
353.399	9.094	368.263	9.002	391.473	8.852	420.998	8.665	429.547	8.605
451.748	8.474	467.621	8.372	473.733	8.342	487.501	8.287	526.468	8.108
545.433	8.062	572.116	8.049	584.21	8.041	614.843	8.06	644.764	8.074
656.577	8.055	684.965	7.964	705.317	7.932	741.038	7.85	765.87	7.79
825.499	7.636	826.424	7.634	861.306	7.561	886.977	7.558	896.574	7.541
909.96	7.544	947.53	7.686	984	7.44	1000	2.97	1012	-1.14
1072	-1.14	1096	7.17	1640	7.33				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	984	.03	1096	.1

\*\*\*\*\*

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	984	1096		.1	.3

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 5

Pier Data

Pier Station	Upstream=	1013.3	Downstream=	1013.3
Upstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	-.1	1	6.65	
Downstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	-.1	1	6.65	

Pier Data

Pier Station	Upstream=	1026.6	Downstream=	1026.6
Upstream	num=	2		
Width	Elev	Width	Elev	
*****				
1	-.1	1	6.65	
Downstream	num=	2		
Width	Elev	Width	Elev	
*****				

1     -.1     1     6.65

Pier Data

Pier Station        Upstream= 1039.9        Downstream= 1039.9

Upstream        num=        2

Width   Elev    Width   Elev

\*\*\*\*\*

1     -.1     1     6.65

Downstream        num=        2

Width   Elev    Width   Elev

\*\*\*\*\*

1     -.1     1     6.65

Pier Data

Pier Station        Upstream= 1053.3        Downstream= 1053.3

Upstream        num=        2

Width   Elev    Width   Elev

\*\*\*\*\*

1     -.1     1     6.65

Downstream        num=        2

Width   Elev    Width   Elev

\*\*\*\*\*

1     -.1     1     6.65

Pier Data

Pier Station        Upstream= 1066.6        Downstream= 1066.6

Upstream        num=        2

Width   Elev    Width   Elev

\*\*\*\*\*

1     -.1     1     6.65

Downstream        num=        2

Width   Elev    Width   Elev

\*\*\*\*\*

1     -.1     1     6.65

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Momentum                    Cd    =    1.2

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Pressure and Weir flow

Submerged Inlet Cd            =

Submerged Inlet + Outlet Cd =     .8

Max Low Cord                    =

ExpandedLocal.rep

Additional Bridge Parameters

- Add Friction component to Momentum
- Do not add Weight component to Momentum
- Class B flow critical depth computations use critical depth inside the bridge at the upstream end
- Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 2038

INPUT

Description: 10' DS Old River Road

Station Elevation Data num= 48

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	10.618	40.899	10.567	51.853	10.553	86.882	10.358	104.588	10.348
124.956	10.175	157.323	9.75	163.03	9.657	177.849	9.704	210.058	9.799
239.178	9.629	262.793	9.49	314.799	9.347	315.326	9.344	315.528	9.342
353.399	9.094	368.263	9.002	391.473	8.852	420.998	8.665	429.547	8.605
451.748	8.474	467.621	8.372	473.733	8.342	487.501	8.287	526.468	8.108
545.433	8.062	572.116	8.049	584.21	8.041	614.843	8.06	644.764	8.074
656.577	8.055	684.965	7.964	705.317	7.932	741.038	7.85	765.87	7.79
825.499	7.636	826.424	7.634	861.306	7.561	886.977	7.558	896.574	7.541
909.96	7.544	947.53	7.686	984	7.44	1000	2.97	1012	-1.14
1072	-1.14	1096	7.17	1640	7.33				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	984	.03	1096	.1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff Contr.	Expan.
	984	1096		217	217	217	.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 1821

INPUT

Description:

Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									

ExpandedLocal.rep

596	9.7	608.27	9.71	628.3	9.86	660.13	9.8	667.22	9.71
688.54	9.4	706.14	9.16	711.99	9.11	723.68	8.97	763.85	8.35
801.38	8.15	815.72	8.05	822.9	7.96	844.49	7.45	861.82	7.02
867.58	6.91	900.74	6.25	919.44	5.91	956.79	5.25	971.3	4.98
978.58	4.85	998.93	4.46	1009.5	-3.39	1069.5	-3.39	1096.28	5.54
1102.85	5.64	1103.8	5.66	1104.61	5.67	1115.69	5.85	1153.14	6.47
1196.53	7.08	1202.49	7.18	1209.39	7.23	1218.21	7.33		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
596	.1	998.93	.03	1096.28	.1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	998.93	1096.28		314	314	314		.1	.3
Ineffective Flow			num=	1					
Sta L	Sta R	Elev	Permanent						
596	876	7.45	F						

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 1507

INPUT

Description: Interpolated Section

Station Elevation Data num= 65

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
573	9.46	578.69	9.46	585.1	9.46	586.18	9.46	590.2	9.47
607.7	9.5	631.43	9.45	631.79	9.45	634.95	9.44	641.89	9.41
649.51	9.34	672.41	9.12	677.76	9.07	683.26	9.02	691.32	8.93
697.61	8.88	710.16	8.76	724.08	8.6	735.54	8.47	753.32	8.24
770.41	8.1	787.83	7.95	793.63	7.9	796.11	7.87	809.03	7.73
816.75	7.63	818.42	7.6	825.61	7.47	839.94	7.18	842.34	7.14
858.56	6.81	864.75	6.7	868.51	6.64	895.7	6.14	900.37	6.05
918.61	5.7	920.46	5.67	930.74	5.49	958.99	4.96	960.58	4.94
965.79	4.84	968.71	4.77	976.17	4.65	983.99	4.54	993.91	4.38
1003.26	4.11	1006.08	4.03	1018	-2.96	1078	-2.96	1103.04	5.39
1121.15	5.79	1122.21	5.81	1123.12	5.83	1135.53	6.11	1136.86	6.14
1177.22	6.72	1177.47	6.72	1185.11	6.85	1188.32	6.89	1195.91	6.95
1226.07	7.17	1232.74	7.23	1233.36	7.24	1240.47	7.25	1250.34	7.3

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
573	.1	1006.08	.03	1103.04	.1

ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1006.08 1103.04 314 314 314 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 1193

INPUT

Description:

Station Elevation Data num= 37

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
550	9.22	556.08	9.22	562.93	9.22	568.39	9.2	612.47	9.08
612.85	9.08	616.23	9.06	662	8.81	667.88	8.77	711.53	8.43
723.78	8.32	761.06	7.94	779.68	7.73	788.53	7.61	812.38	7.28
820.07	7.17	837.96	6.87	865.94	6.43	895	5.94	919.5	5.47
932.47	5.24	962.67	4.65	969.94	4.52	973.06	4.43	1000	4.09
1010	3.71	1013.28	3.61	1027.5	-2.53	1087.5	-2.53	1110.54	5.15
1156.84	6.41	1201.53	6.98	1210.26	7.14	1213.81	7.19	1222.22	7.2
1263.68	7.28	1282.48	7.26						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
550	.1	1013.28	.03	1110.54	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1013.28 1110.54 381 381 381 .1 .3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 812

INPUT

Description: Interpolated Section

Station Elevation Data num= 51

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
585.67	8.86	591.07	8.84	597.15	8.81	598.71	8.8	601.99	8.79
641.14	8.62	641.48	8.61	644.48	8.6	646.8	8.58	669.35	8.44
685.12	8.36	690.35	8.33	712.75	8.18	729.11	8.07	739.99	7.98
773.21	7.71	775.01	7.7	792.51	7.56	800.61	7.49	800.83	7.49
823.24	7.31	829.82	7.26	830.46	7.25	847.27	7.04	850.23	7



ExpandedLocal.rep

862.32	6.85	873.56	6.68	886.71	6.48	900.86	6.12	905	6.01
923.88	5.52	936.07	5.22	943.76	5.02	964.44	4.57	971.27	4.43
974.2	4.34	988.19	4.11	999.51	3.95	1001.19	3.9	1008.91	3.65
1012.67	3.55	1030	-2.36	1090	-2.36	1112.03	4.98	1125.98	5.4
1156.45	5.88	1162.41	6	1164.83	6.04	1170.56	6.07	1198.83	6.22
1211.65	6.24								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
585.67	.1	1012.67	.03	1112.03	.1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1012.67	1112.03		381	381	381		.1	.3

CROSS SECTION

RIVER: W-15 Main  
 REACH: South RS: 431

INPUT  
 Description: Interpolated Section

Station Elevation Data num= 50

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
621.33	8.5	626.05	8.46	631.37	8.41	632.73	8.39	635.6	8.37
669.81	8.15	670.11	8.15	672.74	8.13	674.76	8.12	694.46	7.97
708.25	7.91	712.82	7.89	732.39	7.79	746.69	7.7	756.2	7.64
787.29	7.47	788.97	7.46	805.34	7.4	812.92	7.36	813.12	7.36
834.09	7.34	840.25	7.34	840.84	7.33	856.57	7.2	859.35	7.18
870.66	7.08	881.17	6.94	893.48	6.77	906.72	6.3	910.59	6.16
928.26	5.57	939.66	5.2	946.86	4.95	966.21	4.48	972.6	4.33
975.34	4.26	988.43	3.97	999.03	3.81	1000.6	3.77	1007.82	3.59
1010.31	3.53	1030	-2.2	1090	-2.2	1110.88	4.76	1111.37	4.77
1114.55	4.86	1115.84	4.9	1118.9	4.94	1133.99	5.15	1140.83	5.22

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
621.33	.1	1010.31	.03	1110.88	.1

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1010.31	1110.88		381	381	381		.1	.3

CROSS SECTION

ExpandedLocal.rep

RIVER: W-15 Main  
 REACH: South RS: 50

INPUT

Description: 50' US Confluence with Doubloon Bayou

Station Elevation Data num= 20

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
657	8.15	666.75	7.98	702.72	7.66	719.58	7.51	752.04	7.39
772.41	7.3	801.36	7.23	825.23	7.23	850.68	7.42	868.46	7.36
879	7.31	900.25	7.05	916.19	6.32	949.96	4.89	988.67	3.84
1000	3.65	1009.62	3.48	1030	-2.03	1090	-2.03	1108.71	4.2

Manning's n Values num= 2

Sta	n Val	Sta	n Val
657	.1	1009.62	.03

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	1009.62	1108.71		0	0	0		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 54648

INPUT

Description: Copy of SELA 10.35

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-100	21	260	16	360	16	491.8	17.8	496.8	17.9
499.8	13.2	514.8	12.65	518.8	13.1	524.8	19.1	532.8	18.8
820.21	21								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-100	.125	496.8	.04	524.8	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	496.8	524.8		311	311	311		.1	.3

CROSS SECTION

RIVER: W14 Main

REACH: Upper

RS: 54337

INPUT

Description: Copy of SELA 10.291

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-100	21	260	16	360	16	491.8	17.8	496.8	17.9
499.8	13.2	514.8	12.6	518.8	13.1	524.8	19.1	532.8	18.8
824	21								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-100	.125	496.8	.04	524.8	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	496.8	524.8		53	53	.1	.3

CROSS SECTION

RIVER: W14 Main

REACH: Upper

RS: 54284

INPUT

Description: Copy of SELA 10.281

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-98	21	262	16	362	16	492	16.9	495	16.9
502	12.7	504	12.5	507	12.3	510	12.4	512	12.5
515	17.6	822	21						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-98	.125	495	.04	515	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	495	515		106	106	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-98	501	17.6	F
513	822	17.6	F

CULVERT

ExpandedLocal.rep

RIVER: W14 Main  
 REACH: Upper RS: 54280

INPUT

Description: Pawn Road  
 Distance from Upstream XS = 2  
 Deck/Roadway Width = 102  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 2  

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
492	17.6		515	17.6	

Upstream Bridge Cross Section Data

Station Elevation Data num= 12  

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-98	21	262	16	362	16	492	16.9	495	16.9
502	12.7	504	12.5	507	12.3	510	12.4	512	12.5
515	17.6	822	21						

Manning's n Values num= 3  

Sta	n Val	Sta	n Val	Sta	n Val
-98	.125	495	.04	515	.125

Bank Sta: Left Right Coeff Contr. Expan.  
 495 515 .1 .3

Ineffective Flow num= 2  

Sta L	Sta R	Elev	Permanent
-98	501	17.6	F
513	822	17.6	F

Downstream Deck/Roadway Coordinates

num= 2  

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
495	17.5		515	17.5	

Downstream Bridge Cross Section Data

Station Elevation Data num= 11  

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-95	21	265	16	365	16	495	17.5	500	13.4
502	12	507	12	510	12.3	511	12.4	515	17.5
1665	21								

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -95 .125 495 .04 515 .125

Bank Sta: Left Right Coeff Contr. Expan.  
 495 515 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -95 500 17.5 F  
 512 1665 17.5 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 2

Culvert Name Shape Rise Span  
 Culvert #1 Pipe Arch 3 4.83  
 FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
 FHWA Scale # 1 - 90 Degree headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 1 2 102 .024 .024 0 .2  
 1  
 Upstream Elevation = 12.3  
 Centerline Station = 505  
 Downstream Elevation = 12  
 Centerline Station = 504

Culvert Name Shape Rise Span  
 Culvert #2 Circular 3  
 FHWA Chart # 1 - Concrete Pipe Culvert  
 FHWA Scale # 1 - Square edge entrance with headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 1 2 102 .013 .013 0 .9  
 1  
 Upstream Elevation = 12.75  
 Centerline Station = 510

Downstream Elevation = 12.48  
Centerline Station = 509

CROSS SECTION

RIVER: W14 Main  
REACH: Upper RS: 54178

INPUT

Description: Copy of SELA 10.261

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-95	21	265	16	365	16	495	17.5	500	13.4
504	12.7	507	12	510	12.3	511	12.4	515	17.5
825	21								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-95	.125	495	.04	515	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	495	515		21	21	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-95	500	17.5	F
512	825	17.5	F

CROSS SECTION

RIVER: W14 Main  
REACH: Upper RS: 54157

INPUT

Description: Copy of SELA 10.257

Station Elevation Data num= 30

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-290	21	70	16	170	16	300	18.3	310	18.3
320	18.3	330	18.3	340	18.5	350	18.6	360	18.4
370	18.4	380	18.2	390	18.3	400	18.4	410	18.2
420	18.5	430	18.6	440	18.7	450	18.7	460	18.5
470	18.5	480	18.4	490	18.9	497	17.2	500	12.4
507	12.7	512	12.8	516	17.7	519	17.6	630	21

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -290 .125 497 .04 516 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 497 516 164 164 164 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 53993

INPUT

Description: Copy of SELA 10.226\*

Station Elevation Data num= 39  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -352.55 21 -38.45 16.43 2.14 16 66.25 16 100.67 16.05  
 212.82 17.71 228.75 17.96 238.61 17.97 248.46 17.99 258.31 18.01  
 265.38 18.13 268.16 18.17 278.02 18.24 287.87 18.08 297.72 18.07  
 307.57 17.91 317.43 17.98 317.84 17.98 327.28 18.09 337.13 17.99  
 346.98 18.26 356.84 18.39 366.69 18.51 370.4 18.53 376.54 18.51  
 386.4 18.33 396.25 18.3 406.1 18.2 415.95 18.54 422.85 17.25  
 426.69 13.27 428.38 12.05 434.09 12.46 435.5 12.68 440.58 13.41  
 444.65 17.6 447.46 17.54 450.9 17.56 567.5 21

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -352.55 .125 422.85 .04 444.65 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 422.85 444.65 163 163 163 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 53830

INPUT

Description: Copy of SELA 10.195\*

Station Elevation Data num= 39  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -415.1 21 -105.7 16.29 -65.71 16 -2.57 16 31.34 16.09

ExpandedLocal.rep

141.82	17.41	157.51	17.61	167.21	17.65	176.92	17.69	186.62	17.72
193.59	17.82	196.33	17.84	206.03	17.88	215.74	17.76	225.44	17.74
235.15	17.62	244.85	17.65	245.26	17.65	254.56	17.79	264.26	17.78
273.97	18.03	283.68	18.17	293.38	18.31	297.03	18.35	303.09	18.31
312.79	18.16	322.5	18.1	332.2	18	341.91	18.19	348.7	17.3
354.29	12.68	356.75	11.7	362.56	12.27	363.99	12.66	369.16	14.01
373.3	17.5	375.93	17.47	379.13	17.51	505	21		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-415.1	.125	348.7	.04	373.3	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	348.7	373.3		164	164	164		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 53666

INPUT  
 Description: Copy of SELA 10.164\*  
 Station Elevation Data num= 39

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-477.65	21	-172.95	16.14	-133.57	16	-71.38	16	-37.99	16.14
70.81	17.1	86.26	17.27	95.82	17.32	105.38	17.38	114.93	17.43
121.79	17.51	124.49	17.52	134.05	17.51	143.61	17.44	153.17	17.41
162.72	17.33	172.28	17.33	172.68	17.33	181.84	17.48	191.4	17.58
200.95	17.79	210.51	17.96	220.07	18.12	223.67	18.17	229.63	18.12
239.19	17.99	248.74	17.9	258.3	17.79	267.86	17.83	274.55	17.35
281.9	12.09	285.12	11.35	291.03	12.09	292.49	12.64	297.74	14.62
301.95	17.4	304.39	17.41	307.37	17.45	442.21	21		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-477.65	.125	274.55	.04	301.95	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	274.55	301.95		164	164	164		.1	.3

CROSS SECTION

RIVER: W14 Main



REACH: Upper

RS: 53502

INPUT

Description: Copy of SELA 10.133

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-540.2	21	-240.2	16	-140.2	16	-.2	16.8	50	17.2
100.1	17	150.3	18	200.4	17.4	209.5	11.5	213.5	11
219.5	11.9	230.6	17.3	235.6	17.4	380	21		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-540.2	.125	200.4	.04	230.6	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	200.4	230.6		280	280		.1	.3

CROSS SECTION

RIVER: W14 Main

REACH: Upper

RS: 53222

INPUT

Description: Copy of SELA 10.08

Station Elevation Data num= 41

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
360	19.1	370	18.7	380	18	390	17.5	400	17.3
410	17.1	420	17	430	16.9	440	17.2	450	17.1
460	16.9	470	16.7	480	16.7	490	16.6	500	16.4
510	16.3	513	11.6	517	10.8	527	12.5	529	17.3
530	17.1	540	16.9	550	16.6	560	16.3	570	16.5
580	16	590	16.1	600	16	610	16.1	620	16.2
630	16.2	640	16.3	650	16.3	660	16.2	670	15.7
680	15.9	690	16	700	16.9	710	17	720	16.4
820	20								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
360	.125	510	.04	529	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	510	529		68	68		.1	.3

CROSS SECTION

RIVER: W14 Main
REACH: Upper RS: 53154

INPUT

Description: Copy of SELA 10.067

Station Elevation Data num= 11

Table with 10 columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains station and elevation data points.

Manning's n Values num= 3

Table with 6 columns: Sta, n Val, Sta, n Val, Sta, n Val. Contains Manning's n values for specific stations.

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
478 528 42 42 42 .1 .3

Ineffective Flow num= 2

Table with 4 columns: Sta L, Sta R, Elev, Permanent. Contains ineffective flow data.

CULVERT

RIVER: W14 Main
REACH: Upper RS: 53150

INPUT

Description: Brownsitch Road

Distance from Upstream XS = .5
Deck/Roadway Width = 41
Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

Table with 6 columns: Sta, Hi Cord, Lo Cord, Sta, Hi Cord, Lo Cord. Contains upstream coordinates.

Upstream Bridge Cross Section Data

Station Elevation Data num= 11

Table with 10 columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains station and elevation data points.

ExpandedLocal.rep

278	20	478	17.1	492	11.85	496	11.5	502	10.9
503	10.8	509	10.9	515	10.6	516	10.5	528	16
628	20								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
278	.125	478	.04	528	.125

Bank Sta: Left Right Coeff Contr. Expan.

	478	528	.1	.3
--	-----	-----	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
278	491	19.3	F
515	628	19.3	F

Downstream Deck/Roadway Coordinates num= 2

Sta Hi	Cord Lo	Sta Hi	Cord Lo
*****	*****	*****	*****
200	19.3	700	19.3

Downstream Bridge Cross Section Data Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
322	20	522	17.2	532	11.92	544	10.4	550	11.5
555	11.5	556	12.1	558	18.1	658	20		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****	*****	*****	*****	*****	*****
322	.125	522	.04	558	.125

Bank Sta: Left Right Coeff Contr. Expan.

	522	558	.1	.3
--	-----	-----	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
322	531.25	19.3	F
555.25	658	19.3	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

ExpandedLocal.rep

Number of Culverts = 1

Culvert Name      Shape      Rise      Span  
 Culvert #1      Box      4      4  
 FHWA Chart # 10- 90 degree headwall; Chamfered or beveled inlet  
 FHWA Scale # 1 - Inlet edges chamfered 3/4 inch  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n      Bottom n      Depth Blocked      Entrance Loss Coef  
 Exit Loss Coef  
                          .5      41      .013      .013      0      .5

1

Number of Barrels = 4  
 Upstream Elevation = 11.54  
 Centerline Stations  
     Sta.      Sta.      Sta.      Sta.  
     494.75 500.25 505.75 511.25  
 Downstream Elevation = 11.54  
 Centerline Stations  
     Sta.      Sta.      Sta.      Sta.  
     535      540.5      546      551.5

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper                      RS: 53112

INPUT

Description: Copy of SELA 10.059

Station Elevation Data      num=      13  
     Sta      Elev      Sta      Elev      Sta      Elev      Sta      Elev      Sta      Elev  
 \*\*\*\*\*  
     322      20      522      17.2      533      12.1      537      12      543      12  
     543      10.4      544      10.4      544      11.9      550      11.9      555      11.9  
     556      12.1      558      18.1      658      20

Manning's n Values      num=      3  
     Sta      n Val      Sta      n Val      Sta      n Val  
 \*\*\*\*\*  
     322      .125      522      .04      558      .125

Bank Sta: Left      Right      Lengths: Left Channel      Right      Coeff Contr.      Expan.  
                     522      558                      48      48      48                      .1      .3

Ineffective Flow      num=      2  
     Sta L      Sta R      Elev      Permanent  
     322      531.25      19.3      F  
     555.25      658      19.3      F

ExpandedLocal.rep

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 53064

INPUT

Description: Copy of SELA 10.05

Station Elevation Data num= 20

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
500	21.8	510	17.7	520	17.2	525	17.2	535	11.6
545	11.6	545	10.3	546	10.3	546	11.6	556	11.7
565	18.9	570	19	580	19.1	590	19.1	600	19.2
610	19.2	620	19.2	630	19.3	640	19.4	740	20

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
500	.125	525	.04	565	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	525	565		169	169	.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 52895

INPUT

Description: Copy of SELA 10.018\*

Station Elevation Data num= 33

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
419.72	21.16	435.9	17.67	439.54	17.53	452.07	17.19	459.37	17.18
460.16	17.04	471.17	11.6	473.4	11.4	480.72	10.84	482.18	10.8
482.18	9.76	482.98	9.76	482.98	10.8	486.11	10.89	491.34	12.01
492.87	12.18	501.78	18.84	506.32	18.63	510.2	18.41	515.4	18.52
524.47	18.63	528.9	18.72	533.55	18.73	542.63	18.67	547.43	18.64
551.71	18.65	560.79	18.75	569.86	18.85	586.35	18.97	611.62	19.18
633.52	19.46	642.11	19.84	660.64	19.96				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
419.72	.125	460.16	.04	501.78	.125

ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 460.16 501.78 169 169 169 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 52726

INPUT

Description: Copy of SELA 9.986\*

Station Elevation Data num= 33

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
339.44	20.52	361.79	17.64	366.83	17.47	384.14	17.19	394.23	17.16
395.32	16.88	407.34	11.59	409.78	11.2	417.76	10.08	419.36	10
419.36	9.22	419.96	9.22	419.96	10	423.06	10.14	428.23	12.33
429.75	12.65	438.56	18.78	442.64	18.26	446.13	17.79	450.79	17.94
458.95	18.16	462.93	18.29	467.1	18.26	475.26	18.14	479.57	18.08
483.41	18.1	491.57	18.19	499.73	18.29	514.54	18.43	537.24	18.69
556.91	19.09	564.63	19.81	581.28	19.92				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
339.44	.125	395.32	.04	438.56	.125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 395.32 438.56 169 169 169 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 52557

INPUT

Description: Copy of SELA 9.954\*

Station Elevation Data num= 33

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
259.16	19.88	287.69	17.6	294.12	17.41	316.22	17.18	329.08	17.14
330.48	16.72	343.51	11.59	346.15	11	354.81	9.32	356.54	9.2
356.54	8.68	356.94	8.68	356.94	9.2	360.01	9.39	365.12	12.65
366.62	13.13	375.34	18.72	378.96	17.89	382.05	17.16	386.19	17.36
393.42	17.68	396.95	17.86	400.66	17.79	407.89	17.61	411.72	17.52
415.12	17.55	422.36	17.64	429.59	17.74	442.72	17.88	462.86	18.19

ExpandedLocal.rep

480.31 18.73 487.15 19.77 501.92 19.88

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
259.16 .125 330.48 .04 375.34 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
330.48 375.34 169 169 169 .1 .3

CROSS SECTION

RIVER: W14 Main
REACH: Upper RS: 52388

INPUT

Description: Copy of SELA 9.922\*

Station Elevation Data num= 33
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
\*\*\*\*\*
178.88 19.24 213.58 17.57 221.41 17.36 248.29 17.18 263.94 17.12
265.64 16.56 279.68 11.58 282.53 10.8 291.85 8.56 293.72 8.4
293.72 8.14 293.92 8.14 293.92 8.4 296.95 8.65 302.01 12.98
303.5 13.6 312.12 18.66 315.28 17.52 317.98 16.53 321.59 16.78
327.9 17.21 330.98 17.43 334.21 17.32 340.52 17.08 343.86 16.96
346.83 17 353.14 17.09 359.45 17.18 370.91 17.34 388.48 17.7
403.7 18.36 409.68 19.74 422.56 19.84

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
\*\*\*\*\*
178.88 .125 265.64 .04 312.12 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
265.64 312.12 169 169 169 .1 .3

CROSS SECTION

RIVER: W14 Main
REACH: Upper RS: 52219

INPUT

Description: Copy of SELA 9.89

Station Elevation Data num= 18
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
\*\*\*\*\*

ExpandedLocal.rep

98.6	18.6	148.7	17.3	198.8	17.1	200.8	16.4	218.9	10.6
228.9	7.8	230.9	7.6	233.9	7.9	238.9	13.3	248.9	18.6
253.9	15.9	265	17	276	16.4	299.1	16.8	314.1	17.2
327.1	18	332.2	19.7	343.2	19.8				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
98.6	.125	200.8	.04	248.9	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	200.8	248.9		282	282		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 51937

INPUT  
 Description: Copy of SELA 9.8365\*  
 Station Elevation Data num= 31

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
60	16.92	142.25	16.78	190.71	16.66	199.84	16.59	204.65	16.62
209.2	16.48	213.84	16.31	218.52	16.09	220.4	16.05	237.49	9.9
240.29	8.99	246.93	7.29	248.82	7.1	251.87	7.39	253.4	8.77
256.96	12.34	267.15	17.98	272.15	15.68	279.16	16.2	283.25	16.59
294.25	16.23	296.18	16.28	317.29	16.37	317.34	16.37	332.34	16.62
335.41	16.76	343.32	17.4	345.34	17.63	350.44	19.37	351.42	19.44
361.43	19.53								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
60	.125	220.4	.04	267.15	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	220.4	267.15		283	283		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 51654

INPUT  
 Description: Copy of SELA 9.783\*



ExpandedLocal.rep

Station Elevation Data num= 31

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
57.7	16.53	93.62	16.42	184.39	16.2	201.49	16.07	210.49	16.14
219.02	16.07	227.71	15.93	236.47	15.69	240	15.7	256.08	9.2
258.71	8.21	264.96	6.77	266.73	6.6	269.84	6.89	271.4	8.01
275.03	11.39	285.4	17.37	290.4	15.47	297.41	15.8	301.49	16.17
312.49	16.05	314.42	16.12	335.54	15.93	335.58	15.93	350.58	16.03
353.65	16.13	361.55	16.92	363.57	17.26	368.67	19.04	369.66	19.17
379.67	19.27								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
57.7	.125	240	.04	285.4	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	240	285.4		282 282	282		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 51372

INPUT

Description: Copy of SELA 9.7295\*

Station Elevation Data num= 30

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
44.99	16.07	178.07	15.75	203.15	15.55	216.34	15.65	228.84	15.65
241.58	15.55	254.43	15.29	259.6	15.35	274.66	8.5	277.14	7.43
282.99	6.26	284.65	6.1	287.82	6.38	289.4	7.26	293.09	10.43
303.65	16.75	308.65	15.25	315.66	15.4	319.74	15.76	330.74	15.88
332.67	15.97	353.78	15.5	353.82	15.5	368.82	15.45	371.89	15.49
379.79	16.44	381.81	16.89	386.91	18.71	387.89	18.9	397.9	19

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
44.99	.125	259.6	.04	303.65	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	259.6	303.65		283 283	283		.1	.3

CROSS SECTION

ExpandedLocal.rep

RIVER: W14 Main  
REACH: Upper

RS: 51089

INPUT

Description: Copy of SELA 9.67600\*

Station Elevation Data num= 30

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
140	15.71	171.74	15.3	204.8	15.03	222.18	15.17	238.66	15.23
255.46	15.16	272.39	14.89	279.2	15	293.25	7.8	295.56	6.66
301.01	5.74	302.57	5.6	305.79	5.88	307.4	6.51	311.16	9.48
321.9	16.13	326.9	15.04	333.9	15	337.99	15.34	348.98	15.7
350.91	15.81	372.02	15.07	372.06	15.07	387.05	14.87	390.12	14.86
398.03	15.96	400.04	16.51	405.14	18.38	406.13	18.64	416.13	18.73

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
140	.125	279.2	.04	321.9	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	279.2	321.9		282	282	282		.1	.3

CROSS SECTION

RIVER: W14 Main  
REACH: Upper

RS: 50807

INPUT

Description: Copy of SELA 9.6225\*

Station Elevation Data num= 30

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
158	15.36	165.42	14.85	206.45	14.52	228.03	14.69	248.48	14.82
269.33	14.78	290.34	14.5	298.8	14.65	311.84	7.1	313.98	5.88
319.04	5.23	320.48	5.1	323.76	5.37	325.4	5.75	329.22	8.52
340.15	15.52	345.15	14.82	352.15	14.6	356.24	14.93	367.23	15.53
369.16	15.66	390.26	14.63	390.31	14.63	405.29	14.28	408.36	14.23
416.26	15.48	418.28	16.14	423.38	18.05	424.36	18.37	434.37	18.47

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
158	.125	298.8	.04	340.15	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	298.8	340.15		283	283	283		.1	.3

ExpandedLocal.rep

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 50524

INPUT

Description: Copy of SELA 9.569

Station Elevation Data num= 18

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
130	15	159.1	14.4	208.1	14	258.3	14.4	283.2	14.4
308.3	14.1	318.4	14.3	332.4	5.1	338.4	4.6	343.4	5
358.4	14.9	370.4	14.2	387.4	15.5	408.5	14.2	426.6	13.6
434.5	15	442.6	18.1	452.6	18.2				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
130	.125	318.4	.04	358.4	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	318.4	358.4		289	289	.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 50235

INPUT

Description: Copy of SELA 9.5142\*

Station Elevation Data num= 31

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	14.81	13.86	14.66	196.62	14.24	244.76	13.9	294.08	14.2
318.54	14.19	343.2	13.94	353.12	14.1	361.12	9.63	367.12	5
367.22	4.97	373.12	4.52	378.12	4.93	380.09	6	393.14	14.64
401.13	14.47	405.11	14.26	411.24	14.62	421.35	15.22	422.06	15.26
431.46	14.8	441.68	14.31	443.1	14.25	451.69	14.07	461.15	13.8
461.8	13.89	469.03	14.89	471.91	15.76	477.11	17.41	482.02	17.5
487.08	18.02								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	353.12	.04	393.14	.125

ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 353.12 393.14 289 289 289 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 49946

INPUT

Description: Copy of SELA 9.4594\*

Station Elevation Data num= 31

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-16.73	14.61	54.65	14.5	234.14	14.09	281.41	13.81	329.85	14.01
353.88	13.99	378.09	13.79	387.84	13.9	395.84	10.23	401.84	4.91
401.94	4.85	407.84	4.44	412.85	4.85	414.82	5.7	427.88	14.38
435.85	14.5	439.81	14.33	445.93	14.56	456.01	14.99	456.72	15.02
466.1	14.67	476.28	14.33	477.7	14.3	486.27	14.23	495.7	14
496.35	14.07	503.56	14.78	506.43	15.42	511.62	16.72	516.52	16.85
521.56	17.84								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-16.73	.125	387.84	.04	427.88	.125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 387.84 427.88 290 290 290 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 49656

INPUT

Description: Copy of 9.4046\*

Station Elevation Data num= 31

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
25.35	14.42	95.43	14.33	271.65	13.93	318.07	13.71	365.63	13.81
389.21	13.78	412.99	13.63	422.56	13.7	430.56	10.82	436.56	4.81
436.66	4.74	442.56	4.36	447.58	4.78	449.55	5.4	462.62	14.12
470.56	14.53	474.52	14.39	480.62	14.51	490.68	14.76	491.38	14.78
500.73	14.55	510.89	14.36	512.31	14.35	520.84	14.39	530.26	14.2
530.9	14.25	538.09	14.67	540.96	15.08	546.12	16.03	551.01	16.2

ExpandedLocal.rep

556.04 17.66

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 25.35 .125 422.56 .04 462.62 .125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	422.56	462.62		289	289	289		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 49367

INPUT  
 Description: Copy of SELA 9.3498\*

Station Elevation Data num= 31  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 67.44 14.23 136.22 14.17 309.17 13.78 354.73 13.62 401.4 13.62  
 424.55 13.58 447.89 13.48 457.28 13.5 465.28 11.41 471.28 4.72  
 471.38 4.62 477.28 4.28 482.3 4.7 484.27 5.1 497.36 13.86  
 505.28 14.57 509.23 14.46 515.31 14.45 525.34 14.53 526.04 14.54  
 535.37 14.42 545.49 14.38 546.91 14.39 555.42 14.54 564.81 14.41  
 565.45 14.42 572.62 14.57 575.48 14.74 580.63 15.35 585.51 15.55  
 590.52 17.48

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 67.44 .125 457.28 .04 497.36 .125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	457.28	497.36		289	289	289		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 49078

INPUT  
 Description: Copy of SELA 9.295

Station Elevation Data num= 18  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*

ExpandedLocal.rep

100	15	177	14	492	13.3	500	12	506.1	4.5
512	4.2	519	4.8	532.1	13.6	540	14.6	550	14.4
560	14.3	570	14.3	580.1	14.4	590	14.7	600	14.6
610	14.4	620	14.9	625	17.3				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
100	.125	492	.04	532.1	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	492	532.1		16	16		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
100	470	15.43	F
540	625	15.43	F

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 49062

INPUT  
 Description: Copy from SELA 9.292

Station Elevation Data num= 14

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	15.43	.1	14.2	2.68	9.2	9.5	4.7	18.5	4.19
18.51	4.19	19.5	4.14	19.51	4.13	20.12	4.1	30.23	5.1
35.5	10.2	37.9	14.1	38	15.43	44	14.1		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	0	.04	38	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	0	38		69	69		.1	.3

BRIDGE

RIVER: W14 Main  
 REACH: Upper RS: 49060

INPUT  
 Description: North Blvd

ExpandedLocal.rep

Distance from Upstream XS = 5.5  
Deck/Roadway Width = 58  
Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 2

Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

\*\*\*\*\*  
0 15.43 14.17 38 15.43 14.17

Upstream Bridge Cross Section Data

Station Elevation Data num= 14

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*  
0 15.43 .1 14.2 2.68 9.2 9.5 4.7 18.5 4.19  
18.51 4.19 19.5 4.14 19.51 4.13 20.12 4.1 30.23 5.1  
35.5 10.2 37.9 14.1 38 15.43 44 14.1

Manning's n Values num= 3

Sta n Val Sta n Val Sta n Val

\*\*\*\*\*  
0 .125 0 .04 38 .125

Bank Sta: Left Right Coeff Contr. Expan.  
0 38 .1 .3

Downstream Deck/Roadway Coordinates

num= 2

Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

\*\*\*\*\*  
0 15.43 14.17 38 15.43 14.17

Downstream Bridge Cross Section Data

Station Elevation Data num= 14

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*  
0 15.43 .1 14.2 2.68 9.2 9.5 4.7 18.5 4.19  
18.51 4.19 19.5 4.14 19.51 4.13 20.12 4.1 30.23 5.1  
35.5 10.2 37.9 14.1 38 15.43 44 14.1

Manning's n Values num= 3

Sta n Val Sta n Val Sta n Val

\*\*\*\*\*  
0 .125 0 .04 38 .125

Bank Sta: Left Right Coeff Contr. Expan.  
0 38 .1 .3

Upstream Embankment side slope = 0 horiz. to 1.0 vertical

ExpandedLocal.rep

Downstream Embankment side slope = 0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow = .98
Elevation at which weir flow begins =
Energy head used in spillway design =
Spillway height used in design =
Weir crest shape = Broad Crested

Number of Piers = 1

Pier Data

Pier Station Upstream= 19 Downstream= 19
Upstream num= 2
Width Elev Width Elev
\*\*\*\*\*
1 13 1 14.17
Downstream num= 2
Width Elev Width Elev
\*\*\*\*\*
1 13 1 14.17

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy
Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth
inside the bridge at the upstream end
Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main
REACH: Upper RS: 48993

INPUT

Description: Copy of 9.279

Station Elevation Data num= 14
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
\*\*\*\*\*
0 15.43 .1 14.2 2.68 9.2 9.5 4.7 18.5 4.19



ExpandedLocal.rep

18.51 4.19 19.5 4.14 19.51 4.13 20.12 4.1 30.23 5.1  
 35.5 10.2 37.9 14.1 38 15.43 44 14.1

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .125 0 .04 38 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 0 38 42 42 42 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 48951

INPUT

Description: Copy of SELA 9.271

Station Elevation Data num= 20  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 529.7 15 536.6 13.96 539.6 10.6 546.6 4.6 552.6 4.2  
 557.6 5.1 563.5 11.5 566.6 13.96 573.5 15.2 581.5 14.1  
 590.4 13.9 600.4 14.1 610.4 14.3 620.3 14.4 630.4 14.8  
 640.4 15.2 650.3 16.6 660.3 17.5 667.3 17.9 670.3 18

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 529.7 .125 536.6 .04 566.6 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 536.6 566.6 360 360 360 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 48591

INPUT

Description: Data from Survey

Station Elevation Data num= 13  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 12.8 12 14.4 20 16.2 26 16.2 33 13.9  
 44 12.3 49 8.4 53 4 60 3.4 67 4

ExpandedLocal.rep

74 6.4 93 7 116 6.6

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .125 49 .04 74 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 49 74 179 179 179 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 48412

INPUT

Description: Copy of SELA 9.169

Station Elevation Data num= 16  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 215.6 18.7 222.6 14.7 227.6 14.5 233 13.3 239.6 4.8  
 247.6 4.6 255.6 4.6 263 13.3 269.6 13.4 293.6 15.6  
 307.7 10 314.6 9.5 326.6 11.7 343.6 11.3 351.6 13.5  
 363.6 17.1

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 215.6 .125 233 .04 263 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 233 263 111 111 111 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Upper RS: 48301

INPUT

Description: Copy of SELA 9.148

Station Elevation Data num= 16  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 215.6 18.7 222.6 14.7 227.6 14.5 233 13.4 239.6 4.8  
 247.6 4.6 255.6 4.6 263 13.4 269.6 13.4 293.6 15.6  
 307.7 10 314.6 9.5 326.6 11.7 343.6 11.3 351.6 13.5

ExpandedLocal.rep

363.6 17.1

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 215.6 .125 233 .04 263 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 233 263 0 0 0 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 48154

INPUT

Description: Data from survey

Station Elevation Data num= 11  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 12.4 27 12.5 46 11.9 53 7.9 55 4.2  
 62 3.5 66 4.2 71 9.6 80 13 94 12.3  
 111 12

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .125 46 .035 80 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 46 80 407 407 407 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 47747

INPUT

Description: Copy of SELA 9.147

Station Elevation Data num= 16  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 215.6 18.7 222.6 14.7 227.6 14.5 233 13.4 239.6 4.8  
 247.6 4.6 255.6 4.6 263 13.4 269.6 13.4 293.6 15.6  
 307.7 10 314.6 9.5 326.6 11.7 343.6 11.3 351.6 13.5  
 363.6 17.1

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 215.6 .125 233 .035 263 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 233 263 143 143 143 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 47604

INPUT

Description: Copy of SELA 9.116

Station Elevation Data num= 104  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1128 14.505-1124.36 14.558-1108.95 14.632-1089.99 14.738-1059.56 14.645  
 -1021.25 14.546-1004.17 14.386-986.888 14.181-972.489 13.944-949.416 13.557  
 -925.586 13.12-918.151 13.091 -887.84 13.469-849.415 13.779-847.001 13.778  
 -839.266 13.759-820.806 13.724-815.047 13.701-782.028 13.371 -746.31 13.014  
 -742.221 12.977-729.115 12.858-711.942 12.716-708.768 12.688-683.439 12.366  
 -643.206 11.913-633.891 11.963-595.339 12.164-574.469 12.071-565.609 12.086  
 -540.101 12.27-532.661 12.22-508.815 12.038-506.466 12.035-505.733 12.035  
 -476.419 12.35-471.364 12.372-464.442 12.403-456.523 12.401 -436.79 12.406  
 -417.143 12.748-402.058 12.823-387.551 12.912-367.326 12.984 -357.96 13.025  
 -304.043 13.244-297.862 13.264-273.679 13.36 -263.13 13.39-247.902 13.404  
 -228.398 13.399-222.126 13.388-204.074 13.377-158.934 13.262-144.796 13.215  
 -107.41 13.002 -89.47 12.921 -67.467 12.88 -28.455 12.668 -20.006 12.622  
 -13.499 12.557 -4.135 12.492 35.64 12.177 49.458 12.109 68.472 12.134  
 95.834 12.249 109.457 12.297 118.922 12.385 119.373 12.382 140.106 12.214  
 152.509 11.985 178.28 10.808 188 13.4 200 13.3 204 12.8  
 213 4.8 218 4.1 224 4.5 234 12.8 262 15.3  
 278 11 299 10.7 308 11.9 320 11.9 333.209 11.72  
 336.307 11.711 355.693 11.633 358.126 11.63 366.591 11.462 399.668 10.911  
 409.178 10.967 432.25 11.558 461.548 11.744 497.351 11.933 516.148 12.357  
 522.015 12.408 552.627 13.018 565.836 13.274 567.496 13.364 569.633 13.483  
 590.877 14.54 597.144 14.638 603.361 14.578 612.7 14.167

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1128 .125 204 .035 234 .085

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

ExpandedLocal.rep

	204	234		326	326	326		.1	.3
Ineffective Flow		num=	1						
Sta L	Sta R	Elev	Permanent						
262	612.7	15.3	F						

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 47278

INPUT

Description: Copy of SELA 9.046

Station Elevation Data	num=	117							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-1127	14.773	-1122.54	14.764	-1106.13	14.72	-1082.11	14.625	-1070.94	14.445
-1061.24	14.222	-1035.75	13.703	-1006.4	13.232	-1000.55	13.278	-995.483	13.295
-957.842	13.324	-929.725	13.488	-906.311	13.63	-892.832	13.708	-882.286	13.681
-863.966	13.67	-858.26	13.662	-854.976	13.661	-834.235	13.54	-753.559	12.965
-741.406	12.872	-738.133	12.843	-732.449	12.776	-701.419	12.423	-666.69	12.164
-666.057	12.152	-664.34	12.173	-621.823	12.685	-600.932	12.045	-589.98	11.94
-575.12	12.211	-545.93	12.911	-535.173	12.948	-521.905	12.994	-514.266	12.979
-485.901	12.912	-473.854	12.883	-469.414	12.865	-445.451	12.71	-438.553	12.715
-416.056	12.557	-400.697	12.326	-372.922	12.082	-353.727	11.927	-337.897	11.922
-327.87	11.983	-319.764	12.049	-287.127	12.23	-266.606	12.344	-249.27	12.371
-213.448	12.566	-211.414	12.581	-210.289	12.589	-206.38	12.601	-185.549	12.659
-140.621	12.688	-138.334	12.686	-136.8	12.68	-82.746	12.59	-70.816	12.57
-57.633	12.608	-42.54	12.499	-23.388	12.192	-19.178	12.058	-15.861	11.942
4.183	11.091	25.912	9.671	50.906	6.326	67.684	7.41	74.267	8.24
82.619	8.776	120.99	10.964	135.623	10.965	144.351	11.055	151.229	11.096
163	13.5	188	13.4	200	13.3	204	12.8	213	4.8
218	4.1	224	4.5	234	12.8	242	13.1	259.752	11.461
274.317	11.525	296.133	11.492	335.148	11.833	343.504	11.834	363.863	11.85
378.371	11.928	395.98	11.919	420.453	11.944	436.534	11.939	443.889	11.952
448.105	11.972	463.642	12.043	488.216	12.127	517.371	12.219	517.715	12.219
517.838	12.22	518.101	12.22	562.094	12.203	587.572	12.198	591.645	12.217
614.289	12.091	620.283	12.054	627.018	11.978	657.306	11.916	679.86	12.142
711.207	12.878	720.414	13.131	724.626	13.208	727.039	13.238	767.653	14.133
782.622	14.469	794.705	14.42						

Manning's n Values	num=	3			
Sta	n Val	Sta	n Val	Sta	n Val
*****					
-1127	.125	204	.035	234	.085

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	204	234		206	206	.1	.3

ExpandedLocal.rep

Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 242 794.705 13.1 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 47072

INPUT

Description: Data from Survey

Station Elevation Data num= 118

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-1127	14.773	-1122.54	14.764	-1106.13	14.72	-1082.11	14.625	-1070.94	14.445
-1061.24	14.222	-1035.75	13.703	-1006.4	13.232	-1000.55	13.278	-995.483	13.295
-957.842	13.324	-929.725	13.488	-906.311	13.63	-892.832	13.708	-882.286	13.681
-863.966	13.67	-858.26	13.662	-854.976	13.661	-834.235	13.54	-753.559	12.965
-741.406	12.872	-738.133	12.843	-732.449	12.776	-701.419	12.423	-666.69	12.164
-666.057	12.152	-664.34	12.173	-621.823	12.685	-600.932	12.045	-589.98	11.94
-575.12	12.211	-545.93	12.911	-535.173	12.948	-521.905	12.994	-514.266	12.979
-485.901	12.912	-473.854	12.883	-469.414	12.865	-445.451	12.71	-438.553	12.715
-416.056	12.557	-400.697	12.326	-372.922	12.082	-353.727	11.927	-337.897	11.922
-327.87	11.983	-319.764	12.049	-287.127	12.23	-266.606	12.344	-249.27	12.371
-213.448	12.566	-211.414	12.581	-210.289	12.589	-206.38	12.601	-185.549	12.659
-140.621	12.688	-138.334	12.686	-136.8	12.68	-82.746	12.59	-70.816	12.57
-57.633	12.608	-42.54	12.499	-23.388	12.192	-19.178	12.058	-15.861	11.942
19	11.5	33	11.2	38	6.5	40	3.2	46	2.9
50	3.2	52	5.8	65	14.7	78	14.8	91	14.8
120.99	10.964	135.623	10.965	144.351	11.055	151.229	11.096	167.712	11.222
188.627	10.765	214.435	10.685	234.774	11.148	237.796	11.201	241.631	11.321
259.752	11.461	274.317	11.525	296.133	11.492	335.148	11.833	343.504	11.834
363.863	11.85	378.371	11.928	395.98	11.919	420.453	11.944	436.534	11.939
443.889	11.952	448.105	11.972	463.642	12.043	488.216	12.127	517.371	12.219
517.715	12.219	517.838	12.22	518.101	12.22	562.094	12.203	587.572	12.198
591.645	12.217	614.289	12.091	620.283	12.054	627.018	11.978	657.306	11.916
679.86	12.142	711.207	12.878	720.414	13.131	724.626	13.208	727.039	13.238
767.653	14.133	782.622	14.469	794.705	14.42				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****					
-1127	.125	33	.035	65	.06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 33 65 841 841 841 .1 .3  
 Ineffective Flow num= 1

ExpandedLocal.rep

Sta L Sta R Elev Permanent  
 91 794.705 14.8 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 46231

INPUT

Description: Copy of SELA 8.82066\*

Station Elevation Data num= 109

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1140	14.802	-1100.72	14.922	-1100.37	14.923	-1100.14	14.924	-1099.01	14.926
-1066.87	14.927	-1014.64	14.76	-969.793	14.585	-963.598	14.571	-936.673	14.485
-933.232	14.463	-932.877	14.464	-930.209	14.451	-882.691	14.153	-851.615	13.952
-831.48	13.857	-825.04	13.812	-776.712	13.351	-763.284	13.27	-736.993	13.271
-718.742	13.274	-695.089	13.254	-692.167	13.244	-681.845	13.211	-665.592	13.13
-660.992	13.119	-652.757	13.066	-626.894	12.872	-618.773	12.839	-592.796	12.843
-561.396	12.758	-558.699	12.768	-532.719	13.146	-518.534	13.147	-490.503	13.207
-469.424	13.238	-456.406	13.279	-439.554	13.312	-422.308	13.395	-399.375	13.544
-373.271	13.732	-354.113	13.851	-346.697	13.884	-320.498	14.054	-320.015	14.056
-317.313	14.035	-295.105	13.856	-284.22	13.79	-255.715	13.317	-245.439	13.225
-239.092	13.239	-212.338	13.349	-195.774	13.403	-176.396	13.46	-158.334	13.426
-140.455	13.35	-109.09	13.23	-99.741	13.171	-92.183	13.135	-78.399	13.053
-32.631	12.774	-16.303	12.785	17.747	12.701	40.606	12.749	75.193	12.838
77.387	12.822	82.293	12.784	102.22	12.64	111.134	12.629	134.478	12.348
147.075	12.161	151.886	11.835	161.64	13.18	186.55	13.1	198.5	13.03
202	12.78	210.7	5.36	213.19	4.44	214.77	4.34	218.83	3.1
221.87	5.06	223.96	5.35	232	12.78	235.91	12.7	238.58	13.03
242.985	9.607	252.722	9.815	264.542	10.198	290.84	11.468	300.883	11.484
323.332	11.8	325.715	11.845	327.776	11.864	356.084	12.007	397.22	12.226
398.664	12.228	400.214	12.228	434.606	12.275	441.863	12.275	449.655	12.277
471.789	12.276	473.794	12.278	477.418	12.278	502.379	12.252	509.286	12.249
546.21	12.225	546.783	12.226	559.583	12.25	573	12.275		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1140	.125	202	.035	232	.06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 202 232 261 261 261 .1 .3

Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 238.58 573 13.03 F

ExpandedLocal.rep

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 45970

INPUT

Description: Copy of SELA 8.76433\*

Station Elevation Data num= 111

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1140	14.802	-1100.72	14.922	-1100.37	14.923	-1100.14	14.924	-1099.01	14.926
-1066.87	14.927	-1014.64	14.76	-969.793	14.585	-963.598	14.571	-936.673	14.485
-933.232	14.463	-932.877	14.464	-930.209	14.451	-882.691	14.153	-851.615	13.952
-831.48	13.857	-825.04	13.812	-776.712	13.351	-763.284	13.27	-736.993	13.271
-718.742	13.274	-695.089	13.254	-692.167	13.244	-681.845	13.211	-665.592	13.13
-660.992	13.119	-652.757	13.066	-626.894	12.872	-618.773	12.839	-592.796	12.843
-561.396	12.758	-558.699	12.768	-532.719	13.146	-518.534	13.147	-490.503	13.207
-469.424	13.238	-456.406	13.279	-439.554	13.312	-422.308	13.395	-399.375	13.544
-373.271	13.732	-354.113	13.851	-346.697	13.884	-320.498	14.054	-320.015	14.056
-317.313	14.035	-295.105	13.856	-284.22	13.79	-255.715	13.317	-245.439	13.225
-239.092	13.239	-212.338	13.349	-195.774	13.403	-176.396	13.46	-158.334	13.426
-140.455	13.35	-109.09	13.23	-99.741	13.171	-92.183	13.135	-78.399	13.053
-32.631	12.774	-16.303	12.785	17.747	12.701	40.606	12.749	75.193	12.838
77.387	12.822	82.293	12.784	102.22	12.64	111.134	12.629	134.478	12.348
147.075	12.161	151.886	11.835	160.28	12.86	185.09	12.81	197	12.77
200	12.75	201.44	12.13	210.6	4.48	213.37	4.08	215.13	4.07
219.67	2.1	222.19	5.78	223.91	6.2	229.74	9.02	230	12.72
233.83	12.8	235.16	12.97	242.985	9.607	252.722	9.815	264.542	10.198
290.84	11.468	300.883	11.484	323.332	11.8	325.715	11.845	327.776	11.864
356.084	12.007	397.22	12.226	398.664	12.228	400.214	12.228	434.606	12.275
441.863	12.275	449.655	12.277	471.789	12.276	473.794	12.278	477.418	12.278
502.379	12.252	509.286	12.249	546.21	12.225	546.783	12.226	559.583	12.25
573	12.275								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1140	.125	200	.035	230	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	200	230		339	339	.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
235.16	573	12.97	F

CROSS SECTION



ExpandedLocal.rep

RIVER: W14 Main  
 REACH: Mid RS: 45631

INPUT

Description: data from survey

Station Elevation Data num= 86

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1301	14.802	-1261.72	14.922	-1261.37	14.923	-1261.14	14.924	-1260.01	14.926
-1227.87	14.927	-1175.64	14.76	-1130.79	14.585	-1124.59	14.571	-1097.67	14.485
-1094.23	14.463	-1093.87	14.464	-1091.2	14.451	-1043.69	14.153	-1012.61	13.952
-992.48	13.857	-986.04	13.812	-937.712	13.351	-924.284	13.27	-897.993	13.271
-879.742	13.274	-856.089	13.254	-853.167	13.244	-842.845	13.211	-826.592	13.13
-821.992	13.119	-813.757	13.066	-787.894	12.872	-779.773	12.839	-753.796	12.843
-722.396	12.758	-719.699	12.768	-693.719	13.146	-679.534	13.147	-651.503	13.207
-630.424	13.238	-617.406	13.279	-600.554	13.312	-583.308	13.395	-560.375	13.544
-534.271	13.732	-515.113	13.851	-507.697	13.884	-481.498	14.054	-481.015	14.056
-478.313	14.035	-456.105	13.856	-445.22	13.79	-416.715	13.317	-406.439	13.225
-400.092	13.239	-373.338	13.349	-356.774	13.403	-337.396	13.46	-319.334	13.426
-301.455	13.35	-270.09	13.23	-260.741	13.171	-253.183	13.135	-239.399	13.053
-193.631	12.774	-177.303	12.785	-143.253	12.701	-120.394	12.749	-85.807	12.838
-83.613	12.822	-78.707	12.784	-58.78	12.64	-49.866	12.629	-26.522	12.348
-13.925	12.161	-9.114	11.835	17	13.1	34	12.3	43	11.4
49	7.1	50	3.3	56	3.1	63	2.9	66	8.3
75	14.3	93	15.6	117	20	168	4.5	1210	4.5
1261	20								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1301	.125	43	.035	117	.03

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	43	117		170	170	.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
117	1261	20	T

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 45461

INPUT

Description: Copy of SELA 8.655  
 Pond added from Lidar and Pond Plans

ExpandedLocal.rep

Station Elevation Data num= 94

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1191	15.119	-1186.33	15.112	-1148.29	15.147	-1131.32	15.049	-1118.69	14.956
-1103.53	14.816	-1093.35	14.677	-1060.98	13.779	-1038.41	12.949	-1037.3	12.96
-1036.89	12.965	-1007.49	13.403	-990.647	13.581	-928.53	14.235	-920.308	14.226
-914.186	14.285	-896.861	14.481	-873.588	14.69	-873.414	14.69	-872.403	14.69
-854.398	14.69	-827.932	14.69	-826.774	14.689	-825.737	14.689	-795.588	14.55
-778.758	14.479	-764.03	14.393	-737.647	14.265	-729.585	14.166	-693.602	13.748
-664.135	12.992	-649.557	12.971	-637.8	13.267	-598.259	13.399	-590.464	13.417
-582.064	13.457	-558.907	13.631	-532.891	13.771	-524.731	13.849	-517.422	13.88
-495.792	13.945	-441.129	14.078	-434.544	14.096	-431.795	14.091	-429.332	14.096
-416.745	14.055	-407.436	14.03	-394.926	14.138	-371.995	13.901	-354.582	13.818
-333.679	13.66	-327.447	13.599	-326.531	13.59	-297.633	13.325	-292.334	13.304
-275.114	13.026	-258.137	12.834	-226.674	12.345	-223.94	12.303	-222.448	12.292
-217.375	12.336	-196.021	12.623	-189.743	12.672	-163.47	12.81	-155.545	12.861
-129.793	13.045	-121.348	13.112	-113.84	13.163	-101.072	13.209	-70.772	13.33
-52.954	13.362	-37.461	13.314	-18.757	13.276	-4.569	13.226	41.82	12.807
49.638	12.734	63.968	12.723	83.835	12.897	101.498	12.887	131.535	12.961
144.566	13.013	152.229	13.025	173.954	12.704	195.5	12.5	200.4	12.7
210.5	3.6	215.5	3.8	220.5	1.1	222.5	6.5	228.5	8.9
234.5	20	281	4.5	1323	4.5	1369	20		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1191	.125	195.5	.035	234.5	.03

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
195.5	234.5	338	338	338	.1	.3
Ineffective Flow	num=	1				
Sta L	Sta R	Elev	Permanent			
234.5	1369	20	T			

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 45123

INPUT

Description: Copy of SELA 8.582

Station Elevation Data num= 85

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1021	15.542	-999.193	15.578	-986.024	15.427	-926.064	15.13	-910.402	14.962
-895.474	14.602	-869.846	13.88	-853.504	13.457	-834.464	13.129	-804.666	14.123
-799.503	14.282	-796.495	14.393	-785.094	14.429	-751.518	14.628	-739.486	14.603

ExpandedLocal.rep

-724.827	14.513-720.557	14.455-695.422	14.2-682.588	14.186-659.206	13.961
-644.619	13.869-631.554	13.726-609.126	13.403-607.209	13.408 -606.65	13.407
-577.804	13.31-544.194	13.219-537.601	13.196-531.091	13.182-501.242	13.785
-472.262	14.05-464.884	14.134-457.284	14.201-438.017	14.334-420.381	14.422
-410.346	14.433-400.604	14.436-373.988	14.461-346.574	14.467-316.223	14.322
-309.671	14.321-283.092	13.945-257.286	13.233-246.733	12.985-235.864	12.796
-213.119	13.362-194.428	13.789-185.627	13.943-162.058	14.221-137.032	14.285
-131.386	14.286-127.804	14.282 -120.49	14.245 -88.898	14.079 -67.586	14.041
-54.719	13.974 -41.134	13.861 -20.539	13.502 -14.682	13.302 5.363	12.564
13.641	12.3 17.058	12.289 25.278	12.458 87.144	13.396 96.884	13.319
122.354	13.438 150.361	13.287 170.48	10.94 184.54	8.461 189.2	12.7
200.3	12.5 201	11.82 211.3	4.3 217.3	4 218	1.2
219	1.2 221.3	4.8 223.3	8.3 227.3	11.3 231	11.82
240.4	15 260.4	20 311	4.5 1484	4.5 1535	20

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1021	.125	201	.035	260.4	.03

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	201	260.4		404	404		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
260.4	1535	20	T

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 44719

INPUT

Description: Copy of SELA 8.495

Station Elevation Data num= 120

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1681	16.181-1678.92	16.184-1676.65	16.178-1641.22	16.047-1619.77	15.879				
-1604.67	15.793-1580.87	15.563-1532.42	14.179-1531.56	14.161-1507.33	14.061				
-1458.89	15.302-1458.46	15.313-1458.01	15.317 -1421.9	15.415-1409.28	15.476				
-1385.35	15.393-1384.77	15.391 -1383.6	15.38-1312.24	14.784-1311.24	14.776				
-1309.18	14.775-1299.96	14.772-1286.17	14.765-1276.73	14.838 -1268.8	14.927				
-1209.58	15.08-1206.77	15.044-1184.04	14.827-1145.11	13.671 -1136.8	13.438				
-1132.98	13.389-1122.66	13.619-1090.58	14.244-1075.55	14.397-1034.02	14.764				
-1031.85	14.765-1030.85	14.769-1028.15	14.763-1005.31	14.626-996.866	14.66				
-969.972	14.598-942.712	14.577-926.898	14.605-913.959	14.596-913.191	14.596				
-889.296	14.552-876.307	14.489-866.323	14.443-832.815	14.362-811.019	14.157				
-808.269	14.119-806.155	14.083-774.249	13.526-745.986	12.992-732.741	12.749				

ExpandedLocal.rep

-685.818	13.642	-666.821	13.833	-639.351	14.471	-615.325	14.647	-595.681	14.722
-576.186	14.917	-571.967	14.922	-565.481	14.904	-545.338	14.877	-524.334	14.842
-510.303	14.826	-482.468	14.59	-461.004	14.451	-428.542	13.904	-400.748	13.115
-384.746	12.642	-378.77	12.762	-373.724	12.874	-343.858	13.592	-308.488	14.37
-284.854	14.664	-270.359	14.839	-260.906	14.848	-248.983	14.79	-246.53	14.778
-225.878	14.743	-190.835	14.703	-152.055	14.713	-129.202	14.712	-101.945	14.741
-94.757	14.709	-90.093	14.692	-71.038	14.529	-50.984	14.536	-45.723	14.527
-4.408	13.075	18.608	12.189	23.84	12.091	43.173	12.123	66.343	12.162
71.278	12.18	78.884	12.185	98.945	12.398	105.452	12.531	107.439	12.547
130.292	12.935	156.299	13.134	162.374	13.269	172.424	13.512	189.2	12.7
193.5	11.82	200.3	12.5	211.3	4.3	217.3	4	218	1.3
219	1.3	221.3	4.8	223.3	8.3	227.3	11.3	233.41	13.02
281.086	15.592	311.037	20	362	4.5	1535	4.5	1586	20

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1681	.125	200.3	.035	311.037	.03

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	200.3	311.037		275	275		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
311.037	1586	20	T

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 44444

INPUT

Description: Copy of SELA 8.436

Station Elevation Data num= 119

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1333	15.701	-1325.03	15.648	-1314.67	15.512	-1282.04	15.144	-1268.11	14.877
-1251.67	14.696	-1244.84	14.644	-1239.05	14.669	-1221.56	14.878	-1200.9	15.11
-1198.28	15.133	-1169.37	15.252	-1153.07	15.326	-1151.72	15.331	-1150.12	15.328
-1121.99	15.28	-1110.09	15.193	-1081.88	15.06	-1067.1	15.006	-1055.45	14.977
-1048.57	14.978	-1012.05	14.966	-997.805	14.971	-965.494	14.976	-947.031	14.974
-942.215	14.995	-938.138	14.999	-911.807	15.091	-880.378	15.187	-852.162	15.206
-849.1	15.215	-845.483	15.216	-816.041	15.281	-789.771	15.303	-766.186	15.246
-743.935	15.21	-732.706	15.201	-723.198	15.168	-704.314	15.201	-693.162	15.22
-662.869	15.214	-642.388	15.212	-624.509	15.241	-594.234	15.157	-578.354	15.112
-560.665	15.135	-533.05	15.072	-529.8	15.079	-511.53	15.141	-481.798	15.239
-477.259	15.257	-473.986	15.259	-471.513	15.253	-441.241	15.196	-409.939	15.342
-393.854	15.38	-380.39	15.413	-359.12	15.46	-355.025	15.47	-347.961	15.448

ExpandedLocal.rep

-309.057	15.252	-297.78	15.352	-285.279	15.306	-277.366	15.186	-254.501	14.454
-236.441	14.201	-220.231	13.854	-199.707	13.715	-190.169	13.654	-175.102	13.707
-160.878	13.728	-136.341	13.929	-118.837	14.086	-113.763	14.119	-90.562	14.261
-48.878	14.421	-46.321	14.432	-30.531	14.471	-5.56	14.529	.051	14.549
8.915	14.609	23.829	14.706	33.269	14.815	53.933	15.111	86.402	15.682
110.928	16.034	115.219	16.081	118.96	16.123	132.233	16.256	142.871	16.333
174.846	16.553	190.693	16.595	195.965	16.492	214.604	16.169	225.795	15.816
244.294	15.026	259.697	14.636	286.336	13.714	302.332	13.367	323.429	13.217
334.158	13.152	347.968	13.106	405.891	12.695	417.138	12.666	424.932	12.595
488.432	11.335	490	13.2	495	12.8	503.5	11.7	513	2.7
515	1.6	536	2.3	557	14.1	565	14.5	575	14.5
585	20	636	4.5	1678	4.5	1729	20		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1333	.125	503.5	.035	585	.03

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	503.5	585		51	51		.1	.3
Ineffective Flow			num=	1				
Sta L	Sta R	Elev	Permanent					
585	1729	20	T					

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 44393

INPUT

Description: Copy of SELA 8.425

Station Elevation Data num= 119

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1333	15.701	-1325.03	15.648	-1314.67	15.512	-1282.04	15.144	-1268.11	14.877
-1251.67	14.696	-1244.84	14.644	-1239.05	14.669	-1221.56	14.878	-1200.9	15.11
-1198.28	15.133	-1169.37	15.252	-1153.07	15.326	-1151.72	15.331	-1150.12	15.328
-1121.99	15.28	-1110.09	15.193	-1081.88	15.06	-1067.1	15.006	-1055.45	14.977
-1048.57	14.978	-1012.05	14.966	-997.805	14.971	-965.494	14.976	-947.031	14.974
-942.215	14.995	-938.138	14.999	-911.807	15.091	-880.378	15.187	-852.162	15.206
-849.1	15.215	-845.483	15.216	-816.041	15.281	-789.771	15.303	-766.186	15.246
-743.935	15.21	-732.706	15.201	-723.198	15.168	-704.314	15.201	-693.162	15.22
-662.869	15.214	-642.388	15.212	-624.509	15.241	-594.234	15.157	-578.354	15.112
-560.665	15.135	-533.05	15.072	-529.8	15.079	-511.53	15.141	-481.798	15.239
-477.259	15.257	-473.986	15.259	-471.513	15.253	-441.241	15.196	-409.939	15.342
-393.854	15.38	-380.39	15.413	-359.12	15.46	-355.025	15.47	-347.961	15.448
-309.057	15.252	-297.78	15.352	-285.279	15.306	-277.366	15.186	-254.501	14.454

ExpandedLocal.rep

-236.441	14.201	-220.231	13.854	-199.707	13.715	-190.169	13.654	-175.102	13.707
-160.878	13.728	-136.341	13.929	-118.837	14.086	-113.763	14.119	-90.562	14.261
-48.878	14.421	-46.321	14.432	-30.531	14.471	-5.56	14.529	.051	14.549
8.915	14.609	23.829	14.706	33.269	14.815	53.933	15.111	86.402	15.682
110.928	16.034	115.219	16.081	118.96	16.123	132.233	16.256	142.871	16.333
174.846	16.553	190.693	16.595	195.965	16.492	214.604	16.169	225.795	15.816
244.294	15.026	259.697	14.636	286.336	13.714	302.332	13.367	323.429	13.217
334.158	13.152	347.968	13.106	405.891	12.695	417.138	12.666	424.932	12.595
488.432	11.335	490	13.2	495	12.8	503.5	11.7	513	2.7
515	1.6	536	2.3	557	14.1	565	14.5	575	14.5
585	20	636	4.5	1678	4.5	1729	20		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1333	.125	503.5	.035	585	.03

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	503.5	585		353	353		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
585	1729	20	T

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 44040

INPUT

Description: Copy of SELA 8.349

Station Elevation Data num= 141

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1046	16.316	-1042.7	16.369	-1005.05	16.412	-996.156	16.471	-987.861	16.521
-968.636	16.462	-927.376	16.363	-921.214	16.346	-915.472	16.343	-894.565	16.215
-879.277	16.137	-865.007	16.028	-849.693	15.905	-827.535	15.722	-806.887	15.567
-795.796	10.525	-790.064	15.495	-772.011	15.445	-741.586	15.353	-680.891	15.426
-673.721	8.68	-668.196	15.435	-662.108	15.453	-633.998	15.747	-625.913	15.811
-616.647	15.775	-589.718	15.127	-573.587	14.616	-553.524	14.78	-544.035	14.704
-535.794	14.612	-511.373	14.583	-491.974	14.508	-467.107	14.48	-444.391	14.449
-422.841	14.388	-394.232	14.33	-383.456	14.334	-378.575	14.324	-352.988	14.317
-325.686	14.235	-296.49	14.159	-293.107	14.145	-290.043	14.144	-262.708	14.146
-247.619	14.133	-223.425	14.152	-201.511	14.252	-176.971	14.26	-157.245	14.255
-152.498	14.251	-149.877	14.245	-107.289	14.354	-100.137	14.265	-70.117	13.884
-49.063	13.787	-37.353	13.739	2.936	13.606	9.291	13.597	14.459	13.596
32.613	13.603	54.935	13.771	56.747	13.786	64.635	13.977	99.035	14.76
106.934	14.726	125.9	14.203	158.934	14.041	183.611	13.949	200.53	13.85

ExpandedLocal.rep

210.933	13.805	232.731	13.693	262.932	13.55	264.933	13.54	268.186	13.525
289.152	13.475	310.474	13.436	312.473	13.437	352.762	13.524	361.536	13.523
366.93	13.532	393.737	13.562	418.929	13.586	425.938	13.588	437.338	13.591
452.404	13.569	470.929	13.537	474	13.3	481	13.1	490	13.2
495	12.8	513	2.7	515	1.6	536	2.3	557	14.1
565	14.5	575	14.5	585	15.4	595	16	606.49	7.249
615.656	8.496	626.926	9.638	638.977	11.256	648.778	11.999	659.048	12.175
685.877	12.765	686.99	12.783	758.98	13.229	760.559	13.232	762.183	13.234
785.082	13.249	796.294	13.249	809.605	13.225	836.796	13.153	862.95	13.102
900.58	13.041	905.881	13.034	911.409	13.036	932.221	13.063	942.411	13.065
972.147	13.088	978.94	13.106	981.268	13.126	986.022	13.162	1019.357	13.508
1039.024	13.571	1051.998	13.561	1068.37	13.688	1086.599	13.605	1106.249	13.569
1155.935	13.667	1159.998	13.675	1176.604	13.671	1183.372	13.679	1185.25	13.684
1195.302	13.763	1212.931	13.896	1258.871	14.652	1260.735	14.667	1261.858	14.7
1274.438	14.564								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1046	.125	495	.035	557	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	495	557		32	32	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1046	461.98	14.6	F
5951274.438		16	T

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 44008

INPUT

Description: Copy of SELA 8.342

Station Elevation Data num= 132

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1046	16.316	-1042.7	16.369	-1005.05	16.412	-996.156	16.471	-987.861	16.521
-968.636	16.462	-927.376	16.363	-921.214	16.346	-915.472	16.343	-894.565	16.215
-879.277	16.137	-865.007	16.028	-849.693	15.905	-827.535	15.722	-806.887	15.567
-790.064	15.495	-772.011	15.445	-741.586	15.353	-680.891	15.426	-668.196	15.435
-662.108	15.453	-633.998	15.747	-625.913	15.811	-616.647	15.775	-589.718	15.127
-573.587	14.616	-553.524	14.78	-544.035	14.704	-535.794	14.612	-511.373	14.583
-491.974	14.508	-467.107	14.48	-444.391	14.449	-422.841	14.388	-394.232	14.33
-383.456	14.334	-378.575	14.324	-352.988	14.317	-325.686	14.235	-296.49	14.159
-293.107	14.145	-290.043	14.144	-262.708	14.146	-247.619	14.133	-223.425	14.152

ExpandedLocal.rep

-201.511	14.252	-176.971	14.26	-157.245	14.255	-152.498	14.251	-149.877	14.245
-107.289	14.354	-100.137	14.265	-70.117	13.884	-49.063	13.787	-37.353	13.739
2.936	13.606	9.291	13.597	14.459	13.596	32.613	13.603	54.935	13.771
56.747	13.786	64.635	13.977	99.035	14.76	106.934	14.726	125.9	14.203
158.934	14.041	183.611	13.949	200.53	13.85	210.933	13.805	232.731	13.693
262.932	13.55	264.933	13.54	268.186	13.525	289.152	13.475	310.474	13.436
312.473	13.437	352.762	13.524	361.536	13.523	366.93	13.532	375	13
474.4	12.4	499.4	2.5	500.4	2.4	515.4	1.8	519.4	1.6
529.4	2.1	539.4	2.5	559.2	12.3	559.6	12.3	569.012	12.238
606.49	7.249	615.656	8.496	626.926	9.638	638.977	11.256	648.778	11.999
659.048	12.175	685.877	12.765	686.99	12.783	758.98	13.229	760.559	13.232
762.183	13.234	785.082	13.249	796.294	13.249	809.605	13.225	836.796	13.153
862.95	13.102	900.58	13.041	905.881	13.034	911.409	13.036	932.221	13.063
942.411	13.065	972.147	13.088	978.94	13.106	981.268	13.126	986.022	13.162
1019.357	13.508	1039.024	13.571	1051.998	13.561	1068.37	13.688	1086.599	13.605
1106.249	13.569	1155.935	13.667	1159.998	13.675	1176.604	13.671	1183.372	13.679
1185.25	13.684	1195.302	13.763	1212.931	13.896	1258.871	14.652	1260.735	14.667
1261.858	14.712	1274.438	14.564						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1046	.125	474.4	.035	559.6	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	474.4	559.6		70	70	.1	.3
Ineffective Flow	num=		2				
Sta L	Sta R	Elev	Permanent				
-1046	487.25	14.6	F				
541.75	1274.438	14.6	F				

CULVERT

RIVER: W14 Main  
 REACH: Mid RS: 44006

INPUT

Description:  
 Distance from Upstream XS = 2.5  
 Deck/Roadway Width = 65  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 4			
Sta	Hi Cord	Lo Cord	
-580	14.6	0	14.6
1289	14.6	561	14.6



ExpandedLocal.rep

Upstream Bridge Cross Section Data

Station Elevation Data num= 132

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1046	16.316	-1042.7	16.369	-1005.05	16.412	-996.156	16.471	-987.861	16.521
-968.636	16.462	-927.376	16.363	-921.214	16.346	-915.472	16.343	-894.565	16.215
-879.277	16.137	-865.007	16.028	-849.693	15.905	-827.535	15.722	-806.887	15.567
-790.064	15.495	-772.011	15.445	-741.586	15.353	-680.891	15.426	-668.196	15.435
-662.108	15.453	-633.998	15.747	-625.913	15.811	-616.647	15.775	-589.718	15.127
-573.587	14.616	-553.524	14.78	-544.035	14.704	-535.794	14.612	-511.373	14.583
-491.974	14.508	-467.107	14.48	-444.391	14.449	-422.841	14.388	-394.232	14.33
-383.456	14.334	-378.575	14.324	-352.988	14.317	-325.686	14.235	-296.49	14.159
-293.107	14.145	-290.043	14.144	-262.708	14.146	-247.619	14.133	-223.425	14.152
-201.511	14.252	-176.971	14.26	-157.245	14.255	-152.498	14.251	-149.877	14.245
-107.289	14.354	-100.137	14.265	-70.117	13.884	-49.063	13.787	-37.353	13.739
2.936	13.606	9.291	13.597	14.459	13.596	32.613	13.603	54.935	13.771
56.747	13.786	64.635	13.977	99.035	14.76	106.934	14.726	125.9	14.203
158.934	14.041	183.611	13.949	200.53	13.85	210.933	13.805	232.731	13.693
262.932	13.55	264.933	13.54	268.186	13.525	289.152	13.475	310.474	13.436
312.473	13.437	352.762	13.524	361.536	13.523	366.93	13.532	375	13
474.4	12.4	496.4	2.5	500.4	1.3	515.4	1.3	519.4	1.3
529.4	1.3	539.4	2.5	559.2	12.3	559.6	12.3	569.012	12.238
606.49	7.249	615.656	8.496	626.926	9.638	638.977	11.256	648.778	11.999
659.048	12.175	685.877	12.765	686.99	12.783	758.98	13.229	760.559	13.232
762.183	13.234	785.082	13.249	796.294	13.249	809.605	13.225	836.796	13.153
862.95	13.102	900.58	13.041	905.881	13.034	911.409	13.036	932.221	13.063
942.411	13.065	972.147	13.088	978.94	13.106	981.268	13.126	986.022	13.162
1019.357	13.508	1039.024	13.571	11051.998	13.561	1068.37	13.688	1086.599	13.605
1106.249	13.569	1155.935	13.667	1159.998	13.675	1176.604	13.671	1183.372	13.679
1185.25	13.684	1195.302	13.763	1212.931	13.896	1258.871	14.652	1260.735	14.667
1261.858	14.712	1274.438	14.564						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1046	.125	474.4	.035	559.6	.125

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	474.4	559.6		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1046	487.25	14.6	F
541.75	1274.438	14.6	F

Downstream Deck/Roadway Coordinates

num= 4

Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord

ExpandedLocal.rep

\*\*\*\*\*  
 -580 14.6 0 14.6 617 14.6  
 1289 14.6

Downstream Bridge Cross Section Data

Station Elevation Data num= 137

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1046	16.316	-1042.7	16.369	-1005.05	16.412	-996.156	16.471	-987.861	16.521
-968.636	16.462	-927.376	16.363	-921.214	16.346	-915.472	16.343	-894.565	16.215
-879.277	16.137	-865.007	16.028	-849.693	15.905	-827.535	15.722	-806.887	15.567
-790.064	15.495	-772.011	15.445	-741.586	15.353	-680.891	15.426	-668.196	15.435
-662.108	15.453	-633.998	15.747	-625.913	15.811	-616.647	15.775	-589.718	15.127
-573.587	14.616	-553.524	14.78	-544.035	14.704	-535.794	14.612	-511.373	14.583
-491.974	14.508	-467.107	14.48	-444.391	14.449	-422.841	14.388	-394.232	14.33
-383.456	14.334	-378.575	14.324	-352.988	14.317	-325.686	14.235	-296.49	14.159
-293.107	14.145	-290.043	14.144	-262.708	14.146	-247.619	14.133	-223.425	14.152
-201.511	14.252	-176.971	14.26	-157.245	14.255	-152.498	14.251	-149.877	14.245
-107.289	14.354	-100.137	14.265	-70.117	13.884	-49.063	13.787	-37.353	13.739
2.936	13.606	9.291	13.597	14.459	13.596	32.613	13.603	54.935	13.771
56.747	13.786	64.635	13.977	99.035	14.76	106.934	14.726	125.9	14.203
158.934	14.041	183.611	13.949	200.53	13.85	210.933	13.805	232.731	13.693
262.932	13.55	264.933	13.54	268.186	13.525	289.152	13.475	310.474	13.436
312.473	13.437	352.762	13.524	361.536	13.523	366.93	13.532	393.737	13.562
418.929	13.586	425.938	13.588	437.338	13.591	452.404	13.569	470.929	13.537
479.626	13.533	517.5	13.351	522.369	13.324	522.928	13.314	553.5	1.1
554	1.1	569	1.1	573	1.1	584	1.1	597.6	3.2
617	12.2	617	12.3	626.926	9.638	638.977	11.256	648.778	11.999
659.048	12.175	685.877	12.765	686.99	12.783	758.98	13.229	760.559	13.232
762.183	13.234	785.082	13.249	796.294	13.249	809.605	13.225	836.796	13.153
862.95	13.102	900.58	13.041	905.881	13.034	911.409	13.036	932.221	13.063
942.411	13.065	972.147	13.088	978.94	13.106	981.268	13.126	986.022	13.162
1019.357	13.508	1039.024	13.571	11051.998	13.561	1068.37	13.688	1086.599	13.605
1106.249	13.569	1155.935	13.667	1159.998	13.675	1176.604	13.671	1183.372	13.679
1185.25	13.684	1195.302	13.763	1212.931	13.896	1258.871	14.652	1260.735	14.667
1261.858	14.712	1274.438	14.564						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1046	.125	522.369	.035	617	.125

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	522.369	617		.1	.3
Ineffective Flow		num=	2		
Sta L	Sta R	Elev	Permanent		
-1046	546.25	14.6	F		
590.75	1274.438	14.6	F		

ExpandedLocal.rep

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 3

Culvert Name      Shape      Rise      Span  
 Culvert #1      Circular      9.5  
 FHWA Chart # 1 - Concrete Pipe Culvert  
 FHWA Scale # 1 - Square edge entrance with headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n      Bottom n      Depth Blocked      Entrance Loss Coef  
 Exit Loss Coef  
                          2.5      65      .025      .025      0      .5  
 1  
 Upstream      Elevation = 1.3  
                          Centerline Station = 502  
 Downstream      Elevation = 1.1  
                          Centerline Station = 556

Culvert Name      Shape      Rise      Span  
 Culvert #2      Circular      9.5  
 FHWA Chart # 1 - Concrete Pipe Culvert  
 FHWA Scale # 1 - Square edge entrance with headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n      Bottom n      Depth Blocked      Entrance Loss Coef  
 Exit Loss Coef  
                          2.5      65      .025      .025      0      .5  
 1  
 Upstream      Elevation = 1.3  
                          Centerline Station = 515  
 Downstream      Elevation = 1.1  
                          Centerline Station = 569

Culvert Name      Shape      Rise      Span  
 Culvert #3      Circular      9.5  
 FHWA Chart # 1 - Concrete Pipe Culvert  
 FHWA Scale # 1 - Square edge entrance with headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n      Bottom n      Depth Blocked      Entrance Loss Coef  
 Exit Loss Coef  
                          2.5      65      .025      .025      0      .5  
 1

ExpandedLocal.rep

Upstream Elevation = 1.3  
Centerline Station = 527  
Downstream Elevation = 1.1  
Centerline Station = 581

CROSS SECTION

RIVER: W14 Main  
REACH: Mid RS: 43938

INPUT

Description: Copy of SELA 8.327

Station Elevation Data num= 137

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1046	16.316	-1042.7	16.369	-1005.05	16.412	-996.156	16.471	-987.861	16.521
-968.636	16.462	-927.376	16.363	-921.214	16.346	-915.472	16.343	-894.565	16.215
-879.277	16.137	-865.007	16.028	-849.693	15.905	-827.535	15.722	-806.887	15.567
-790.064	15.495	-772.011	15.445	-741.586	15.353	-680.891	15.426	-668.196	15.435
-662.108	15.453	-633.998	15.747	-625.913	15.811	-616.647	15.775	-589.718	15.127
-573.587	14.616	-553.524	14.78	-544.035	14.704	-535.794	14.612	-511.373	14.583
-491.974	14.508	-467.107	14.48	-444.391	14.449	-422.841	14.388	-394.232	14.33
-383.456	14.334	-378.575	14.324	-352.988	14.317	-325.686	14.235	-296.49	14.159
-293.107	14.145	-290.043	14.144	-262.708	14.146	-247.619	14.133	-223.425	14.152
-201.511	14.252	-176.971	14.26	-157.245	14.255	-152.498	14.251	-149.877	14.245
-107.289	14.354	-100.137	14.265	-70.117	13.884	-49.063	13.787	-37.353	13.739
2.936	13.606	9.291	13.597	14.459	13.596	32.613	13.603	54.935	13.771
56.747	13.786	64.635	13.977	99.035	14.76	106.934	14.726	125.9	14.203
158.934	14.041	183.611	13.949	200.53	13.85	210.933	13.805	232.731	13.693
262.932	13.55	264.933	13.54	268.186	13.525	289.152	13.475	310.474	13.436
312.473	13.437	352.762	13.524	361.536	13.523	366.93	13.532	393.737	13.562
418.929	13.586	425.938	13.588	437.338	13.591	452.404	13.569	470.929	13.537
479.626	13.533	517.5	13.351	522.369	13.324	522.928	13.314	553.5	2.9
554	2.8	569	1.7	573	1.4	584	2.3	597.6	3.2
617	12.2	617	12.3	626.926	9.638	638.977	11.256	648.778	11.999
659.048	12.175	685.877	12.765	686.99	12.783	758.98	13.229	760.559	13.232
762.183	13.234	785.082	13.249	796.294	13.249	809.605	13.225	836.796	13.153
862.95	13.102	900.58	13.041	905.881	13.034	911.409	13.036	932.221	13.063
942.411	13.065	972.147	13.088	978.94	13.106	981.268	13.126	986.022	13.162
1019.357	13.508	1039.024	13.571	1051.998	13.561	1068.37	13.688	1086.599	13.605
1106.249	13.569	1155.935	13.667	1159.998	13.675	1176.604	13.671	1183.372	13.679
1185.25	13.684	1195.302	13.763	1212.931	13.896	1258.871	14.652	1260.735	14.667
1261.858	14.712	1274.438	14.564						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****					

ExpandedLocal.rep

-1046 .125 522.369 .035 617 .125

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
522.369	617	46	46	46	.1	.3	
Ineffective Flow	num=	2					
Sta L	Sta R	Elev	Permanent				
-1046	546.25	14.6	F				
590.751274.438		14.6	F				

CROSS SECTION

RIVER: W14 Main  
REACH: Mid RS: 43892

INPUT

Description: Copy of SELA 8.317

Station Elevation Data num= 140

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-1046	16.316	-1042.7	16.369	-1005.05	16.412	-996.156	16.471	-987.861	16.521
-968.636	16.462	-927.376	16.363	-921.214	16.346	-915.472	16.343	-894.565	16.215
-879.277	16.137	-865.007	16.028	-849.693	15.905	-827.535	15.722	-806.887	15.567
-790.064	15.495	-772.011	15.445	-741.586	15.353	-680.891	15.426	-668.196	15.435
-662.108	15.453	-633.998	15.747	-625.913	15.811	-616.647	15.775	-589.718	15.127
-573.587	14.616	-553.524	14.78	-544.035	14.704	-535.794	14.612	-511.373	14.583
-491.974	14.508	-467.107	14.48	-444.391	14.449	-422.841	14.388	-394.232	14.33
-383.456	14.334	-378.575	14.324	-352.988	14.317	-325.686	14.235	-296.49	14.159
-293.107	14.145	-290.043	14.144	-262.708	14.146	-247.619	14.133	-223.425	14.152
-201.511	14.252	-176.971	14.26	-157.245	14.255	-152.498	14.251	-149.877	14.245
-107.289	14.354	-100.137	14.265	-70.117	13.884	-49.063	13.787	-37.353	13.739
2.936	13.606	9.291	13.597	14.459	13.596	32.613	13.603	54.935	13.771
56.747	13.786	64.635	13.977	99.035	14.76	106.934	14.726	125.9	14.203
158.934	14.041	183.611	13.949	200.53	13.85	210.933	13.805	232.731	13.693
262.932	13.55	264.933	13.54	268.186	13.525	289.152	13.475	310.474	13.436
312.473	13.437	352.762	13.524	361.536	13.523	366.93	13.532	393.737	13.562
418.929	13.586	425.938	13.588	437.338	13.591	452.404	13.569	470.929	13.537
479.626	13.533	517.5	13.351	522.369	13.324	522.928	13.314	550	13.8
560	13.7	570	13.5	577	13.4	582	13.3	595	2.8
607	1.6	613	2.9	627	13.4	640	13.6	650	13.7
660	13.7	670	13.8	680	13.4	690	13.5	700	14
710	14.2	758.98	13.229	760.559	13.232	762.183	13.234	785.082	13.249
796.294	13.249	809.605	13.225	836.796	13.153	862.95	13.102	900.58	13.041
905.881	13.034	911.409	13.036	932.221	13.063	942.411	13.065	972.147	13.088
978.94	13.106	981.268	13.126	986.022	13.162	1019.357	13.508	1039.024	13.571
1051.998	13.561	1068.37	13.688	1086.599	13.605	1106.249	13.569	1155.935	13.667
1159.998	13.675	1176.604	13.671	1183.372	13.679	1185.25	13.684	1195.302	13.763
1212.931	13.896	1258.871	14.652	1260.735	14.667	1261.858	14.712	1274.438	14.564

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1046 .125 582 .035 627 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 582 627 163 163 163 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -1046 555.41 14.6 F  
 645.911274.438 14.6 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Mid RS: 43729

INPUT

Description: Copy of SELA 8.282  
 Overbank from Lidar

Station Elevation Data num= 94  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -437.069 15.491 -430.39 15.498-402.487 15.426-378.511 15.311-359.424 15.107  
 -333.325 14.814-300.693 14.401-298.744 14.388-283.168 14.39-237.415 14.327  
 -235.667 14.306-229.258 14.243-219.101 14.295-193.248 14.191-176.934 14.113  
 -151.241 14.133-121.227 14.291-109.327 14.269-103.532 14.257 -64.66 14.163  
 -51.497 14.09 -24.856 13.919 -16.859 13.872 -1.241 13.709 17.779 13.494  
 38.844 13.069 79.891 12.536 87.056 12.481 90.215 12.479 90.708 12.48  
 148.23 13.063 152.852 13.122 180.41 13.375 185.666 13.435 212.589 13.546  
 218.481 13.578 224.611 13.585 232.043 13.587 276.347 13.608 284.13 13.605  
 308.097 13.564 316.958 13.541 339.846 13.439 349.785 13.391 360.423 13.312  
 403.344 13.269 415.439 13.262 435.094 13.674 462.366 14.182 479.586 14.413  
 491.983 14.562 514.909 14.678 547.267 14.522 548.68 14.5 555.55 13.465  
 582 13.3 595 2.8 607 1.6 613 2.9 627 13.4  
 640 13.6 650 13.7 660 13.7 670 13.8 680 13.4  
 681.42 12.118 689.261 12.253 714.288 13.277 720.338 13.315 747.151 13.355  
 777.233 13.393 780.013 13.398 781.287 13.4 784.714 13.401 825.616 13.423  
 839.128 13.43 844.952 13.433 846.115 13.435 878.536 13.387 878.923 13.388  
 943.765 13.056 944.152 13.054 944.927 13.047 976.961 12.896 986.428 12.858  
 1007.079 12.7811009.881 12.7771059.869 13.3931071.267 13.4731075.811 13.497  
 1102.694 13.6331122.923 13.7581141.742 13.7981156.739 13.805

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*

ExpandedLocal.rep

-437.069 .125 582 .035 627 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 582 627 0 0 0 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 43600

INPUT

Description: copy of SELA 8.281

Station Elevation Data num= 94

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-437.069	15.491	-430.39	15.498	402.487	15.426	378.511	15.311	359.424	15.107
-333.325	14.814	-300.693	14.401	298.744	14.388	283.168	14.39	237.415	14.327
-235.667	14.306	-229.258	14.243	219.101	14.295	193.248	14.191	176.934	14.113
-151.241	14.133	-121.227	14.291	109.327	14.269	103.532	14.257	-64.66	14.163
-51.497	14.09	-24.856	13.919	-16.859	13.872	-1.241	13.709	17.779	13.494
38.844	13.069	79.891	12.536	87.056	12.481	90.215	12.479	90.708	12.48
148.23	13.063	152.852	13.122	180.41	13.375	185.666	13.435	212.589	13.546
218.481	13.578	224.611	13.585	232.043	13.587	276.347	13.608	284.13	13.605
308.097	13.564	316.958	13.541	339.846	13.439	349.785	13.391	360.423	13.312
403.344	13.269	415.439	13.262	435.094	13.674	462.366	14.182	479.586	14.413
491.983	14.562	514.909	14.678	547.267	14.522	548.68	14.5	555.55	13.465
582	13.3	595	2.8	607	1.6	613	2.9	627	13.4
640	13.6	650	13.7	660	13.7	670	13.8	680	13.4
681.42	12.118	689.261	12.253	714.288	13.277	720.338	13.315	747.151	13.355
777.233	13.393	780.013	13.398	781.287	13.4	784.714	13.401	825.616	13.423
839.128	13.43	844.952	13.433	846.115	13.435	878.536	13.387	878.923	13.388
943.765	13.056	944.152	13.054	944.927	13.047	976.961	12.896	986.428	12.858
1007.079	12.781	1009.881	12.777	1059.869	13.393	1071.267	13.473	1075.811	13.497
1102.694	13.633	1122.923	13.758	1141.742	13.798	1156.739	13.805		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-437.069	.125	582	.035	627	.125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 582 627 354 354 354 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -437.069 228 15.7 T  
 9811156.739 15.7 T

ExpandedLocal.rep

CROSS SECTION

RIVER: W14 Main

REACH: Lower

RS: 43256

INPUT

Description: Copy of SELA 8.177

Station Elevation Data num= 137

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1346	15.13	1326.94	15.067	1311.54	15.053	1287.72	15.181	1285.84	15.187
-1285.17	15.19	1260.14	15.12	1229.84	15.124	1215.56	15.076	1212.81	15.073
-1204.46	15.086	1181.51	15.108	1154.06	15.092	1147.95	15.095	1138.35	15.111
-1114.34	15.138	1099.07	15.116	1080.73	15.077	1068.11	15.056	1050.69	15.028
-1016.92	14.973	1013.38	14.961	1007.62	14.937	962.459	14.747	945.924	14.647
-924.938	14.619	912.195	14.621	894.804	14.652	878.466	14.717	864.669	14.775
-844.737	14.862	834.535	14.896	804.803	14.959	749.006	15.199	745.312	15.211
-744.601	15.215	-743.55	15.22	-741.84	15.224	723.662	15.238	709.821	15.195
-702.292	15.196	676.091	15.255	662.904	15.318	653.976	15.348	635.672	15.381
-607.699	15.442	607.663	15.442	571.518	15.48	538.139	15.474	535.115	15.474
-532.904	15.473	462.926	15.288	459.88	15.263	449.82	14.93	422.668	14.331
-399.092	13.973	390.21	13.902	369.751	14.375	348.243	14.895	341.732	14.987
-329.568	15.011	295.557	15.175	276.387	15.262	261.073	14.987	225.302	14.386
-196.819	13.944	177.939	13.723	164.927	13.635	164.747	13.634	134.931	13.538
-115.738	13.436	106.289	13.406	46.797	13.267	-33.151	13.25	-17.72	13.265
24.343	13.278	55.793	13.401	76.557	13.445	80.298	13.445	145.622	13.843
153.811	13.872	162.17	13.927	186.265	14.052	209.634	14.124	222.834	14.167
236.445	14.172	250.274	14.163	253.905	14.161	262.625	14.152	267.26	14.14
302.336	14.031	319.338	13.983	329.373	13.953	362.852	13.747	364.534	13.738
368.324	13.652	407.777	12.934	434.855	12.744	438.99	12.726	449.72	12.776
458.826	12.798	469.334	12.831	474.395	12.523	500	14.8	510	10.9
520	8	525	4	535	1.8	543	4.2	557	12.7
601.408	12.318	607.07	12.304	624.265	12.264	654.227	12.385	667.061	12.39
687.036	12.468	699.869	12.519	706.286	12.525	725.536	12.691	765.486	12.991
775.473	13.045	798.294	13.216	808.282	13.259	831.102	13.398	840.57	13.437
841.193	13.44	864.748	13.557	896.823	13.668	898.734	13.671	902.061	13.661
932.72	13.572	948.635	13.44	966.706	13.294	983.823	13.236	1017.423	13.066
1050.004	13.073	1053.652	13.066						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1346	.125	500	.035	557	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	500	557		10	10	.1	.3
Ineffective Flow			num=	2			



ExpandedLocal.rep

Sta L	Sta R	Elev	Permanent
-1346	502.89	15.7	T
564.041053.652		15.7	T

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 43246

INPUT

Description: Copy of SELA 8.174

Station Elevation Data num= 153

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-1849	15.13	-1829.94	15.067	-1814.54	15.053	-1790.72	15.181	-1788.84	15.187
-1788.17	15.19	-1763.14	15.12	-1732.84	15.124	-1718.56	15.076	-1715.81	15.073
-1707.46	15.086	-1684.51	15.108	-1657.06	15.092	-1650.95	15.095	-1641.35	15.111
-1617.34	15.138	-1602.07	15.116	-1583.73	15.077	-1571.11	15.056	-1553.69	15.028
-1519.92	14.973	-1516.38	14.961	-1510.62	14.937	-1465.45	14.747	-1448.92	14.647
-1427.93	14.619	-1415.19	14.621	-1397.8	14.652	-1381.46	14.717	-1367.66	14.775
-1347.73	14.862	-1337.53	14.896	-1307.8	14.959	-1252	15.199	-1248.31	15.211
-1247.6	15.215	-1246.55	15.22	-1244.84	15.224	-1226.66	15.238	-1212.82	15.195
-1205.29	15.196	-1179.09	15.255	-1165.9	15.318	-1156.97	15.348	-1138.67	15.381
-1110.69	15.442	-1110.66	15.442	-1074.51	15.48	-1041.13	15.474	-1038.11	15.474
-1035.9	15.473	-965.926	15.288	-962.88	15.263	-952.82	14.93	-925.668	14.331
-902.092	13.973	-893.21	13.902	-872.751	14.375	-851.243	14.895	-844.732	14.987
-832.568	15.011	-798.557	15.175	-779.387	15.262	-764.073	14.987	-728.302	14.386
-699.819	13.944	-680.939	13.723	-667.927	13.635	-667.747	13.634	-637.931	13.538
-618.738	13.436	-609.289	13.406	-549.797	13.267	-536.151	13.25	-520.72	13.265
-478.657	13.278	-447.207	13.401	-426.443	13.445	-422.702	13.445	-357.378	13.843
-349.189	13.872	-340.83	13.927	-316.735	14.052	-293.366	14.124	-280.166	14.167
-266.555	14.172	-252.726	14.163	-249.095	14.161	-240.375	14.152	-235.74	14.14
-200.664	14.031	-183.662	13.983	-173.627	13.953	-140.148	13.747	-138.466	13.738
-134.676	13.652	-95.223	12.934	-68.145	12.744	-64.01	12.726	-53.28	12.776
-44.174	12.798	-33.666	12.831	-28.605	12.523	7.13	15.1	14.25	10.9
18.5	7.89	18.51	7.88	19.5	7.18	19.51	7.17	21.02	6.1
21.38	5.7	27.07	2.4	28.5	2.1	32.06	-5.4	34.2	2
35.63	2.5	37.5	3.34	37.51	3.35	38.5	3.79	38.51	3.8
42.75	5.7	48.45	12.9	49.16	14.6	49.88	14.7	57	15.7
80	14.2	98.408	12.318	104.07	12.304	121.265	12.264	151.227	12.385
164.061	12.39	184.036	12.468	196.869	12.519	203.286	12.525	222.536	12.691
262.486	12.991	272.473	13.045	295.294	13.216	305.282	13.259	328.102	13.398
337.57	13.437	338.193	13.44	361.748	13.557	393.823	13.668	395.734	13.671
399.061	13.661	429.72	13.572	445.635	13.44	463.706	13.294	480.823	13.236
514.423	13.066	547.004	13.073	550.652	13.066				

Manning's n Values num= 3

ExpandedLocal.rep

Sta n Val      Sta n Val      Sta n Val  
 \*\*\*\*\*  
 -1849    .125    7.13    .035    57    .125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	7.13	57		30	30	30		.1	.3
Ineffective Flow		num=		2					
Sta L	Sta R	Elev	Permanent						
-1849	8.59	15.7	T						
49.74	550.652	15.7	T						

BRIDGE

RIVER: W14 Main  
 REACH: Lower                      RS: 43220

INPUT

Description: Independence Avenue  
 taken from SELA model  
 Distance from Upstream XS =      1  
 Deck/Roadway Width                =      28  
 Weir Coefficient                    =      2.6

Upstream Deck/Roadway Coordinates  
 num=      2  
 Sta Hi Cord Lo Cord      Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
       0    15.7    13.7      57    15.7    13.7

Upstream Bridge Cross Section Data

Station Elevation Data      num=      153

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1849	15.13-1829.94	15.067-1814.54	15.053-1790.72	15.181-1788.84	15.187				
-1788.17	15.19-1763.14	15.12-1732.84	15.124-1718.56	15.076-1715.81	15.073				
-1707.46	15.086-1684.51	15.108-1657.06	15.092-1650.95	15.095-1641.35	15.111				
-1617.34	15.138-1602.07	15.116-1583.73	15.077-1571.11	15.056-1553.69	15.028				
-1519.92	14.973-1516.38	14.961-1510.62	14.937-1465.45	14.747-1448.92	14.647				
-1427.93	14.619-1415.19	14.621 -1397.8	14.652-1381.46	14.717-1367.66	14.775				
-1347.73	14.862-1337.53	14.896 -1307.8	14.959 -1252	15.199-1248.31	15.211				
-1247.6	15.215-1246.55	15.22-1244.84	15.224-1226.66	15.238-1212.82	15.195				
-1205.29	15.196-1179.09	15.255 -1165.9	15.318-1156.97	15.348-1138.67	15.381				
-1110.69	15.442-1110.66	15.442-1074.51	15.48-1041.13	15.474-1038.11	15.474				
-1035.9	15.473-965.926	15.288 -962.88	15.263 -952.82	14.93-925.668	14.331				
-902.092	13.973 -893.21	13.902-872.751	14.375-851.243	14.895-844.732	14.987				
-832.568	15.011-798.557	15.175-779.387	15.262-764.073	14.987-728.302	14.386				
-699.819	13.944-680.939	13.723-667.927	13.635-667.747	13.634-637.931	13.538				
-618.738	13.436-609.289	13.406-549.797	13.267-536.151	13.25 -520.72	13.265				

ExpandedLocal.rep

-478.657	13.278	-447.207	13.401	-426.443	13.445	-422.702	13.445	-357.378	13.843
-349.189	13.872	-340.83	13.927	-316.735	14.052	-293.366	14.124	-280.166	14.167
-266.555	14.172	-252.726	14.163	-249.095	14.161	-240.375	14.152	-235.74	14.14
-200.664	14.031	-183.662	13.983	-173.627	13.953	-140.148	13.747	-138.466	13.738
-134.676	13.652	-95.223	12.934	-68.145	12.744	-64.01	12.726	-53.28	12.776
-44.174	12.798	-33.666	12.831	-28.605	12.523	7.13	15.1	14.25	10.9
18.5	7.89	18.51	7.88	19.5	7.18	19.51	7.17	21.02	6.1
21.38	5.7	27.07	2.4	28.5	2.1	32.06	-5.4	34.2	2
35.63	2.5	37.5	3.34	37.51	3.35	38.5	3.79	38.51	3.8
42.75	5.7	48.45	12.9	49.16	14.6	49.88	14.7	57	15.7
80	14.2	98.408	12.318	104.07	12.304	121.265	12.264	151.227	12.385
164.061	12.39	184.036	12.468	196.869	12.519	203.286	12.525	222.536	12.691
262.486	12.991	272.473	13.045	295.294	13.216	305.282	13.259	328.102	13.398
337.57	13.437	338.193	13.44	361.748	13.557	393.823	13.668	395.734	13.671
399.061	13.661	429.72	13.572	445.635	13.44	463.706	13.294	480.823	13.236
514.423	13.066	547.004	13.073	550.652	13.066				

Manning's n Values num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
-1849	.125		7.13	.035		57	.125	

Bank Sta: Left Right Coeff Contr. Expan.

7.13	57	.1	.3
------	----	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1849	8.59	15.7	T
49.74	550.652	15.7	T

Downstream Deck/Roadway Coordinates num= 2

Sta Hi	Cord	Lo Cord	Sta Hi	Cord	Lo Cord
0	15.7	13.7	57	15.7	13.7

Downstream Bridge Cross Section Data Station Elevation Data num= 153

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1849	15.13	-1829.94	15.067	-1814.54	15.053	-1790.72	15.181	-1788.84	15.187
-1788.17	15.19	-1763.14	15.12	-1732.84	15.124	-1718.56	15.076	-1715.81	15.073
-1707.46	15.086	-1684.51	15.108	-1657.06	15.092	-1650.95	15.095	-1641.35	15.111
-1617.34	15.138	-1602.07	15.116	-1583.73	15.077	-1571.11	15.056	-1553.69	15.028
-1519.92	14.973	-1516.38	14.961	-1510.62	14.937	-1465.45	14.747	-1448.92	14.647
-1427.93	14.619	-1415.19	14.621	-1397.8	14.652	-1381.46	14.717	-1367.66	14.775
-1347.73	14.862	-1337.53	14.896	-1307.8	14.959	-1252	15.199	-1248.31	15.211
-1247.6	15.215	-1246.55	15.22	-1244.84	15.224	-1226.66	15.238	-1212.82	15.195
-1205.29	15.196	-1179.09	15.255	-1165.9	15.318	-1156.97	15.348	-1138.67	15.381

ExpandedLocal.rep

-1110.69	15.442-1110.66	15.442-1074.51	15.48-1041.13	15.474-1038.11	15.474
-1035.9	15.473-965.926	15.288 -962.88	15.263 -952.82	14.93-925.668	14.331
-902.092	13.973 -893.21	13.902-872.751	14.375-851.243	14.895-844.732	14.987
-832.568	15.011-798.557	15.175-779.387	15.262-764.073	14.987-728.302	14.386
-699.819	13.944-680.939	13.723-667.927	13.635-667.747	13.634-637.931	13.538
-618.738	13.436-609.289	13.406-549.797	13.267-536.151	13.25 -520.72	13.265
-478.657	13.278-447.207	13.401-426.443	13.445-422.702	13.445-357.378	13.843
-349.189	13.872 -340.83	13.927-316.735	14.052-293.366	14.124-280.166	14.167
-266.555	14.172-252.726	14.163-249.095	14.161-240.375	14.152 -235.74	14.14
-200.664	14.031-183.662	13.983-173.627	13.953-140.148	13.747-138.466	13.738
-134.676	13.652 -95.223	12.934 -68.145	12.744 -64.01	12.726 -53.28	12.776
-44.174	12.798 -33.666	12.831 -28.605	12.523 7.13	15.1 14.25	10.9
18.5	7.89 18.51	7.88 19.5	7.18 19.51	7.17 21.02	6.1
21.38	5.7 27.07	2.4 28.5	2.1 32.06	1.4 34.2	2
35.63	2.5 37.5	3.34 37.51	3.35 38.5	3.79 38.51	3.8
42.75	5.7 48.45	12.9 49.16	14.6 49.88	14.7 57	15.7
80	14.2 98.408	12.318 104.07	12.304 121.265	12.264 151.227	12.385
164.061	12.39 184.036	12.468 196.869	12.519 203.286	12.525 222.536	12.691
262.486	12.991 272.473	13.045 295.294	13.216 305.282	13.259 328.102	13.398
337.57	13.437 338.193	13.44 361.748	13.557 393.823	13.668 395.734	13.671
399.061	13.661 429.72	13.572 445.635	13.44 463.706	13.294 480.823	13.236
514.423	13.066 547.004	13.073 550.652	13.066		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1849	.125	7.13	.035	57	.125

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	7.13	57		.1	.3
Ineffective Flow	num=		2		
Sta L	Sta R	Elev	Permanent		
-1849	9.09	15.7	T		
49.24	550.652	15.7	T		

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins = 12.32  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 2

Pier Data

Pier Station	Upstream=	19	Downstream=	19
Upstream	num=	2		

```

Width  Elev  Width  Elev
*****
      1    10     1    14.2
Downstream  num=      2
Width  Elev  Width  Elev
*****
      1    10     1    14.2

```

Pier Data

```

Pier Station      Upstream=      38      Downstream=      38
Upstream  num=      2
Width  Elev  Width  Elev
*****
      1    10     1    14.2
Downstream  num=      2
Width  Elev  Width  Elev
*****
      1    10     1    14.2

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth  
inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main

REACH: Lower

RS: 43216

INPUT

Description: copy of SELA 8.166

reach lengths adjusted

Station Elevation Data num= 153

```

Sta  Elev  Sta  Elev  Sta  Elev  Sta  Elev  Sta  Elev
*****
-1849  15.13-1829.94  15.067-1814.54  15.053-1790.72  15.181-1788.84  15.187

```

ExpandedLocal.rep

-1788.17	15.19-1763.14	15.12-1732.84	15.124-1718.56	15.076-1715.81	15.073
-1707.46	15.086-1684.51	15.108-1657.06	15.092-1650.95	15.095-1641.35	15.111
-1617.34	15.138-1602.07	15.116-1583.73	15.077-1571.11	15.056-1553.69	15.028
-1519.92	14.973-1516.38	14.961-1510.62	14.937-1465.45	14.747-1448.92	14.647
-1427.93	14.619-1415.19	14.621 -1397.8	14.652-1381.46	14.717-1367.66	14.775
-1347.73	14.862-1337.53	14.896 -1307.8	14.959 -1252	15.199-1248.31	15.211
-1247.6	15.215-1246.55	15.22-1244.84	15.224-1226.66	15.238-1212.82	15.195
-1205.29	15.196-1179.09	15.255 -1165.9	15.318-1156.97	15.348-1138.67	15.381
-1110.69	15.442-1110.66	15.442-1074.51	15.48-1041.13	15.474-1038.11	15.474
-1035.9	15.473-965.926	15.288 -962.88	15.263 -952.82	14.93-925.668	14.331
-902.092	13.973 -893.21	13.902-872.751	14.375-851.243	14.895-844.732	14.987
-832.568	15.011-798.557	15.175-779.387	15.262-764.073	14.987-728.302	14.386
-699.819	13.944-680.939	13.723-667.927	13.635-667.747	13.634-637.931	13.538
-618.738	13.436-609.289	13.406-549.797	13.267-536.151	13.25 -520.72	13.265
-478.657	13.278-447.207	13.401-426.443	13.445-422.702	13.445-357.378	13.843
-349.189	13.872 -340.83	13.927-316.735	14.052-293.366	14.124-280.166	14.167
-266.555	14.172-252.726	14.163-249.095	14.161-240.375	14.152 -235.74	14.14
-200.664	14.031-183.662	13.983-173.627	13.953-140.148	13.747-138.466	13.738
-134.676	13.652 -95.223	12.934 -68.145	12.744 -64.01	12.726 -53.28	12.776
-44.174	12.798 -33.666	12.831 -28.605	12.523 7.13	15.1 14.25	10.9
18.5	7.89 18.51	7.88 19.5	7.18 19.51	7.17 21.02	6.1
21.38	5.7 27.07	2.4 28.5	2.1 32.06	1.4 34.2	2
35.63	2.5 37.5	3.34 37.51	3.35 38.5	3.79 38.51	3.8
42.75	5.7 48.45	12.9 49.16	14.6 49.88	14.7 57	15.7
80	14.2 98.408	12.318 104.07	12.304 121.265	12.264 151.227	12.385
164.061	12.39 184.036	12.468 196.869	12.519 203.286	12.525 222.536	12.691
262.486	12.991 272.473	13.045 295.294	13.216 305.282	13.259 328.102	13.398
337.57	13.437 338.193	13.44 361.748	13.557 393.823	13.668 395.734	13.671
399.061	13.661 429.72	13.572 445.635	13.44 463.706	13.294 480.823	13.236
514.423	13.066 547.004	13.073 550.652	13.066		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1849	.125	7.13	.035	57	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	7.13	57		42	42	.1	.3
Ineffective Flow			num=	2			
Sta L	Sta R	Elev	Permanent				
-1849	9.09	15.7	T				
49.24	550.652	15.7	T				

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower

RS: 43174

ExpandedLocal.rep

INPUT

Description: copy of SELA 8.158  
 reach lengths adjusted  
 ineffective flows from  
 SELA

Station Elevation Data		num= 140									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****											
-1354	15.13	-1334.94	15.067	-1319.54	15.053	-1295.72	15.181	-1293.84	15.187		
-1293.17	15.19	-1268.14	15.12	-1237.84	15.124	-1223.56	15.076	-1220.81	15.073		
-1212.46	15.086	-1189.51	15.108	-1162.06	15.092	-1155.95	15.095	-1146.35	15.111		
-1122.34	15.138	-1107.07	15.116	-1088.73	15.077	-1076.11	15.056	-1058.69	15.028		
-1024.92	14.973	-1021.38	14.961	-1015.62	14.937	-970.459	14.747	-953.924	14.647		
-932.938	14.619	-920.195	14.621	-902.804	14.652	-886.466	14.717	-872.669	14.775		
-852.737	14.862	-842.535	14.896	-812.803	14.959	-757.006	15.199	-753.312	15.211		
-752.601	15.215	-751.55	15.22	-749.84	15.224	-731.662	15.238	-717.821	15.195		
-710.292	15.196	-684.091	15.255	-670.904	15.318	-661.976	15.348	-643.672	15.381		
-615.699	15.442	-615.663	15.442	-579.518	15.48	-546.139	15.474	-543.115	15.474		
-540.904	15.473	-470.926	15.288	-467.88	15.263	-457.82	14.93	-430.668	14.331		
-407.092	13.973	-398.21	13.902	-377.751	14.375	-356.243	14.895	-349.732	14.987		
-337.568	15.011	-303.557	15.175	-284.387	15.262	-269.073	14.987	-233.302	14.386		
-204.819	13.944	-185.939	13.723	-172.927	13.635	-172.747	13.634	-142.931	13.538		
-123.738	13.436	-114.289	13.406	-54.797	13.267	-41.151	13.25	-25.72	13.265		
16.343	13.278	47.793	13.401	68.557	13.445	72.298	13.445	137.622	13.843		
145.811	13.872	154.17	13.927	178.265	14.052	201.634	14.124	214.834	14.167		
228.445	14.172	242.274	14.163	245.905	14.161	254.625	14.152	259.26	14.14		
294.336	14.031	311.338	13.983	321.373	13.953	354.852	13.747	356.534	13.738		
360.324	13.652	399.777	12.934	426.855	12.744	430.99	12.726	441.72	12.776		
450.826	12.798	461.334	12.831	466.395	12.523	494.353	11.54	504	14.3		
510	9.4	520	2.2	527	.7	530	1.7	532	2.2		
540	8.5	547	14.1	575.929	11.854	593.408	12.318	599.07	12.304		
616.265	12.264	646.227	12.385	659.061	12.39	679.036	12.468	691.869	12.519		
698.286	12.525	717.536	12.691	757.486	12.991	767.473	13.045	790.294	13.216		
800.282	13.259	823.102	13.398	832.57	13.437	833.193	13.44	856.748	13.557		
888.823	13.668	890.734	13.671	894.061	13.661	924.72	13.572	940.635	13.44		
958.706	13.294	975.823	13.236	1009.423	13.066	1042.004	13.073	1045.652	13.066		

Manning's n Values		num= 3			
Sta	n Val	Sta	n Val	Sta	n Val
*****					
-1354	.125	504	.035	547	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	504	547		401	401		.1	.3
Ineffective Flow			num=	2				
Sta L	Sta R	Elev	Permanent					
-1354	484.39	15.7	T					

566.541045.652 15.7 T

CROSS SECTION

RIVER: W14 Main

REACH: Lower

RS: 42773

INPUT

Description: copy of SELA 8.082\*

reach lengths adjusted

ineffective flows

from SELA

Station Elevation Data

num= 160

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-2432	14.949-2420.82	14.944	-2413.2	14.941-2388.01	14.928-2380.28	14.934			
-2356.75	14.996-2322.39	15.092-2305.57		15.164-2289.58	15.198-2281.51	15.228			
-2256.78	15.318-2248.59	15.337-2223.97		15.355-2215.66	15.354-2166.82	15.29			
-2158.35	15.273-2149.82	15.25-2125.54		15.135-2116.89	15.11-2068.73	14.908			
-2051.05	14.916-2027.11	14.917-2003.34		14.928 -1985.2	14.944-1937.95	14.908			
-1928.68	14.932-1890.97	15.122-1863.07		15.2-1843.88	15.215-1816.82	15.205			
-1797.45	15.173-1777.81	15.153-1751.65		15.15-1711.73	15.215-1686.49	15.268			
-1666.21	15.352-1645.65	15.369 -1609.4		15.339-1567.78	15.187-1565.97	15.178			
-1545.9	15.072-1540.32	15.028-1531.49		14.989-1502.12	14.825-1493.18	14.754			
-1469.29	14.555-1443.52	14.509-1436.46		14.495-1423.84	14.53-1370.79	14.628			
-1274.18	14.532-1272.58	14.529 -1272.3		14.529-1272.02	14.529-1271.26	14.528			
-1223.69	14.441-1206.63	14.426-1170.49		14.452-1140.97	14.523-1113.61	14.567			
-1108.14	14.574-1102.24	14.563-1075.31		14.515-1060.32	14.477-1009.64	14.324			
-988.112	14.299-976.814	14.296-935.609		14.301-917.607	14.273 -911.15	14.262			
-897.472	14.305-878.318	14.319-863.344		14.286-854.467	14.259-845.417	14.233			
-826.323	14.171-801.565	14.101-779.246		14.071-750.244	14.045-743.019	14.035			
-718.891	14.028-713.746	14.022-712.205		14.022 -679.99	14.033-674.165	14.04			
-646.905	14.041-637.651	14.037-636.273		14.036-613.996	14.024 -593.61	14.005			
-567.544	13.951-548.314	13.929-533.179		13.872-515.474	13.814-499.273	13.713			
-464.449	13.624-449.793	13.55-408.457		13.603-384.111	13.611-361.354	13.573			
-351.271	13.555-300.345	13.229-289.027		13.17 -285.59	13.16-255.442	12.958			
-250.173	12.935-219.908	12.78 -216.26		12.756-187.068	12.672-134.014	12.632			
-121.387	12.624-120.801	12.622 -88.546		12.526 -70.722	12.478 -55.706	12.446			
-27.586	12.398 -22.865	12.396 -12.045		12.371 42.816	12.055 60.03	12.085			
129.644	12.224 141.338	12.243 326		13.98 338.98	13.49 352	13.05			
357.61	8.44 359.52	6.96 366.96		2.07 368.12	1.62 373.5	.85			
376	.85 378.92	2.29 380.88		3.17 381.13	3.35 388.67	8.16			
395.5	12.55 398.52	12.65 469.435		12.15 477.453	12.283 478.175	12.287			
480.092	12.296 547.56	12.691 573.265		12.725 582.614	12.733 588.252	12.72			
625.389	12.61 638.607	12.596 687.774		12.467 707.412	12.575 722.827	12.72			
756.837	13.333 758.353	13.349 759.61		13.379 809.295	14.307 827.987	14.494			
852.783	14.674 863.041	14.734 869.227		14.731 887.005	14.683 903.427	14.704			



ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2432 .125 326 .035 395.5 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 326 395.5 401 401 401 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -2432 326 13.98 F  
 398.52 903.427 12.65 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 42372

INPUT  
 Description: copy of SELA 8.006  
 reach lengths adjusted  
 ineffective flows from  
 SELA

Station Elevation Data num= 53  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -211.156 13.223 -191.029 13.117 -134.272 12.749 -112.547 12.573 -93.064 12.319  
 -79.677 12.188 -46.427 11.007 -13.937 9.814 12.137 10.737 51.802 12.204  
 75.519 12.324 84.672 12.456 88.841 12.402 99.982 12.283 101.054 12.272  
 150 13.3 175 12.5 200 11.8 207 6 215 1.3  
 220 1 225 1 230 4.3 244 11 250 11.2  
 389.074 12.283 420.123 12.285 479.815 12.258 536.84 12.427 544.935 12.451  
 545.845 12.456 598.104 12.455 607.883 12.478 611.875 12.492 621.376 12.507  
 644.89 12.546 676.218 12.596 703.794 12.667 704.874 12.666 720.129 12.665  
 740.325 12.665 745.092 12.665 747.148 12.667 752.323 12.679 782.878 12.753  
 801.533 12.812 834.111 12.95 854.34 13.083 885.694 13.29 890.07 13.309  
 905.986 13.412 925.801 13.508 927.046 13.511

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -211.156 .125 150 .035 244 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 150 244 461 461 461 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent

ExpandedLocal.rep

-211.156 150 13.3 F  
 250 927.046 11.2 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 41911

INPUT

Description: copy of SELA 7.91866\*  
 reach lengths adjusted  
 ineffective flows

from SELA

Station Elevation Data num= 60

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-491	13.077	436.991	12.713	436.445	12.708	427.555	12.632	404.121	12.431
-400.837	12.4	347.701	11.787	-338.38	11.75	312.576	11.577	-305.51	11.567
-260.323	12.259	-239.77	12.472	-219.674	12.622	-201.778	12.629	-157.429	12.679
-132.325	12.577	-126.117	12.552	-108.303	12.452	-92.222	12.275	-56.872	11.811
-42.6	11.566	-29.718	10.935	12.373	9.896	23.102	9.748	73.613	11.305
88.805	11.983	95.292	11.783	200	11.47	206.18	5.88	212.23	1.52
213.25	1.04	217.67	.7	221	.7	226	3.1	240	10.87
284.32	10.341	285.912	10.542	287.588	10.609	293.189	10.726	298.238	10.806
351.545	11.606	355.437	11.608	413.27	11.703	421.053	11.701	449.97	11.931
478.887	11.705	480.238	11.701	484.35	11.653	484.676	11.65	485.187	11.651
537.453	12.396	554.915	12.529	568.635	12.815	578.28	13.18	610.359	14.59
625.011	15.033	643.66	15.101	648.377	15.111	655.071	15.152	711.696	15.218

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-491	.125	200	.035	240	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	200	240		462	462	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-491	88.81	11.98	F
240	711.696	10.87	F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 41449

ExpandedLocal.rep

INPUT

Description: copy of SELA 7.83133\*  
 reach lengths adjusted  
 ineffective flows

from SELA

Station Elevation Data num= 156

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2207	14.515	2190.31	14.686	2187.65	14.696	2159.59	14.588	2154.76	14.61
-2128.87	14.282	2121.87	14.204	2098.15	13.966	2088.98	13.884	2067.43	13.716
-2049.79	13.591	2027.81	13.46	1998.65	13.302	1990.31	13.245	1975.27	13.1
-1957.42	12.943	1944.55	12.934	1924.53	12.915	1913.83	13.006	1891.64	13.199
-1871.35	13.46	1849.84	13.785	1825.86	14.082	1811.13	14.23	1795.28	14.386
-1790.95	14.418	1762.48	14.505	1760.23	14.512	1760.08	14.512	1738.83	14.45
-1727.29	14.414	1701.47	14.331	1696.2	14.316	1680.19	14.214	1627.63	13.845
-1610.6	13.812	1594.47	13.775	1573.14	13.832	1541.7	13.89	1528.16	13.932
-1495.64	14.104	1495	14.108	1494.61	14.109	1461.85	14.201	1455.32	14.209
-1454.86	14.21	1443.39	14.217	1431.56	14.199	1423.37	14.169	1407.98	14.081
-1351.77	13.916	1343.57	13.87	1339.59	13.855	1328.08	13.864	1313.66	13.846
-1303.68	13.864	1290.08	13.779	1270.42	13.668	1266.5	13.64	1263.78	13.624
-1248.85	13.481	1219.34	13.211	1212.77	13.203	1195.76	13.145	1155.11	13.331
-1150.83	13.33	1150.37	13.331	1145.11	13.339	1121.28	13.401	1111.26	13.41
-1094.29	13.385	1049	13.238	1043.55	13.216	1038.16	13.173	1027.56	13.084
-975.853	12.642	968.208	12.638	952.152	12.673	941.694	12.733	917.239	12.949
-873.197	13.37	854.363	13.384	830.64	13.362	804.7	13.298	802.902	13.297
-770.451	13.286	756.574	13.294	741.682	13.299	723.459	13.291	703.282	13.255
-640.64	12.999	637.772	12.989	637.074	12.987	635.02	12.971	627.387	12.913
-577.569	12.532	570.866	12.467	550.055	12.298	504.658	11.858	485.576	11.924
-460.857	12.118	411.735	12.177	406.632	12.171	404.655	12.167	402.679	12.157
-374.915	12.091	333.27	11.863	330.635	11.843	329.317	11.84	306.181	11.741
-294.613	11.569	259.909	10.52	257.932	10.483	255.955	10.481	241.794	10.795
-223.288	11.097	213.516	11.198	190.244	11.722	171.959	11.82	157.201	11.846
-113.701	11.728	95.679	11.69	91.113	11.677	87.064	11.667	77.269	11.622
-25.026	11.295	19.585	11.317	41.062	11.573	49.332	11.536	74.105	11.538
200	11.13	205.37	5.76	210.62	1.06	211.5	.77	215.33	.4
217	.4	222	1.9	236	10.73	265.974	11.073	277.012	11.231
304.986	12.111	307.07	12.116	328.653	12.196	337.947	12.233	391.695	12.243
403.869	12.225	427.245	12.218	448.098	12.177	465.771	12.121	474.785	12.169
520.304	12.636	548.444	12.953	577.741	13.102	585.274	13.141	592.51	13.123
594.508	13.113								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2207	.125	200	.035	236	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	200	236		462	462	.1	.3

ExpandedLocal.rep

Ineffective Flow num= 1  
Sta L Sta R Elev Permanent  
-2207 41 11.57 F

CROSS SECTION

RIVER: W14 Main  
REACH: Lower RS: 40987

INPUT

Description: copy of SELA 7.744

Station Elevation Data num= 152

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-2194	14.515	-2177.31	14.686	-2174.65	14.696	-2146.59	14.588	-2141.76	14.61
-2115.87	14.282	-2108.87	14.204	-2085.15	13.966	-2075.98	13.884	-2054.43	13.716
-2036.79	13.591	-2014.81	13.46	-1985.65	13.302	-1977.31	13.245	-1962.27	13.1
-1944.42	12.943	-1931.55	12.934	-1911.53	12.915	-1900.83	13.006	-1878.64	13.199
-1858.35	13.46	-1836.84	13.785	-1812.86	14.082	-1798.13	14.23	-1782.28	14.386
-1777.95	14.418	-1749.48	14.505	-1747.23	14.512	-1747.08	14.512	-1725.83	14.45
-1714.29	14.414	-1688.47	14.331	-1683.2	14.316	-1667.19	14.214	-1614.63	13.845
-1597.6	13.812	-1581.47	13.775	-1560.14	13.832	-1528.7	13.89	-1515.16	13.932
-1482.64	14.104	-1482	14.108	-1481.61	14.109	-1448.85	14.201	-1442.32	14.209
-1441.86	14.21	-1430.39	14.217	-1418.56	14.199	-1410.37	14.169	-1394.98	14.081
-1338.77	13.916	-1330.57	13.87	-1326.59	13.855	-1315.08	13.864	-1300.66	13.846
-1290.68	13.864	-1277.08	13.779	-1257.42	13.668	-1253.5	13.64	-1250.78	13.624
-1235.85	13.481	-1206.34	13.211	-1199.77	13.203	-1182.76	13.145	-1142.11	13.331
-1137.83	13.33	-1137.37	13.331	-1132.11	13.339	-1108.28	13.401	-1098.26	13.41
-1081.29	13.385	-1036	13.238	-1030.55	13.216	-1025.16	13.173	-1014.56	13.084
-962.853	12.642	-955.208	12.638	-939.152	12.673	-928.694	12.733	-904.239	12.949
-860.197	13.37	-841.363	13.384	-817.64	13.362	-791.7	13.298	-789.902	13.297
-757.451	13.286	-743.574	13.294	-728.682	13.299	-710.459	13.291	-690.282	13.255
-627.64	12.999	-624.772	12.989	-624.074	12.987	-622.02	12.971	-614.387	12.913
-564.569	12.532	-557.866	12.467	-537.055	12.298	-491.658	11.858	-472.576	11.924
-447.857	12.118	-398.735	12.177	-393.632	12.171	-391.655	12.167	-389.679	12.157
-361.915	12.091	-320.27	11.863	-317.635	11.843	-316.317	11.84	-293.181	11.741
-281.613	11.569	-246.909	10.52	-244.932	10.483	-242.955	10.481	-228.794	10.795
-210.288	11.097	-200.516	11.198	-177.244	11.722	-158.959	11.82	-144.201	11.846
-100.701	11.728	-82.679	11.69	-78.113	11.677	-74.064	11.667	-64.269	11.622
-12.026	11.295	-6.585	11.317	54.062	11.573	62.332	11.536	200	10.8
209	.6	213	.1	218	.7	232	10.6	278.974	11.073
290.012	11.231	317.986	12.111	320.07	12.116	341.653	12.196	350.947	12.233
404.695	12.243	416.869	12.225	440.245	12.218	461.098	12.177	478.771	12.121
487.785	12.169	533.304	12.636	561.444	12.953	590.741	13.102	598.274	13.141
605.51	13.123	607.508	13.113						

Manning's n Values num= 3

ExpandedLocal.rep

Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2194 .125 200 .035 232 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
           200 232           20 20 20           .1 .3  
 Ineffective Flow num= 2  
   Sta L Sta R Elev Permanent  
   -2194 149.49 12 F  
   322.71 607.508 12 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 40967

INPUT

Description: Gause Blvd culverts  
 copy of SELA 7.74  
 reach lengths adjusted

Station Elevation Data num= 151  
   Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -2121 14.515-2104.31 14.686-2101.65 14.696-2073.59 14.588-2068.76 14.61  
 -2042.87 14.282-2035.87 14.204-2012.15 13.966-2002.98 13.884-1981.43 13.716  
 -1963.79 13.591-1941.81 13.46-1912.65 13.302-1904.31 13.245-1889.27 13.1  
 -1871.42 12.943-1858.55 12.934-1838.53 12.915-1827.83 13.006-1805.64 13.199  
 -1785.35 13.46-1763.84 13.785-1739.86 14.082-1725.13 14.23-1709.28 14.386  
 -1704.95 14.418-1676.48 14.505-1674.23 14.512-1674.08 14.512-1652.83 14.45  
 -1641.29 14.414-1615.47 14.331 -1610.2 14.316-1594.19 14.214-1541.63 13.845  
 -1524.6 13.812-1508.47 13.775-1487.14 13.832 -1455.7 13.89-1442.16 13.932  
 -1409.64 14.104 -1409 14.108-1408.61 14.109-1375.85 14.201-1369.32 14.209  
 -1368.86 14.21-1357.39 14.217-1345.56 14.199-1337.37 14.169-1321.98 14.081  
 -1265.77 13.916-1257.57 13.87-1253.59 13.855-1242.08 13.864-1227.66 13.846  
 -1217.68 13.864-1204.08 13.779-1184.42 13.668 -1180.5 13.64-1177.78 13.624  
 -1162.85 13.481-1133.34 13.211-1126.77 13.203-1109.76 13.145-1069.11 13.331  
 -1064.83 13.33-1064.37 13.331-1059.11 13.339-1035.28 13.401-1025.26 13.41  
 -1008.29 13.385-963.009 13.238-957.557 13.216-952.166 13.173-941.564 13.084  
 -889.853 12.642-882.208 12.638-866.152 12.673-855.694 12.733-831.239 12.949  
 -787.197 13.37-768.363 13.384 -744.64 13.362 -718.7 13.298-716.902 13.297  
 -684.451 13.286-670.574 13.294-655.682 13.299-637.459 13.291-617.282 13.255  
 -554.64 12.999-551.772 12.989-551.074 12.987 -549.02 12.971-541.387 12.913  
 -491.569 12.532-484.866 12.467-464.055 12.298-418.658 11.858-399.576 11.924  
 -374.857 12.118-325.735 12.177-320.632 12.171-318.655 12.167-316.679 12.157  
 -288.915 12.091 -247.27 11.863-244.635 11.843-243.317 11.84-220.181 11.741  
 -208.613 11.569-173.909 10.52-171.932 10.483-169.955 10.481-155.794 10.795  
 -137.288 11.097-127.516 11.198-104.244 11.722 -85.959 11.82 -71.201 11.846

ExpandedLocal.rep

-27.701	11.728	-9.679	11.69	-5.113	11.677	-1.064	11.667	8.731	11.622
60.974	11.295	66.415	11.317	127.062	11.573	135.332	11.536	441	11.7
452.2	10.5	467.5	2	468.5	.7	470.3	-1.5	485.2	-2.9
485.8	-3.6	500	-3.4	500	-3.3	510.2	-2.3	515	-.5
528.5	0	530	.7	540.7	8.3	556.9	10.6	562	11.9
606.304	12.636	634.444	12.953	663.741	13.102	671.274	13.141	678.51	13.123
680.508	13.113								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2121	.125	441	.035	562	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	441	562		105	105	105		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-2121	479.05	12	F
530.05	680.508	12	F

CULVERT

RIVER: W14 Main  
 REACH: Lower RS: 40900

INPUT

Description: Gause Blvd  
 taken from SELA model  
 Distance from Upstream XS = 1.5  
 Deck/Roadway Width = 102  
 Weir Coefficient = 2.7

Upstream Deck/Roadway Coordinates num= 2

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
0	12		1000	12	

Upstream Bridge Cross Section Data

Station Elevation Data num= 24

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4535	18	-4300	17	-3700	16	-3330	15	-1790	14
-815	13	20	12	434.9	11.5	441	11.7	452.2	10.5
467.5	2	468.5	.7	470.3	-3.23	485.2	-3.23	485.8	-3.6
500	-3.4	500	-3.3	510.2	-3.23	515	-3.23	528.5	-3.23
530	.7	540.7	8.3	556.9	10.6	562	11.9		

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -4535 .125 452.2 .035 556.9 .125

Bank Sta: Left Right Coeff Contr. Expan.  
 441 562 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -4535 479.05 12 F  
 530.05 562 12 F

Downstream Deck/Roadway Coordinates  
 num= 2  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 0 12 1000 12

Downstream Bridge Cross Section Data  
 Station Elevation Data num= 21  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -4435 17 -3740 16 -3365 15 -1880 14 -950 13  
 -65 12 520.3 11.1 525.4 10.2 526.4 -3.7 539.7 -5.1  
 544.7 -4.3 554.7 -3.22 560 -3.22 569.6 -3.22 575.2 -3.22  
 583.4 -3.22 586.4 -2.5 589.5 -.7 606.8 9.8 615.9 6.7  
 621 10.8

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -4435 .125 525.4 .035 606.8 .125

Bank Sta: Left Right Coeff Contr. Expan.  
 520.3 606.8 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -4435 529.35 12 F  
 578.85 621 12 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name      Shape      Rise      Span  
 Culvert #1          Box          12          12  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist   Length      Top n    Bottom n    Depth Blocked    Entrance Loss Coef  
 Exit Loss Coef

1	1.5	102	.013	.013	0	.4
---	-----	-----	------	------	---	----

Number of Barrels = 4  
 Upstream Elevation = -3.23  
 Centerline Stations  
 Sta.    Sta.    Sta.    Sta.  
 486.55 498.55 510.55 522.55  
 Downstream Elevation = -3.22  
 Centerline Stations  
 Sta.    Sta.    Sta.    Sta.  
 536.1   548.1   560.1   572.1

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower                      RS: 40862

INPUT  
 Description: DS Gause Blvd Culverts  
 copy of SELA 7.72  
 Reach lengths adjusted

Station Elevation Data    num=    161

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1867	14.515	-1850.31	14.686	-1847.65	14.696	-1819.59	14.588	-1814.76	14.61
-1788.87	14.282	-1781.87	14.204	-1758.15	13.966	-1748.98	13.884	-1727.43	13.716
-1709.79	13.591	-1687.81	13.46	-1658.65	13.302	-1650.31	13.245	-1635.27	13.1
-1617.42	12.943	-1604.55	12.934	-1584.53	12.915	-1573.83	13.006	-1551.64	13.199
-1531.35	13.46	-1509.84	13.785	-1485.86	14.082	-1471.13	14.23	-1455.28	14.386
-1450.95	14.418	-1422.48	14.505	-1420.23	14.512	-1420.08	14.512	-1398.83	14.45
-1387.29	14.414	-1361.47	14.331	-1356.2	14.316	-1340.19	14.214	-1287.63	13.845
-1270.6	13.812	-1254.47	13.775	-1233.14	13.832	-1201.7	13.89	-1188.16	13.932
-1155.64	14.104	-1155	14.108	-1154.61	14.109	-1121.85	14.201	-1115.32	14.209
-1114.86	14.21	-1103.39	14.217	-1091.56	14.199	-1083.37	14.169	-1067.98	14.081
-1011.77	13.916	-1003.57	13.87	-999.596	13.855	-988.082	13.864	-973.661	13.846
-963.682	13.864	-950.081	13.779	-930.427	13.668	-926.501	13.64	-923.784	13.624
-908.859	13.481	-879.34	13.211	-872.771	13.203	-855.76	13.145	-815.115	13.331
-810.839	13.33	-810.372	13.331	-805.113	13.339	-781.286	13.401	-771.261	13.41



ExpandedLocal.rep

-754.295	13.385-709.009	13.238-703.557	13.216-698.166	13.173-687.564	13.084
-635.853	12.642-628.208	12.638-612.152	12.673-601.694	12.733-577.239	12.949
-533.197	13.37-514.363	13.384 -490.64	13.362 -464.7	13.298-462.902	13.297
-430.451	13.286-416.574	13.294-401.682	13.299-383.459	13.291-363.282	13.255
-300.64	12.999-297.772	12.989-297.074	12.987 -295.02	12.971-287.387	12.913
-237.569	12.532-230.866	12.467-210.055	12.298-164.658	11.858-145.576	11.924
-120.857	12.118 -71.735	12.177 -66.632	12.171 -64.655	12.167 -62.679	12.157
-34.915	12.091 6.73	11.863 9.365	11.843 10.683	11.84 33.819	11.741
45.387	11.569 80.091	10.52 82.068	10.483 84.045	10.481 98.206	10.795
116.712	11.097 126.484	11.198 149.756	11.722 168.041	11.82 182.799	11.846
226.299	11.728 244.321	11.69 248.887	11.677 252.936	11.667 262.731	11.622
314.974	11.295 320.415	11.317 381.062	11.573 389.332	11.536 414.105	11.538
520.3	11.1 525.4	10.2 526.4	-3.7 539.7	-5.1 544.7	-4.3
554.7	-3 560	-1.5 569.6	-2.4 575.2	-2.6 583.4	-2.4
586.4	-2.5 589.5	-.7 606.8	9.8 615.9	6.7 621	10.8
644.986	12.111 647.07	12.116 668.653	12.196 677.947	12.233 731.695	12.243
743.869	12.225 767.245	12.218 788.098	12.177 805.771	12.121 814.785	12.169
860.304	12.636 888.444	12.953 917.741	13.102 925.274	13.141 932.51	13.123
934.508	13.113				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1867	.125	520.3	.035	606.8	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	520.3	606.8		64	64	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1867	529.35	12	F
578.85	934.508	12	F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 40798

INPUT

Description: copy of SELA 7.708

Station Elevation Data num= 117

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1708	13.422-1700.53	13.397-1643.45	13.12	-1628.1	12.967	-1610.5	12.995		
-1583.87	11.8-1569.96	11.458-1544.61	11.417	-1523.53	12.193	-1511.66	12.676		
-1493.36	12.998-1461.11	13.306-1445.89	13.357	-1445.77	13.357	-1417.99	13.239		
-1346.08	12.801-1345.52	12.798-1345.18	12.792	-1278.7	11.598	-1261.6	12.223		
-1221.16	12.896-1211.87	12.951-1179.75	13.154	-1177.98	13.162	-1173.04	13.157		

ExpandedLocal.rep

-1150.54	13.144-1113.03	13.089-1112.13	13.088-1112.08	13.088-1111.96	13.087
-1079.06	12.858-1031.65	12.059-1013.01	11.802-977.915	12.197-946.971	12.484
-934.403	12.559-913.948	12.694-901.858	12.716-854.813	12.779-849.316	12.786
-847.903	12.785-845.513	12.78-824.639	12.71-815.883	12.679 -814.88	12.674
-762.96	12.084-748.835	11.963-709.221	12.365-682.789	12.52-667.733	12.497
-649.766	12.526-638.103	12.468-623.118	12.407-593.452	12.29-574.749	12.232
-551.162	12.161 -542.38	12.125 -518.35	12.023 -510.01	11.968-485.539	11.82
-469.953	11.67-419.916	11.247-412.902	11.206-387.105	11.081-360.594	11.034
-348.163	11.029 -330.09	10.962-321.419	10.934-298.181	11.168-275.835	11.294
-246.826	11.444-222.267	11.523-209.793	11.537-128.188	11.601 -125.3	11.6
-123.115	11.6 -107.36	11.652 -90.064	11.709 -88.943	11.714 -84.495	11.749
-23.963	12.124 -12.398	12.181 9.088	12.245 25.235	12.218 42.139	12.184
69.429	12.159 75.189	12.146 80.289	12.116 92.591	12.162 100.064	12.114
140.5	12.5 161	12.3 181.5	11.9 202	11.5 213.3	.5
221.5	-1.2 228.6	.6 243	11.1 253.2	12.2 304.236	12.128
320.952	12.223 344.332	12.356 344.564	12.356 365.091	12.36 401.105	12.282
403.906	12.274 405.535	12.281 442.722	12.448 466.93	12.636 481.537	12.775
488.289	12.887 520.352	13.243 545.046	13.47 559.168	13.597 571.001	13.671
589.718	13.886 630.873	14.097			

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1708	.125	140.5	.035	253.2	.125

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	140.5	253.2		487	487	.1	.3
Ineffective Flow			num=	2			
Sta L	Sta R	Elev	Permanent				
-1708	153.39	12	F				
266.89	630.873	12	F				

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 40311

INPUT  
 Description: copy of SELA 7.61575\*  
 reach lengths adjusted

Station Elevation Data num= 116

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1563	13.422-1555.53	13.397-1498.45	13.12 -1483.1	12.967 -1465.5	12.995				
-1438.87	11.8-1424.96	11.458-1399.61	11.417-1378.53	12.193-1366.66	12.676				
-1348.36	12.998-1316.11	13.306-1300.89	13.357-1300.77	13.357-1272.99	13.239				
-1201.08	12.801-1200.52	12.798-1200.18	12.792 -1133.7	11.598 -1116.6	12.223				

\*\*\*\*\*

ExpandedLocal.rep

-1076.16	12.896-1066.87	12.951-1034.75	13.154-1032.98	13.162-1028.04	13.157
-1005.54	13.144-968.037	13.089-967.136	13.088-967.084	13.088-966.961	13.087
-934.062	12.858-886.654	12.059-868.016	11.802-832.915	12.197-801.971	12.484
-789.403	12.559-768.948	12.694-756.858	12.716-709.813	12.779-704.316	12.786
-702.903	12.785-700.513	12.78-679.639	12.71-670.883	12.679-669.88	12.674
-617.96	12.084-603.835	11.963-564.221	12.365-537.789	12.52-522.733	12.497
-504.766	12.526-493.103	12.468-478.118	12.407-448.452	12.29-429.749	12.232
-406.162	12.161-397.38	12.125-373.35	12.023-365.01	11.968-340.539	11.82
-324.953	11.67-274.916	11.247-267.902	11.206-242.105	11.081-215.594	11.034
-203.163	11.029-185.09	10.962-176.419	10.934-153.181	11.168-130.835	11.294
-101.826	11.444-77.267	11.523-64.793	11.537-16.812	11.601-19.7	11.6
21.885	11.6-37.64	11.652-54.936	11.709-56.057	11.714-60.505	11.749
121.037	12.124-132.602	12.181-154.088	12.245-170.235	12.218-187.139	12.184
214.429	12.159-220.189	12.146-225.289	12.116-237.591	12.162-245.064	12.114
278.829	11.886-346.1	11.7-358.7	2.58-359.69	2.21-361.51	-.11
367.85	-.8-374.55	1.87-388.15	10.7-449.236	12.128-465.952	12.223
489.332	12.356-489.564	12.356-510.091	12.36-546.105	12.282-548.906	12.274
550.535	12.281-587.722	12.448-611.93	12.636-626.537	12.775-633.289	12.887
665.352	13.243-690.046	13.47-704.168	13.597-716.001	13.671-734.718	13.886
775.873	14.097				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1563	.125	346.1	.035	388.15	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	346.1	388.15		162	162	162		.1	.3
Ineffective Flow			num=	1					
Sta L	Sta R	Elev	Permanent						
-1563	154.1	12.24	F						

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 40149

INPUT

Description:

Station Elevation Data num= 114

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1423	13.422-1415.53	13.397-1358.45	13.12	-1343.1	12.967	-1325.5	12.995		
-1298.87	11.8-1284.96	11.458-1259.61	11.417	-1238.53	12.193	-1226.66	12.676		
-1208.36	12.998-1176.11	13.306-1160.89	13.357	-1160.77	13.357	-1132.99	13.239		
-1061.08	12.801-1060.52	12.798-1060.18	12.792	-993.7	11.598	-976.6	12.223		
-936.164	12.896-926.872	12.951-894.753	13.154	-892.98	13.162	-888.044	13.157		

ExpandedLocal.rep

-865.541	13.144	-828.037	13.089	-827.136	13.088	-827.084	13.088	-826.961	13.087
-794.062	12.858	-746.654	12.059	-728.016	11.802	-692.915	12.197	-661.971	12.484
-649.403	12.559	-628.948	12.694	-616.858	12.716	-569.813	12.779	-564.316	12.786
-562.903	12.785	-560.513	12.78	-539.639	12.71	-530.883	12.679	-529.88	12.674
-477.96	12.084	-463.835	11.963	-424.221	12.365	-397.789	12.52	-382.733	12.497
-364.766	12.526	-353.103	12.468	-338.118	12.407	-308.452	12.29	-289.749	12.232
-266.162	12.161	-257.38	12.125	-233.35	12.023	-225.01	11.968	-200.539	11.82
-184.953	11.67	-134.916	11.247	-127.902	11.206	-102.105	11.081	-75.594	11.034
-63.163	11.029	-45.09	10.962	-36.419	10.934	-13.181	11.168	9.165	11.294
38.174	11.444	62.733	11.523	75.207	11.537	156.812	11.601	159.7	11.6
161.885	11.6	177.64	11.652	194.936	11.709	196.057	11.714	200.505	11.749
261.037	12.124	272.602	12.181	294.088	12.245	310.235	12.218	327.139	12.184
354.429	12.159	360.189	12.146	365.289	12.116	377.591	12.162	385.064	12.114
490.2	11.9	505.2	4.1	507.2	-.2	514.2	-.4	533.3	10.3
561.923	11.172	589.236	12.128	605.952	12.223	629.332	12.356	629.564	12.356
650.091	12.36	686.105	12.282	688.906	12.274	690.535	12.281	727.722	12.448
751.93	12.636	766.537	12.775	773.289	12.887	805.352	13.243	830.046	13.47
844.168	13.597	856.001	13.671	874.718	13.886	915.873	14.097		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1423	.125	490.2	.035	533.3	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	490.2	533.3		35	35	.1	.3
Ineffective Flow	num=		2				
Sta L	Sta R	Elev	Permanent				
-1423	462.37	12.01	F				
563.26	915.873	12.01	F				

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 40114

INPUT

Description: Florida Avenue  
 copy of SELA 7.579

Station Elevation Data num= 130

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
169	13.422	176.47	13.397	233.545	13.12	248.893	12.967	266.492	12.995
293.121	11.8	307.035	11.458	332.385	11.417	353.466	12.193	365.332	12.676
383.638	12.998	415.885	13.306	431.101	13.357	431.227	13.357	459.002	13.239
530.917	12.801	531.471	12.798	531.819	12.792	598.3	11.598	615.4	12.223
655.836	12.896	665.128	12.951	697.247	13.154	699.02	13.162	703.956	13.157

ExpandedLocal.rep

726.459	13.144	763.963	13.089	764.864	13.088	764.916	13.088	765.039	13.087
797.938	12.858	845.346	12.059	863.984	11.802	899.085	12.197	930.029	12.484
942.597	12.559	963.052	12.694	975.142	12.716	1022.187	12.779	1027.684	12.786
1029.097	12.785	1031.487	12.781	1052.361	12.711	1061.117	12.679	1062.12	12.674
1114.04	12.084	1128.165	11.963	1167.779	12.365	1194.211	12.521	1209.267	12.497
1227.234	12.526	1238.897	12.468	1253.882	12.407	1283.548	12.291	1302.251	12.232
1325.838	12.161	1334.62	12.125	1358.65	12.023	1366.99	11.968	1391.461	11.82
1407.047	11.671	1457.084	11.247	1464.098	11.206	1489.895	11.081	1516.406	11.034
1528.837	11.029	1546.91	10.962	1555.581	10.934	1578.819	11.168	1601.165	11.294
1630.174	11.444	1654.733	11.523	1667.207	11.537	1748.812	11.601	1751.7	11.6
1753.885	11.6	1769.64	11.652	1786.936	11.709	1788.057	11.714	1792.505	11.749
1853.037	12.124	1864.602	12.181	1886.088	12.245	1902.235	12.218	1919.139	12.184
1946.429	12.159	1952.189	12.146	1957.289	12.116	1969.591	12.162	1977.064	12.114
2056	12.58	2070	11.5	2070.01	11.5	2081	11.5	2084	3
2084.01	32084.415		32085.585		3.2	2090	4.75	2096	1.75
2097.415	1.642	2098.585	1.6	2099	1.6	2099.01	1.6	2100	1.75
2111	1.35	2112	7.5	2112.01	7.5	2113	7.5	2113.01	7.5
2115	4.75	2126	11.65	2151	12.542	2197.952	12.223	2221.332	12.356
2221.564	12.356	2242.091	12.362	2278.105	12.282	2280.906	12.274	2282.535	12.281
2319.722	12.448	2343.93	12.636	2358.537	12.775	2365.289	12.887	2397.352	13.243
2422.046	13.472	2436.168	13.597	2448.001	13.671	2466.718	13.886	2507.873	14.097

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
169	.125	2070	.035	2126	.125

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	2070	2126		32	32	.1	.3
Ineffective Flow			num=	2			
Sta L	Sta R	Elev	Permanent				
169	2081.13	12.01	F				
2112.052	207.873	12.01	F				

BRIDGE

RIVER: W14 Main  
 REACH: Lower RS: 40100

INPUT

Description: Florida Avenue Bridge  
 taken from SELA model  
 Distance from Upstream XS = .05  
 Deck/Roadway Width = 31.9  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates  
 num= 4

ExpandedLocal.rep

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
2056	12.01	11.12	2112	12.01	11.12	2112	12.01	7.5						
2151	12.01													

Upstream Bridge Cross Section Data

Station Elevation Data num= 130											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
169	13.422	176.47	13.397	233.545	13.12	248.893	12.967	266.492	12.995		
293.121	11.8	307.035	11.458	332.385	11.417	353.466	12.193	365.332	12.676		
383.638	12.998	415.885	13.306	431.101	13.357	431.227	13.357	459.002	13.239		
530.917	12.801	531.471	12.798	531.819	12.792	598.3	11.598	615.4	12.223		
655.836	12.896	665.128	12.951	697.247	13.154	699.02	13.162	703.956	13.157		
726.459	13.144	763.963	13.089	764.864	13.088	764.916	13.088	765.039	13.087		
797.938	12.858	845.346	12.059	863.984	11.802	899.085	12.197	930.029	12.484		
942.597	12.559	963.052	12.694	975.142	12.716	1022.187	12.779	1027.684	12.786		
1029.097	12.785	1031.487	12.781	1052.361	12.711	1061.117	12.679	1062.12	12.674		
1114.04	12.084	1128.165	11.963	1167.779	12.365	1194.211	12.521	1209.267	12.497		
1227.234	12.526	1238.897	12.468	1253.882	12.407	1283.548	12.291	1302.251	12.232		
1325.838	12.161	1334.62	12.125	1358.65	12.023	1366.99	11.968	1391.461	11.82		
1407.047	11.671	1457.084	11.247	1464.098	11.206	1489.895	11.081	1516.406	11.034		
1528.837	11.029	1546.91	10.962	1555.581	10.934	1578.819	11.168	1601.165	11.294		
1630.174	11.444	1654.733	11.523	1667.207	11.537	1748.812	11.601	1751.7	11.6		
1753.885	11.6	1769.64	11.652	1786.936	11.709	1788.057	11.714	1792.505	11.749		
1853.037	12.124	1864.602	12.181	1886.088	12.245	1902.235	12.218	1919.139	12.184		
1946.429	12.159	1952.189	12.146	1957.289	12.116	1969.591	12.162	1977.064	12.114		
2056	12.58	2070	11.5	2070.01	11.5	2081	11.5	2084	3		
2084.01	3.2	2084.415	3.2	2085.585	3.2	2090	4.75	2096	1.75		
2097.415	1.642	2098.585	1.6	2099	1.6	2099.01	1.6	2100	1.75		
2111	1.35	2112	7.5	2112.01	7.5	2113	7.5	2113.01	7.5		
2115	4.75	2126	11.65	2151	12.542	2197.952	12.223	2221.332	12.356		
2221.564	12.356	2242.091	12.362	2278.105	12.282	2280.906	12.274	2282.535	12.281		
2319.722	12.448	2343.93	12.636	2358.537	12.775	2365.289	12.887	2397.352	13.243		
2422.046	13.472	2436.168	13.597	2448.001	13.671	2466.718	13.886	2507.873	14.097		

Manning's n Values num= 3					
Sta	n	Sta	n	Sta	n
169	.125	2070	.035	2126	.125

Bank	Sta	Left	Right	Coeff	Contr.	Expan.
	2070		2126	.1		.3

Ineffective Flow num= 2			
Sta	L	Sta	R
169	2081.13	12.01	F
2112.052	2507.873	12.01	F

ExpandedLocal.rep

Downstream Deck/Roadway Coordinates

num= 4

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
2056	12.01	11.12	2112	12.01	11.12	2112	12.01	7.5						
2151	12.01													

Downstream Bridge Cross Section Data

Station Elevation Data num= 131

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
169	13.422	176.47	13.397	233.545	13.12	248.893	12.967	266.492	12.995
293.121	11.8	307.035	11.458	332.385	11.417	353.466	12.193	365.332	12.676
383.638	12.998	415.885	13.306	431.101	13.357	431.227	13.357	459.002	13.239
530.917	12.801	531.471	12.798	531.819	12.792	598.3	11.598	615.4	12.223
655.836	12.896	665.128	12.951	697.247	13.154	699.02	13.162	703.956	13.157
726.459	13.144	763.963	13.089	764.864	13.088	764.916	13.088	765.039	13.087
797.938	12.858	845.346	12.059	863.984	11.802	899.085	12.197	930.029	12.484
942.597	12.559	963.052	12.694	975.142	12.716	1022.187	12.779	1027.684	12.786
1029.097	12.785	1031.487	12.781	1052.361	12.711	1061.117	12.679	1062.12	12.674
1114.04	12.084	1128.165	11.963	1167.779	12.365	1194.211	12.521	1209.267	12.497
1227.234	12.526	1238.897	12.468	1253.882	12.407	1283.548	12.291	1302.251	12.232
1325.838	12.161	1334.62	12.125	1358.65	12.023	1366.99	11.968	1391.461	11.82
1407.047	11.671	1457.084	11.247	1464.098	11.206	1489.895	11.081	1516.406	11.034
1528.837	11.029	1546.91	10.962	1555.581	10.934	1578.819	11.168	1601.165	11.294
1630.174	11.444	1654.733	11.523	1667.207	11.537	1748.812	11.601	1751.7	11.6
1753.885	11.6	1769.64	11.652	1786.936	11.709	1788.057	11.714	1792.505	11.749
1853.037	12.124	1864.602	12.181	1886.088	12.245	1902.235	12.218	1919.139	12.184
1946.429	12.159	1952.189	12.146	1957.289	12.116	1969.591	12.162	1977.064	12.114
2056	12.58	2070	11.5	2070.01	11.5	2081	11.5	2084	3
2084.01		32084.415		32085.585	3.2	2090	4.75	2096	1.75
2097.415	1.642	2098.585	1.6	2099	1.6	2099.01	1.6	2100	1.75
2111	1.35	2112	7.5	2112.01	7.5	2113	7.5	2113.01	7.5
2115	4.75	2126	11.65	2151	12.542	2181.236	12.128	2197.952	12.223
2221.332	12.356	2221.564	12.356	2242.091	12.362	2278.105	12.282	2280.906	12.274
2282.535	12.281	2319.722	12.448	2343.93	12.636	2358.537	12.775	2365.289	12.887
2397.352	13.243	2422.046	13.472	2436.168	13.597	2448.001	13.671	2466.718	13.886
2507.873	14.097								

Manning's n Values

num= 3

Sta	n	Val	Sta	n	Val	Sta	n	Val
169	.125		2070	.035		2126	.125	

Bank Sta: Left 2070 Right 2126 Coeff Contr. .1 Expan. .3

Ineffective Flow num= 2  
Sta L Sta R Elev Permanent

ExpandedLocal.rep

1692081.155 12.01 F  
2112.052507.873 12.01 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
Maximum allowable submergence for weir flow = .98  
Elevation at which weir flow begins =  
Energy head used in spillway design =  
Spillway height used in design =  
Weir crest shape = Broad Crested

Number of Piers = 2

Pier Data

Pier Station Upstream= 2085 Downstream= 2085  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.08 10 1.08 15  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.08 10 1.08 15

Pier Data

Pier Station Upstream= 2098 Downstream= 2098  
Upstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.08 10 1.08 15  
Downstream num= 2  
Width Elev Width Elev  
\*\*\*\*\*  
1.08 10 1.08 15

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth



ExpandedLocal.rep  
inside the bridge at the upstream end  
Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main  
REACH: Lower RS: 40082

INPUT

Description: Florida Avenue  
copy of SELA 7.573

Station Elevation Data num= 131

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
169	13.422	176.47	13.397	233.545	13.12	248.893	12.967	266.492	12.995
293.121	11.8	307.035	11.458	332.385	11.417	353.466	12.193	365.332	12.676
383.638	12.998	415.885	13.306	431.101	13.357	431.227	13.357	459.002	13.239
530.917	12.801	531.471	12.798	531.819	12.792	598.3	11.598	615.4	12.223
655.836	12.896	665.128	12.951	697.247	13.154	699.02	13.162	703.956	13.157
726.459	13.144	763.963	13.089	764.864	13.088	764.916	13.088	765.039	13.087
797.938	12.858	845.346	12.059	863.984	11.802	899.085	12.197	930.029	12.484
942.597	12.559	963.052	12.694	975.142	12.716	1022.187	12.779	1027.684	12.786
1029.097	12.785	1031.487	12.781	1052.361	12.711	1061.117	12.679	1062.12	12.674
1114.04	12.084	1128.165	11.963	1167.779	12.365	1194.211	12.521	1209.267	12.497
1227.234	12.526	1238.897	12.468	1253.882	12.407	1283.548	12.291	1302.251	12.232
1325.838	12.161	1334.62	12.125	1358.65	12.023	1366.99	11.968	1391.461	11.82
1407.047	11.671	1457.084	11.247	1464.098	11.206	1489.895	11.081	1516.406	11.034
1528.837	11.029	1546.91	10.962	1555.581	10.934	1578.819	11.168	1601.165	11.294
1630.174	11.444	1654.733	11.523	1667.207	11.537	1748.812	11.601	1751.7	11.6
1753.885	11.6	1769.64	11.652	1786.936	11.709	1788.057	11.714	1792.505	11.749
1853.037	12.124	1864.602	12.181	1886.088	12.245	1902.235	12.218	1919.139	12.184
1946.429	12.159	1952.189	12.146	1957.289	12.116	1969.591	12.162	1977.064	12.114
2056	12.58	2070	11.5	2070.01	11.5	2081	11.5	2084	3
2084.01		32084.415		32085.585	3.2	2090	4.75	2096	1.75
2097.415	1.642	2098.585	1.6	2099	1.6	2099.01	1.6	2100	1.75
2111	1.35	2112	7.5	2112.01	7.5	2113	7.5	2113.01	7.5
2115	4.75	2126	11.65	2151	12.542	2181.236	12.128	2197.952	12.223
2221.332	12.356	2221.564	12.356	2242.091	12.362	2278.105	12.282	2280.906	12.274
2282.535	12.281	2319.722	12.448	2343.93	12.636	2358.537	12.775	2365.289	12.887
2397.352	13.243	2422.046	13.472	2436.168	13.597	2448.001	13.671	2466.718	13.886
2507.873	14.097								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
169	.125	2070	.035	2126	.125

ExpandedLocal.rep

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
2070	2126	2	2	2		.1	.3
Ineffective Flow	num=	2					
Sta L	Sta R	Elev	Permanent				
1692081.155	12.01	F					
2112.052507.873	12.01	F					

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 40080

INPUT

Description: copy of SELA 7.572  
 reach lengths adjusted  
 ineffective flows from  
 SELA

Station Elevation Data	num=	123							
Sta Elev Sta Elev	Sta Elev	Sta Elev	Sta Elev	Sta Elev	Sta Elev	Sta Elev	Sta Elev	Sta Elev	Sta Elev
*****									
-1396	13.422	-1388.53	13.397	-1331.45	13.12	-1316.1	12.967	-1298.5	12.995
-1271.87	11.8	-1257.96	11.458	-1232.61	11.417	-1211.53	12.193	-1199.66	12.676
-1181.36	12.998	-1149.11	13.306	-1133.89	13.357	-1133.77	13.357	-1105.99	13.239
-1034.08	12.801	-1033.52	12.798	-1033.18	12.792	-966.7	11.598	-949.6	12.223
-909.164	12.896	-899.872	12.951	-867.753	13.154	-865.98	13.162	-861.044	13.157
-838.541	13.144	-801.037	13.089	-800.136	13.088	-800.084	13.088	-799.961	13.087
-767.062	12.858	-719.654	12.059	-701.016	11.802	-665.915	12.197	-634.971	12.484
-622.403	12.559	-601.948	12.694	-589.858	12.716	-542.813	12.779	-537.316	12.786
-535.903	12.785	-533.513	12.78	-512.639	12.71	-503.883	12.679	-502.88	12.674
-450.96	12.084	-436.835	11.963	-397.221	12.365	-370.789	12.52	-355.733	12.497
-337.766	12.526	-326.103	12.468	-311.118	12.407	-281.452	12.29	-262.749	12.232
-239.162	12.161	-230.38	12.125	-206.35	12.023	-198.01	11.968	-173.539	11.82
-157.953	11.67	-107.916	11.247	-100.902	11.206	-75.105	11.081	-48.594	11.034
-36.163	11.029	-18.09	10.962	-9.419	10.934	13.819	11.168	36.165	11.294
65.174	11.444	89.733	11.523	102.207	11.537	183.812	11.601	186.7	11.6
188.885	11.6	204.64	11.652	221.936	11.709	223.057	11.714	227.505	11.749
288.037	12.124	299.602	12.181	321.088	12.245	337.235	12.218	354.139	12.184
381.429	12.159	387.189	12.146	392.289	12.116	404.591	12.162	412.064	12.114
445.829	11.886	454.106	11.846	500	12.5	511	11.7	515	7.9
516	4.3	519	2.7	519.5	3	525	.2	534	-.7
538.4	.3	544	0	550	3.8	554	5.4	557	11.5
616.236	12.128	632.952	12.223	656.332	12.356	656.564	12.356	677.091	12.36
713.105	12.282	715.906	12.274	717.535	12.281	754.722	12.448	778.93	12.636
793.537	12.775	800.289	12.887	832.352	13.243	857.046	13.47	871.168	13.597
883.001	13.671	901.718	13.886	942.873	14.097				

Manning's n Values num= 3

ExpandedLocal.rep

Sta n Val      Sta n Val      Sta n Val  
 \*\*\*\*\*  
 -1396    .125      500    .035      557    .125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	500	557		42      42	42		.1	.3
Ineffective Flow		num=	2					
Sta L	Sta R	Elev	Permanent					
-1396	497.19	12.01	F					
569.585	942.873	12.01	F					

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower                      RS: 40038

INPUT

Description: copy of SELA 7.564  
 reach lengths adjusted

Station Elevation Data	num=	120							
Sta    Elev    Sta    Elev    Sta    Elev    Sta    Elev    Sta    Elev									
*****									
-1396	13.422	-1388.53	13.397	-1331.45	13.12	-1316.1	12.967	-1298.5	12.995
-1271.87	11.8	-1257.96	11.458	-1232.61	11.417	-1211.53	12.193	-1199.66	12.676
-1181.36	12.998	-1149.11	13.306	-1133.89	13.357	-1133.77	13.357	-1105.99	13.239
-1034.08	12.801	-1033.52	12.798	-1033.18	12.792	-966.7	11.598	-949.6	12.223
-909.164	12.896	-899.872	12.951	-867.753	13.154	-865.98	13.162	-861.044	13.157
-838.541	13.144	-801.037	13.089	-800.136	13.088	-800.084	13.088	-799.961	13.087
-767.062	12.858	-719.654	12.059	-701.016	11.802	-665.915	12.197	-634.971	12.484
-622.403	12.559	-601.948	12.694	-589.858	12.716	-542.813	12.779	-537.316	12.786
-535.903	12.785	-533.513	12.78	-512.639	12.71	-503.883	12.679	-502.88	12.674
-450.96	12.084	-436.835	11.963	-397.221	12.365	-370.789	12.52	-355.733	12.497
-337.766	12.526	-326.103	12.468	-311.118	12.407	-281.452	12.29	-262.749	12.232
-239.162	12.161	-230.38	12.125	-206.35	12.023	-198.01	11.968	-173.539	11.82
-157.953	11.67	-107.916	11.247	-100.902	11.206	-75.105	11.081	-48.594	11.034
-36.163	11.029	-18.09	10.962	-9.419	10.934	13.819	11.168	36.165	11.294
65.174	11.444	89.733	11.523	102.207	11.537	183.812	11.601	186.7	11.6
188.885	11.6	204.64	11.652	221.936	11.709	223.057	11.714	227.505	11.749
288.037	12.124	299.602	12.181	321.088	12.245	337.235	12.218	354.139	12.184
381.429	12.159	387.189	12.146	392.289	12.116	404.591	12.162	412.064	12.114
445.829	11.886	454.106	11.846	456.653	11.751	507	11.4	526.2	10.5
537.3	3.9	539.3	-.3	545.3	-.5	551.4	.3	552.4	3.8
567.5	11.8	572	13.4	616.236	12.128	632.952	12.223	656.332	12.356
656.564	12.356	677.091	12.36	713.105	12.282	715.906	12.274	717.535	12.281
754.722	12.448	778.93	12.636	793.537	12.775	800.289	12.887	832.352	13.243
857.046	13.47	871.168	13.597	883.001	13.671	901.718	13.886	942.873	14.097

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -1396 .125 507 .035 572 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
           507 572 756 756 756 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -1396 321 12.24 F  
 572 942.873 13.4 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 39282

INPUT

Description:

Station Elevation Data num= 149  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -1323 13.067-1281.12 12.95-1261.57 12.723-1247.56 12.542-1238.52 12.259  
 -1196.54 11.279-1185.29 11.01-1180.44 10.889-1176.02 11.094-1146.88 12.647  
 -1136.56 12.617-1113.32 12.819-1100.46 12.865-1079.76 12.996-1072.85 12.969  
 -1071.35 12.966-1060.16 12.954-1041.27 12.92-1003.19 12.802-961.016 12.673  
 -954.903 12.649-946.224 12.58-907.812 12.383-880.756 12.013-845.163 12.299  
 -840.625 12.322-838.452 12.337-835.744 12.356-832.279 12.396 -811.86 12.64  
 -775.307 13.05 -766.54 13.195-760.365 13.289-736.206 13.211-732.798 13.183  
 -722.948 13.155-710.947 13.081-656.321 12.686-631.077 12.407-623.007 12.314  
 -611.486 12.093-589.694 11.629-542.261 12.112-526.475 12.266-517.782 12.363  
 -489.753 12.642-487.782 12.645-461.134 12.682-456.439 12.687-439.389 12.694  
 -389.812 12.677-368.863 12.657-356.499 12.653-344.262 12.609-332.808 12.562  
 -323.327 12.527-310.977 12.428-290.236 12.268-261.703 11.998-224.056 11.62  
 -215.818 11.557-190.965 11.402 -186.57 11.389-157.875 11.261-153.118 11.245  
 -126.531 11.183-120.499 11.112 -91.694 11.004 -69.667 10.666 -67.907 10.657  
 -47.829 10.598 -25.875 10.746 -15.021 10.703 6.933 10.711 28.641 10.633  
 39.742 10.629 61.45 10.591 72.55 10.584 115.966 10.481 138.167 10.472  
 149.267 10.393 170.975 10.176 192.683 10.275 203.783 10.267 247.2 10.392  
 258.093 10.412 270.886 10.452 274.671 10.401 281.824 10.358 344.32 11.06  
 354.54 10.76 363.6 10.15 375.86 4.77 377.9 4.28 380.47 2.16  
 386.57 2.02 388.2 -.65 394.28 -.26 395.39 -.19 396.56 1.57  
 399.49 2.26 401.23 4.5 407.4 7.44 414.35 10.95 418.83 11.78  
 519.323 10.206 537.347 10.264 547.006 10.25 562.393 10.261 568.094 10.271  
 589.3 10.316 608.024 10.345 617.772 10.36 651.486 10.299 677.382 10.244  
 694.948 10.207 701.874 10.197 717.817 10.173 738.41 10.265 752.092 10.294  
 781.872 10.541 798.604 10.639 807.922 10.662 825.334 10.698 884.093 11.138

ExpandedLocal.rep

912.259	11.322	914.885	11.337	917.907	11.356	974.568	11.654	999.183	11.812
1017.952	11.897	1031.165	11.928	1042.645	11.964	1052.945	11.971	1062.938	11.99
1074.395	11.931	1096.199	11.801	1111.773	11.538	1154.221	11.386	1162.721	11.453
1205.217	11.833	1229.242	12.051	1234.047	12.068	1282.829	12.202	1329.025	12.188
1339.848	12.213	1393.7	12.423	1395.547	12.425	1399.662	12.428		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1323	.125	344.32	.035	418.83	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	344.32	418.83		253	253		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-1323	344.3	11.06	F
418.81	399.662	11.78	F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 39029

INPUT

Description: copy of SELA 7.373  
 reach lengths adjusted

Station Elevation Data num= 154

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2431	11.988	-2423.73	12.056	-2364.31	12.337	-2352.73	12.342	-2330.87	12.499
-2322.29	12.44	-2267.14	12.163	-2261.41	12.137	-2235.19	12.046	-2203.38	11.959
-2197.11	11.939	-2187.76	11.905	-2163.67	11.843	-2146.11	11.815	-2130.23	11.803
-2104.46	11.816	-2091.65	11.784	-2065.58	11.779	-2063.72	11.776	-2063.35	11.775
-2035.79	11.657	-2029.91	11.638	-2021.16	11.614	-1996.47	11.481	-1970.37	11.462
-1951.99	11.486	-1929.59	11.475	-1929.52	11.475	-1924.32	11.478	-1905.61	11.481
-1896.76	11.472	-1895.51	11.468	-1893.85	11.463	-1861.42	11.374	-1837	11.274
-1827.33	11.235	-1807.13	11.076	-1793.24	10.995	-1777.25	10.903	-1759.15	10.763
-1738.19	10.656	-1701.63	10.302	-1690.98	10.185	-1687.63	10.145	-1663.86	9.905
-1658.42	9.855	-1656.89	9.843	-1631.83	9.651	-1622.8	9.599	-1594.02	9.347
-1554.63	9.187	-1552.07	9.177	-1542.99	9.178	-1486.45	9.14	-1464.24	9.24
-1452.36	9.288	-1448.62	9.29	-1422.11	9.403	-1419.12	9.413	-1418.27	9.416
-1416.77	9.416	-1365.94	9.545	-1350.1	9.537	-1321.81	9.538	-1316.01	9.517
-1312.76	9.51	-1301.24	9.565	-1281.92	9.565	-1259.58	9.344	-1247.94	9.31
-1247.84	9.31	-1229.79	9.165	-1215.03	8.972	-1210	9.023	-1184	8.88
-1149.4	8.666	-1116.99	8.877	-1083.77	9.218	-1068.36	9.283	-1050.96	9.387
-1032.98	9.397	-1018.15	9.394	-1002.9	9.372	-989.125	9.35	-952.531	9.318
-934.908	9.358	-904.151	9.436	-870.091	9.406	-837.704	9.3	-821.288	8.83

ExpandedLocal.rep

-804.48	8.818-772.867	9.713-755.666	9.989-740.458	10.04	-704.81	10.251
-690.045	9.983-680.885	9.924-672.443	9.865-657.135	9.672-642.279		9.538
-624.187	9.195-602.138	8.968-591.239	9.064-566.117	8.696-558.292		8.628
-529.819	8.156-525.344	8.103-523.402	8.095-492.396	8.318-491.908		8.316
-481.34	8.391-460.414	8.57-458.389	8.562-397.425	8.517-393.552		8.529
-373.676	8.584-327.657	8.736-295.981	8.697-261.761	8.741-239.431		8.752
-228.813	8.733-224.207	8.724-164.781	8.65-161.219	8.647-158.674		8.637
-97.925	8.402 -97.256	8.4 -95.976	8.396 -64.433	8.26 -63.795		8.259
-15.756	8.143 29.127	8.143 34.036	8.144 63.382	8.322 70.55		8.394
127.125	8.575 132.505	8.538 175.8	10.8 191.9	10.6 201		9.8
216	4.7 229.1	4.5 231.1	-.8 238.1	-.7 244.1		-.6
246.1	3.1 253.2	6.2 261.2	10.1 343.63	7.398 351.68		7.516
358.565	7.881 390.134	8.927 409.168	9.132 409.182	9.132		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2431	.125	191.9	.035	261.2	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	191.9	261.2		760	760		.1	.3
Ineffective Flow			num=	2				
Sta L	Sta R	Elev	Permanent					
-2431	175.8	10.8	F					
261.2	409.182	10.1	F					

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 38269

INPUT

Description: copy of SELA 7.229\*  
 reach lengths adjusted

Station Elevation Data num= 166

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2274	11.988-2266.73	12.056-2207.31	12.337-2195.73	12.342-2173.87	12.499				
-2165.29	12.44-2110.14	12.163-2104.41	12.137-2078.19	12.046-2046.38	11.959				
-2040.11	11.939-2030.76	11.905-2006.67	11.843-1989.11	11.815-1973.23	11.803				
-1947.46	11.816-1934.65	11.784-1908.58	11.779-1906.72	11.776-1906.35	11.775				
-1878.79	11.657-1872.91	11.638-1864.16	11.614-1839.47	11.481-1813.37	11.462				
-1794.99	11.486-1772.59	11.475-1772.52	11.475-1767.32	11.478-1748.61	11.481				
-1739.76	11.472-1738.51	11.468-1736.85	11.463-1704.42	11.374 -1680	11.274				
-1670.33	11.235-1650.13	11.076-1636.24	10.995-1620.25	10.903-1602.15	10.763				
-1581.19	10.656-1544.63	10.302-1533.98	10.185-1530.63	10.145-1506.86	9.905				
-1501.42	9.855-1499.89	9.843-1474.83	9.651 -1465.8	9.599-1437.02	9.347				

ExpandedLocal.rep

-1397.63	9.187-1395.07	9.177-1385.99	9.178-1329.45	9.14-1307.24	9.24
-1295.36	9.288-1291.62	9.29-1265.11	9.403-1262.12	9.413-1261.27	9.416
-1259.77	9.416-1208.94	9.545 -1193.1	9.537-1164.81	9.538-1159.01	9.517
-1155.76	9.51-1144.24	9.565-1124.92	9.565-1102.58	9.344-1090.94	9.31
-1090.84	9.31-1072.79	9.165-1058.03	8.972 -1053	9.023 -1027	8.88
-992.405	8.666-959.993	8.877-926.779	9.218-911.367	9.283-893.967	9.387
-875.989	9.397-861.154	9.394-845.909	9.372-832.125	9.35-795.531	9.318
-777.908	9.358-747.151	9.436-713.091	9.406-680.704	9.3-664.288	8.83
-647.48	8.818-615.867	9.713-598.666	9.989-583.458	10.04 -547.81	10.251
-533.045	9.983-523.885	9.924-515.443	9.865-500.135	9.672-485.279	9.538
-467.187	9.195-445.138	8.968-434.239	9.064-409.117	8.696-401.292	8.628
-372.819	8.156-368.344	8.103-366.402	8.095-335.396	8.318-334.908	8.316
-324.34	8.391-303.414	8.57-301.389	8.562-240.425	8.517-236.552	8.529
-216.676	8.584-170.657	8.736-138.981	8.697-104.761	8.741 -82.431	8.752
-71.813	8.733 -67.207	8.724 -7.781	8.65 -4.219	8.647 -1.674	8.637
59.075	8.402 59.744	8.4 61.024	8.396 92.567	8.26 93.205	8.259
141.244	8.143 186.127	8.143 191.036	8.144 220.382	8.322 227.55	8.394
271.49	10.46 286.78	10.19 294.58	9.97 307.16	9.66 317.67	9.54
334.53	9.16 340.76	8.96 352.08	8.66 362	8.05 370.08	2.94
375.23	1.88 381.62	1.74 386.79	1.59 388.55	-1.1 392.98	.75
395.69	1.89 396.78	2.05 398.04	4.09 402.54	6.28 407.6	8.95
418.49	9.27 427.16	9.47 436.6	9.5 454.63	9.56 472.73	10.01
500.63	7.398 508.68	7.516 515.565	7.881 547.134	8.927 566.168	9.132
566.182	9.132				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2274	.125	271.49	.035	472.73	.125

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
271.49	472.73	253	253	253	.1	.3	

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-2274	271.49	10.46	F
472.73	566.182	10.01	F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 38016

INPUT

Description: copy of SELA 7.181

Station Elevation Data num= 155

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									

ExpandedLocal.rep

-2155	11.988-2147.73	12.056-2088.31	12.337-2076.73	12.342-2054.87	12.499
-2046.29	12.44-1991.14	12.163-1985.41	12.137-1959.19	12.046-1927.38	11.959
-1921.11	11.939-1911.76	11.905-1887.67	11.843-1870.11	11.815-1854.23	11.803
-1828.46	11.816-1815.65	11.784-1789.58	11.779-1787.72	11.776-1787.35	11.775
-1759.79	11.657-1753.91	11.638-1745.16	11.614-1720.47	11.481-1694.37	11.462
-1675.99	11.486-1653.59	11.475-1653.52	11.475-1648.32	11.478-1629.61	11.481
-1620.76	11.472-1619.51	11.468-1617.85	11.463-1585.42	11.374 -1561	11.274
-1551.33	11.235-1531.13	11.076-1517.24	10.995-1501.25	10.903-1483.15	10.763
-1462.19	10.656-1425.63	10.302-1414.98	10.185-1411.63	10.145-1387.86	9.905
-1382.42	9.855-1380.89	9.843-1355.83	9.651 -1346.8	9.599-1318.02	9.347
-1278.63	9.187-1276.07	9.177-1266.99	9.178-1210.45	9.14-1188.24	9.24
-1176.36	9.288-1172.62	9.29-1146.11	9.403-1143.12	9.413-1142.27	9.416
-1140.77	9.416-1089.94	9.545 -1074.1	9.537-1045.81	9.538-1040.01	9.517
-1036.76	9.51-1025.24	9.565-1005.92	9.565-983.586	9.344-971.942	9.31
-971.843	9.31-953.795	9.165 -939.03	8.972-934.001	9.023-908.005	8.88
-873.405	8.666-840.993	8.877-807.779	9.218-792.367	9.283-774.967	9.387
-756.989	9.397-742.154	9.394-726.909	9.372-713.125	9.35-676.531	9.318
-658.908	9.358-628.151	9.436-594.091	9.406-561.704	9.3-545.288	8.83
-528.48	8.818-496.867	9.713-479.666	9.989-464.458	10.04 -428.81	10.251
-414.045	9.983-404.885	9.924-396.443	9.865-381.135	9.672-366.279	9.538
-348.187	9.195-326.138	8.968-315.239	9.064-290.117	8.696-282.292	8.628
-253.819	8.156-249.344	8.103-247.402	8.095-216.396	8.318-215.908	8.316
-205.34	8.391-184.414	8.57-182.389	8.562-121.425	8.517-117.552	8.529
-97.676	8.584 -51.657	8.736 -19.981	8.697 14.239	8.741 36.569	8.752
47.187	8.733 51.793	8.724 111.219	8.65 114.781	8.647 117.326	8.637
178.075	8.402 178.744	8.4 180.024	8.396 211.567	8.26 212.205	8.259
260.244	8.143 305.127	8.143 310.036	8.144 339.382	8.322 346.55	8.394
403.125	8.575 408.505	8.538 438.115	8.063 448.049	7.944 474.151	7.293
475	8.4 500	7.2 523	6.3 530	-.8 540	-1.1
546	-1.4 549	4.4 554	7.8 566	8.6 619.63	7.398
627.68	7.516 634.565	7.881 666.134	8.927 685.168	9.132 685.182	9.132

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****					
-2155	.125	523	.035	566	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	523	566		16	16	16		.1	.3
Ineffective Flow			num=	2					
Sta L	Sta R	Elev	Permanent						
-2155	476.47	13.1	F						
597.66	685.182	13.1	F						

CROSS SECTION

RIVER: W14 Main



ExpandedLocal.rep

REACH: Lower

RS: 38000

INPUT

Description: 5' US Fremaux Road bridge  
copy of SELA 7.178

Station Elevation Data num= 155

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2117	11.988	2109.73	12.056	2050.31	12.337	2038.73	12.342	2016.87	12.499
-2008.29	12.44	1953.14	12.163	1947.41	12.137	1921.19	12.046	1889.38	11.959
-1883.11	11.939	1873.76	11.905	1849.67	11.843	1832.11	11.815	1816.23	11.803
-1790.46	11.816	1777.65	11.784	1751.58	11.779	1749.72	11.776	1749.35	11.775
-1721.79	11.657	1715.91	11.638	1707.16	11.614	1682.47	11.481	1656.37	11.462
-1637.99	11.486	1615.59	11.475	1615.52	11.475	1610.32	11.478	1591.61	11.481
-1582.76	11.472	1581.51	11.468	1579.85	11.463	1547.42	11.374	-1523	11.274
-1513.33	11.235	1493.13	11.076	1479.24	10.995	1463.25	10.903	1445.15	10.763
-1424.19	10.656	1387.63	10.302	1376.98	10.185	1373.63	10.145	1349.86	9.905
-1344.42	9.855	1342.89	9.843	1317.83	9.651	-1308.8	9.599	1280.02	9.347
-1240.63	9.187	1238.07	9.177	1228.99	9.178	1172.45	9.14	1150.24	9.24
-1138.36	9.288	1134.62	9.29	1108.11	9.403	1105.12	9.413	1104.27	9.416
-1102.77	9.416	1051.94	9.545	-1036.1	9.537	1007.81	9.538	1002.01	9.517
-998.765	9.51	987.242	9.565	967.927	9.565	945.586	9.344	933.942	9.31
-933.843	9.31	915.795	9.165	-901.03	8.972	896.001	9.023	870.005	8.88
-835.405	8.666	802.993	8.877	769.779	9.218	754.367	9.283	736.967	9.387
-718.989	9.397	704.154	9.394	688.909	9.372	675.125	9.35	638.531	9.318
-620.908	9.358	590.151	9.436	556.091	9.406	523.704	9.3	507.288	8.83
-490.48	8.818	458.867	9.713	441.666	9.989	426.458	10.04	-390.81	10.251
-376.045	9.983	366.885	9.924	358.443	9.865	343.135	9.672	328.279	9.538
-310.187	9.195	288.138	8.968	277.239	9.064	252.117	8.696	244.292	8.628
-215.819	8.156	211.344	8.103	209.402	8.095	178.396	8.318	177.908	8.316
-167.34	8.391	146.414	8.57	144.389	8.562	-83.425	8.517	-79.552	8.529
-59.676	8.584	-13.657	8.736	18.019	8.697	52.239	8.741	74.569	8.752
85.187	8.733	89.793	8.724	149.219	8.65	152.781	8.647	155.326	8.637
216.075	8.402	216.744	8.4	218.024	8.396	249.567	8.26	250.205	8.259
298.244	8.143	343.127	8.143	348.036	8.144	377.382	8.322	384.55	8.394
441.125	8.575	446.505	8.538	476.115	8.063	517.35	8.5	518.2	4
520	4.1	529.5	3.5	536.8	.6	540	.5	545	-.3
554.3	.1	558.4	3.1	560	3.5	563.35	8.5	657.63	7.398
665.68	7.516	672.565	7.881	704.134	8.927	723.168	9.132	723.182	9.132

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2117	.125	517.35	.035	563.35	.125

Bank	Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
	517.35	563.35	69	69	69	.1	.3	
Ineffective Flow			num=	2				

ExpandedLocal.rep

Sta L	Sta R	Elev	Permanent
-2117	494.12	13.1	F
583.31	723.182	13.1	F

BRIDGE

RIVER: W14 Main  
 REACH: Lower RS: 37950

INPUT

Description: Fremaux Avenue Bridge  
 taken from SELA model  
 Distance from Upstream XS = 5.85  
 Deck/Roadway Width = 57.3  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 2

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
499	13.1	8.9	581	13.1	8.9				

Upstream Bridge Cross Section Data

Station Elevation Data num= 25

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-4660	14	-3730	13	-1640	12	-1130	11	80	10
499.7	10.6	500	8.6	500.8	7.3	518.2	4	519.4	3.7
520.6	3.7	529.5	3.5	536.8	.6	539.4	.5	540	.5
540.6	.5	545	-.3	554.3	.1	558.4	3.1	559.4	3.5
560.6	3.5	567.7	5.1	579.6	9.7	581	10.6	890	8.92

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-4660	.125	499.7	.035	560.6	.125

Bank Sta: Left Right Coeff Contr. Expan.  
 500 579.6 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-4660	494.12	13.1	F
583.31	890	13.1	F

Downstream Deck/Roadway Coordinates  
 num= 2

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord

ExpandedLocal.rep

500 13.1 8.9 581 13.1 8.9

Downstream Bridge Cross Section Data

Station Elevation Data num= 22

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2145	10	-750	10	-380	10.2	87	10	500	10.4
500	9	501	7.7	516	6	519.4	4.6	520.6	4.6
528	2.1	537	1	539.4	.3	540.6	.3	542	-.2
552	-.9	559.4	-.4	560.6	-.4	562	0	578	7.2
579.6	9	580	10.8						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2145	.125	500	.035	562	.125

Bank Sta: Left Right Coeff Contr. Expan.  
 500 579.6 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-2145	497.155	13.1	F
582.385	580	13.1	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 3

Pier Data

Pier Station	Upstream=	Downstream=
	520	520

Upstream num= 2

Width	Elev	Width	Elev
1.2	8	1.2	10.4

Downstream num= 2

Width	Elev	Width	Elev
1.2	8	1.2	10.4

Pier Data

Pier Station	Upstream=	Downstream=
	540	540

Upstream num= 2

```

Width  Elev  Width  Elev
*****
1.2    8     1.2   10.4
Downstream  num=      2
Width  Elev  Width  Elev
*****
1.2    8     1.2   10.4

```

Pier Data

Pier Station Upstream= 560 Downstream= 560

```

Upstream  num=      2
Width  Elev  Width  Elev
*****
1.2    8     1.2   10.4
Downstream  num=      2
Width  Elev  Width  Elev
*****
1.2    8     1.2   10.4

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main

REACH: Lower

RS: 37931

INPUT

Description: 5' DS Fremaux Road Bridge

copy of SELA 7.165

Station Elevation Data num= 153

```

Sta  Elev  Sta  Elev  Sta  Elev  Sta  Elev  Sta  Elev
*****
-2117 11.988-2109.73 12.056-2050.31 12.337-2038.73 12.342-2016.87 12.499

```

ExpandedLocal.rep

-2008.29	12.44-1953.14	12.163-1947.41	12.137-1921.19	12.046-1889.38	11.959
-1883.11	11.939-1873.76	11.905-1849.67	11.843-1832.11	11.815-1816.23	11.803
-1790.46	11.816-1777.65	11.784-1751.58	11.779-1749.72	11.776-1749.35	11.775
-1721.79	11.657-1715.91	11.638-1707.16	11.614-1682.47	11.481-1656.37	11.462
-1637.99	11.486-1615.59	11.475-1615.52	11.475-1610.32	11.478-1591.61	11.481
-1582.76	11.472-1581.51	11.468-1579.85	11.463-1547.42	11.374 -1523	11.274
-1513.33	11.235-1493.13	11.076-1479.24	10.995-1463.25	10.903-1445.15	10.763
-1424.19	10.656-1387.63	10.302-1376.98	10.185-1373.63	10.145-1349.86	9.905
-1344.42	9.855-1342.89	9.843-1317.83	9.651 -1308.8	9.599-1280.02	9.347
-1240.63	9.187-1238.07	9.177-1228.99	9.178-1172.45	9.14-1150.24	9.24
-1138.36	9.288-1134.62	9.29-1108.11	9.403-1105.12	9.413-1104.27	9.416
-1102.77	9.416-1051.94	9.545 -1036.1	9.537-1007.81	9.538-1002.01	9.517
-998.765	9.51-987.242	9.565-967.927	9.565-945.586	9.344-933.942	9.31
-933.843	9.31-915.795	9.165 -901.03	8.972-896.001	9.023-870.005	8.88
-835.405	8.666-802.993	8.877-769.779	9.218-754.367	9.283-736.967	9.387
-718.989	9.397-704.154	9.394-688.909	9.372-675.125	9.35-638.531	9.318
-620.908	9.358-590.151	9.436-556.091	9.406-523.704	9.3-507.288	8.83
-490.48	8.818-458.867	9.713-441.666	9.989-426.458	10.04 -390.81	10.251
-376.045	9.983-366.885	9.924-358.443	9.865-343.135	9.672-328.279	9.538
-310.187	9.195-288.138	8.968-277.239	9.064-252.117	8.696-244.292	8.628
-215.819	8.156-211.344	8.103-209.402	8.095-178.396	8.318-177.908	8.316
-167.34	8.391-146.414	8.57-144.389	8.562 -83.425	8.517 -79.552	8.529
-59.676	8.584 -13.657	8.736 18.019	8.697 52.239	8.741 74.569	8.752
85.187	8.733 89.793	8.724 149.219	8.65 152.781	8.647 155.326	8.637
216.075	8.402 216.744	8.4 218.024	8.396 249.567	8.26 250.205	8.259
298.244	8.143 343.127	8.143 348.036	8.144 377.382	8.322 384.55	8.394
441.125	8.575 446.505	8.538 476.115	8.063 523	8.5 528	2.1
537	1 540	.3 542	-.2 552	-.9 560	-.4
562	0 569	8.5 657.63	7.398 665.68	7.516 672.565	7.881
704.134	8.927 723.168	9.132 723.182	9.132		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
*****					
-2117	.125	523	.035	569	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	523	569		42	42	42		.1	.3
Ineffective Flow	num=		2						
Sta L	Sta R	Elev	Permanent						
-2117	497.155	13.1	F						
582.385	723.182	13.1	F						

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 37889

ExpandedLocal.rep

INPUT

Description: copy of SELA 7.157  
reach lengths adjusted

Station Elevation Data num= 152

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2095	11.988	-2087.73	12.056	-2028.31	12.337	-2016.73	12.342	-1994.87	12.499
-1986.29	12.44	-1931.14	12.163	-1925.41	12.137	-1899.19	12.046	-1867.38	11.959
-1861.11	11.939	-1851.76	11.905	-1827.67	11.843	-1810.11	11.815	-1794.23	11.803
-1768.46	11.816	-1755.65	11.784	-1729.58	11.779	-1727.72	11.776	-1727.35	11.775
-1699.79	11.657	-1693.91	11.638	-1685.16	11.614	-1660.47	11.481	-1634.37	11.462
-1615.99	11.486	-1593.59	11.475	-1593.52	11.475	-1588.32	11.478	-1569.61	11.481
-1560.76	11.472	-1559.51	11.468	-1557.85	11.463	-1525.42	11.374	-1501	11.274
-1491.33	11.235	-1471.13	11.076	-1457.24	10.995	-1441.25	10.903	-1423.15	10.763
-1402.19	10.656	-1365.63	10.302	-1354.98	10.185	-1351.63	10.145	-1327.86	9.905
-1322.42	9.855	-1320.89	9.843	-1295.83	9.651	-1286.8	9.599	-1258.02	9.347
-1218.63	9.187	-1216.07	9.177	-1206.99	9.178	-1150.45	9.14	-1128.24	9.24
-1116.36	9.288	-1112.62	9.29	-1086.11	9.403	-1083.12	9.413	-1082.27	9.416
-1080.77	9.416	-1029.94	9.545	-1014.1	9.537	-985.818	9.538	-980.015	9.517
-976.765	9.51	-965.242	9.565	-945.927	9.565	-923.586	9.344	-911.942	9.31
-911.843	9.31	-893.795	9.165	-879.03	8.972	-874.001	9.023	-848.005	8.88
-813.405	8.666	-780.993	8.877	-747.779	9.218	-732.367	9.283	-714.967	9.387
-696.989	9.397	-682.154	9.394	-666.909	9.372	-653.125	9.35	-616.531	9.318
-598.908	9.358	-568.151	9.436	-534.091	9.406	-501.704	9.3	-485.288	8.83
-468.48	8.818	-436.867	9.713	-419.666	9.989	-404.458	10.04	-368.81	10.251
-354.045	9.983	-344.885	9.924	-336.443	9.865	-321.135	9.672	-306.279	9.538
-288.187	9.195	-266.138	8.968	-255.239	9.064	-230.117	8.696	-222.292	8.628
-193.819	8.156	-189.344	8.103	-187.402	8.095	-156.396	8.318	-155.908	8.316
-145.34	8.391	-124.414	8.57	-122.389	8.562	-61.425	8.517	-57.552	8.529
-37.676	8.584	8.343	8.736	40.019	8.697	74.239	8.741	96.569	8.752
107.187	8.733	111.793	8.724	171.219	8.65	174.781	8.647	177.326	8.637
238.075	8.402	238.744	8.4	240.024	8.396	271.567	8.26	272.205	8.259
320.244	8.143	365.127	8.143	370.036	8.144	399.382	8.322	406.55	8.394
463.125	8.575	477.8	9.4	503.2	9.4	531.7	9	546.9	7.4
554	4.7	558.1	-.8	566.2	-1.4	575.3	.6	577.4	3.4
588.47	9.1	679.63	7.398	687.68	7.516	694.565	7.881	726.134	8.927
745.168	9.132	745.182	9.132						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2095	.125	531.7	.035	588.47	.125

Bank	Sta	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
		531.7	588.47		771	771	771	.1		.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent

ExpandedLocal.rep

-2095 501.995 13.1 F  
 629.225 745.182 13.1 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 37118

INPUT

Description: copy of SELA 7.011\*  
 reach lengths adjusted

Station Elevation Data num= 135

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2101	10.323	-2057.3	10.568	-2049.92	10.603	-2047.23	10.622	-2024.33	10.708
-2012.31	10.985	-1998.75	11.419	-1961.56	11.508	-1947.57	11.604	-1931.5	11.218
-1896.39	10.484	-1872.62	10.295	-1865.82	10.266	-1845.21	10.207	-1837.69	10.222
-1821.54	10.285	-1794.04	10.397	-1770.09	10.404	-1767.85	10.406	-1766.56	10.402
-1762.5	10.396	-1732.94	10.356	-1703.36	10.23	-1698.03	10.214	-1694.34	10.195
-1674.04	9.934	-1666.03	9.858	-1660.7	9.872	-1628.22	10.013	-1618.05	10.134
-1563.62	10.632	-1558.41	10.652	-1538.01	10.648	-1492.42	10.45	-1488.59	10.421
-1486.81	10.425	-1481.88	10.448	-1455.02	10.551	-1431.12	10.589	-1420.93	10.587
-1399.61	10.564	-1375.56	10.51	-1336.59	10.382	-1307	10.271	-1289.58	10.248
-1258.79	10.413	-1223.9	10.538	-1210.54	10.463	-1191.07	10.367	-1167.93	10.096
-1125.39	9.579	-1116.01	9.487	-1092.55	9.364	-1084.5	9.351	-1032.75	9.248
-1026.88	9.213	-1021.48	9.22	-994.046	9.172	-979.599	9.139	-965.137	9.102
-961.222	9.105	-952.915	9.06	-909.501	8.813	-868.573	8.672	-862.778	8.593
-836.385	8.334	-823.287	8.295	-797.149	7.868	-789.821	7.856	-764.334	8.034
-739.821	7.952	-722.889	7.931	-675.445	7.812	-665.891	7.832	-645.621	7.992
-611.267	8.267	-600.262	8.405	-578.881	8.665	-568.521	8.731	-567.418	8.738
-551.45	8.848	-533.714	8.883	-507.375	8.702	-500.009	8.668	-495.449	8.636
-476.069	8.548	-446.511	8.364	-432.601	8.261	-419.226	8.14	-386.312	7.827
-365.192	7.765	-332.826	7.839	-304.458	7.892	-297.784	7.915	-277.174	7.964
-264.079	7.993	-241.159	8.035	-198.852	8.077	-196.671	8.08	-189.583	8.075
-166.844	8.057	-165.661	8.057	-158.04	8.035	-101.303	7.774	-97.438	7.755
-67.801	7.654	-63.083	7.643	-31.808	7.569	-30.6	7.564	1.007	7.529
1.882	7.524	33.823	7.42	34.364	7.417	35.923	7.408	87.109	7.105
99.205	7.033	99.712	7.029	163.516	6.62	165.084	6.613	223.239	6.809
224.851	6.814	230.742	6.841	244.852	6.841	306.814	6.852	348.592	6.779
420.8	8.2	426.73	6.12	433.87	5.22	439.98	3.16	443.5	-.66
450.47	-1.37	455.05	-.15	459.02	1.02	460.99	3.16	473.4	9.43

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2101	.125	420.8	.035	473.4	.125

ExpandedLocal.rep

Bank Sta: Left      Right      Lengths: Left Channel      Right      Coeff Contr.      Expan.  
                   420.8    473.4                    193      193      193                    .1           .3  
 Ineffective Flow      num=      1  
                   Sta L      Sta R      Elev      Permanent  
                   -2101      -318      13.1      F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower                    RS: 36925

INPUT

Description: copy of SELA 6.9745\*  
 reach lengths adjusted

Station Elevation Data      num=      138

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
*****									
-2217	10.323	-2173.3	10.568	-2165.92	10.603	-2163.23	10.622	-2140.33	10.708
-2128.31	10.985	-2114.75	11.419	-2077.56	11.508	-2063.57	11.604	-2047.5	11.218
-2012.39	10.484	-1988.62	10.295	-1981.82	10.266	-1961.21	10.207	-1953.69	10.222
-1937.54	10.285	-1910.04	10.397	-1886.09	10.404	-1883.85	10.406	-1882.56	10.402
-1878.5	10.396	-1848.94	10.356	-1819.36	10.23	-1814.03	10.214	-1810.34	10.195
-1790.04	9.934	-1782.03	9.858	-1776.7	9.872	-1744.22	10.013	-1734.05	10.134
-1679.62	10.632	-1674.41	10.652	-1654.01	10.648	-1608.42	10.45	-1604.59	10.421
-1602.81	10.425	-1597.88	10.448	-1571.02	10.551	-1547.12	10.589	-1536.93	10.587
-1515.61	10.564	-1491.56	10.51	-1452.59	10.382	-1423	10.271	-1405.58	10.248
-1374.79	10.413	-1339.9	10.538	-1326.54	10.463	-1307.07	10.367	-1283.93	10.096
-1241.39	9.579	-1232.01	9.487	-1208.55	9.364	-1200.5	9.351	-1148.75	9.248
-1142.88	9.213	-1137.48	9.22	-1110.04	9.172	-1095.59	9.139	-1081.13	9.102
-1077.22	9.105	-1068.91	9.06	-1025.5	8.813	-984.573	8.672	-978.778	8.593
-952.385	8.334	-939.287	8.295	-913.149	7.868	-905.821	7.856	-880.334	8.034
-855.821	7.952	-838.889	7.931	-791.445	7.812	-781.891	7.832	-761.621	7.992
-727.267	8.267	-716.262	8.405	-694.881	8.665	-684.521	8.731	-683.418	8.738
-667.45	8.848	-649.714	8.883	-623.375	8.702	-616.009	8.668	-611.449	8.636
-592.069	8.548	-562.511	8.364	-548.601	8.261	-535.226	8.14	-502.312	7.827
-481.192	7.765	-448.826	7.839	-420.458	7.892	-413.784	7.915	-393.174	7.964
-380.079	7.993	-357.159	8.035	-314.852	8.077	-312.671	8.08	-305.583	8.075
-282.844	8.057	-281.661	8.057	-274.04	8.035	-217.303	7.774	-213.438	7.755
-183.801	7.654	-179.083	7.643	-147.808	7.569	-146.6	7.564	-114.993	7.529
-114.118	7.524	-82.177	7.42	-81.636	7.417	-80.077	7.408	-28.891	7.105
-16.795	7.033	-16.288	7.029	47.516	6.62	49.084	6.613	107.239	6.809
108.851	6.814	114.742	6.841	128.852	6.841	190.814	6.852	232.592	6.779
268.49	8.13	281.95	7.87	285.66	7.78	309.9	7.4	314.87	3.96
320.84	3.05	325.95	1.61	328.9	-.53	334.73	-1.33	339.03	.02
342.74	1.44	344.59	2.93	356.2	8.67				

Manning's n Values      num=      3



ExpandedLocal.rep

Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2217 .125 268.49 .035 356.2 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 268.49 356.2 192 192 192 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 -2217 -511 13.1 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 36733

INPUT

Description: copy of SELA 6.938  
 Station Elevation Data num= 133

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2332	10.323	-2288.3	10.568	-2280.92	10.603	-2278.23	10.622	-2255.33	10.708
-2243.31	10.985	-2229.75	11.419	-2192.56	11.508	-2178.57	11.604	-2162.5	11.218
-2127.39	10.484	-2103.62	10.295	-2096.82	10.266	-2076.21	10.207	-2068.69	10.222
-2052.54	10.285	-2025.04	10.397	-2001.09	10.404	-1998.85	10.406	-1997.56	10.402
-1993.5	10.396	-1963.94	10.356	-1934.36	10.23	-1929.03	10.214	-1925.34	10.195
-1905.04	9.934	-1897.03	9.858	-1891.7	9.872	-1859.22	10.013	-1849.05	10.134
-1794.62	10.632	-1789.41	10.652	-1769.01	10.648	-1723.42	10.45	-1719.59	10.421
-1717.81	10.425	-1712.88	10.448	-1686.02	10.551	-1662.12	10.589	-1651.93	10.587
-1630.61	10.564	-1606.56	10.51	-1567.59	10.382	-1538	10.271	-1520.58	10.248
-1489.79	10.413	-1454.9	10.538	-1441.54	10.463	-1422.07	10.367	-1398.93	10.096
-1356.39	9.579	-1347.01	9.487	-1323.55	9.364	-1315.5	9.351	-1263.75	9.248
-1257.88	9.213	-1252.48	9.22	-1225.04	9.172	-1210.59	9.139	-1196.13	9.102
-1192.22	9.105	-1183.91	9.06	-1140.5	8.813	-1099.57	8.672	-1093.77	8.593
-1067.38	8.334	-1054.28	8.295	-1028.14	7.868	-1020.82	7.856	-995.334	8.034
-970.821	7.952	-953.889	7.931	-906.445	7.812	-896.891	7.832	-876.621	7.992
-842.267	8.267	-831.262	8.405	-809.881	8.665	-799.521	8.731	-798.418	8.738
-782.45	8.848	-764.714	8.883	-738.375	8.702	-731.009	8.668	-726.449	8.636
-707.069	8.548	-677.511	8.364	-663.601	8.261	-650.226	8.14	-617.312	7.827
-596.192	7.765	-563.826	7.839	-535.458	7.892	-528.784	7.915	-508.174	7.964
-495.079	7.993	-472.159	8.035	-429.852	8.077	-427.671	8.08	-420.583	8.075
-397.844	8.057	-396.661	8.057	-389.04	8.035	-332.303	7.774	-328.438	7.755
-298.801	7.654	-294.083	7.643	-262.808	7.569	-261.6	7.564	-229.993	7.529
-229.118	7.524	-197.177	7.42	-196.636	7.417	-195.077	7.408	-143.891	7.105
-131.795	7.033	-131.288	7.029	-67.484	6.62	-65.916	6.613	-7.761	6.809
-6.149	6.814	-.258	6.841	13.852	6.841	75.814	6.852	117.592	6.779
131.488	6.746	168.245	6.477	193	8.5	199	6.6	203	1.8
219	-1.3	223	.2	239	8.5				

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 -2332 .125 193 .035 239 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 193 239 20 20 20 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 -2332 181.51 9 F  
 256.51 239 9 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 36713

INPUT

Description: 1' US Cousin Street Bridge  
 copy of SELA 6.935

Station Elevation Data num= 138  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 -2322 10.323 -2278.3 10.568-2270.92 10.603-2268.23 10.622-2245.33 10.708  
 -2233.31 10.985-2219.75 11.419-2182.56 11.508-2168.57 11.604 -2152.5 11.218  
 -2117.39 10.484-2093.62 10.295-2086.82 10.266-2066.21 10.207-2058.69 10.222  
 -2042.54 10.285-2015.04 10.397-1991.09 10.404-1988.85 10.406-1987.56 10.402  
 -1983.5 10.396-1953.94 10.356-1924.36 10.23-1919.03 10.214-1915.34 10.195  
 -1895.04 9.934-1887.03 9.858 -1881.7 9.872-1849.22 10.013-1839.05 10.134  
 -1784.62 10.632-1779.41 10.652-1759.01 10.648-1713.42 10.45-1709.59 10.421  
 -1707.81 10.425-1702.88 10.448-1676.02 10.551-1652.12 10.589-1641.93 10.587  
 -1620.61 10.564-1596.56 10.51-1557.59 10.382 -1528 10.271-1510.58 10.248  
 -1479.79 10.413 -1444.9 10.538-1431.54 10.463-1412.07 10.367-1388.93 10.096  
 -1346.39 9.579-1337.01 9.487-1313.55 9.364 -1305.5 9.351-1253.75 9.248  
 -1247.88 9.213-1242.48 9.22-1215.04 9.172-1200.59 9.139-1186.13 9.102  
 -1182.22 9.105-1173.91 9.06 -1130.5 8.813-1089.57 8.672-1083.77 8.593  
 -1057.38 8.334-1044.28 8.295-1018.14 7.868-1010.82 7.856-985.334 8.034  
 -960.821 7.952-943.889 7.931-896.445 7.812-886.891 7.832-866.621 7.992  
 -832.267 8.267-821.262 8.405-799.881 8.665-789.521 8.731-788.418 8.738  
 -772.45 8.848-754.714 8.883-728.375 8.702-721.009 8.668-716.449 8.636  
 -697.069 8.548-667.511 8.364-653.601 8.261-640.226 8.14-607.312 7.827  
 -586.192 7.765-553.826 7.839-525.458 7.892-518.784 7.915-498.174 7.964  
 -485.079 7.993-462.159 8.035-419.852 8.077-417.671 8.08-410.583 8.075  
 -387.844 8.057-386.661 8.057 -379.04 8.035-322.303 7.774-318.438 7.755  
 -288.801 7.654-284.083 7.643-252.808 7.569 -251.6 7.564-219.993 7.529  
 -219.118 7.524-187.177 7.42-186.636 7.417-185.077 7.408-133.891 7.105

ExpandedLocal.rep

-121.795	7.033	-121.288	7.029	-57.484	6.62	-55.916	6.613	2.239	6.809
3.851	6.814	9.742	6.841	23.852	6.841	85.814	6.852	127.592	6.779
141.488	6.746	178.245	6.477	200	8.7	200.1	3.7	201	3.7
203	-.5	214	-1	219	.4	228	-.2	235	4.6
238	6.8	240	8.3	245	8.3				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2322	.125	200	.035	245	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	200	245		15	15		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-2322	201	9	F
237	245	9	F

BRIDGE

RIVER: W14 Main  
 REACH: Lower RS: 36710

INPUT

Description: Cousin Street  
 Distance from Upstream XS = 1  
 Deck/Roadway Width = 13  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num=	9	Sta Hi Cord Lo Cord				Sta Hi Cord Lo Cord				Sta Hi Cord Lo Cord			
		-2000	9		194	9.32			201	9.32			
		202	9.32	5.5	202	9.32	8.48		236	9.32	8.48		
		236	9.32	4.72	243	9.32			245	9			

Upstream Bridge Cross Section Data

Station	Elevation	num=	138	Sta		Elev		Sta		Elev	
-2322	10.323	-2278.3	10.568	-2270.92	10.603	-2268.23	10.622	-2245.33	10.708		
-2233.31	10.985	-2219.75	11.419	-2182.56	11.508	-2168.57	11.604	-2152.5	11.218		
-2117.39	10.484	-2093.62	10.295	-2086.82	10.266	-2066.21	10.207	-2058.69	10.222		
-2042.54	10.285	-2015.04	10.397	-1991.09	10.404	-1988.85	10.406	-1987.56	10.402		
-1983.5	10.396	-1953.94	10.356	-1924.36	10.23	-1919.03	10.214	-1915.34	10.195		
-1895.04	9.934	-1887.03	9.858	-1881.7	9.872	-1849.22	10.013	-1839.05	10.134		
-1784.62	10.632	-1779.41	10.652	-1759.01	10.648	-1713.42	10.45	-1709.59	10.421		

ExpandedLocal.rep

-1707.81	10.425-1702.88	10.448-1676.02	10.551-1652.12	10.589-1641.93	10.587
-1620.61	10.564-1596.56	10.51-1557.59	10.382 -1528	10.271-1510.58	10.248
-1479.79	10.413 -1444.9	10.538-1431.54	10.463-1412.07	10.367-1388.93	10.096
-1346.39	9.579-1337.01	9.487-1313.55	9.364 -1305.5	9.351-1253.75	9.248
-1247.88	9.213-1242.48	9.22-1215.04	9.172-1200.59	9.139-1186.13	9.102
-1182.22	9.105-1173.91	9.06 -1130.5	8.813-1089.57	8.672-1083.77	8.593
-1057.38	8.334-1044.28	8.295-1018.14	7.868-1010.82	7.856-985.334	8.034
-960.821	7.952-943.889	7.931-896.445	7.812-886.891	7.832-866.621	7.992
-832.267	8.267-821.262	8.405-799.881	8.665-789.521	8.731-788.418	8.738
-772.45	8.848-754.714	8.883-728.375	8.702-721.009	8.668-716.449	8.636
-697.069	8.548-667.511	8.364-653.601	8.261-640.226	8.14-607.312	7.827
-586.192	7.765-553.826	7.839-525.458	7.892-518.784	7.915-498.174	7.964
-485.079	7.993-462.159	8.035-419.852	8.077-417.671	8.08-410.583	8.075
-387.844	8.057-386.661	8.057 -379.04	8.035-322.303	7.774-318.438	7.755
-288.801	7.654-284.083	7.643-252.808	7.569 -251.6	7.564-219.993	7.529
-219.118	7.524-187.177	7.42-186.636	7.417-185.077	7.408-133.891	7.105
-121.795	7.033-121.288	7.029 -57.484	6.62 -55.916	6.613 2.239	6.809
3.851	6.814 9.742	6.841 23.852	6.841 85.814	6.852 127.592	6.779
141.488	6.746 178.245	6.477 200	8.7 200.1	3.7 201	3.7
203	-.5 214	-1 219	.4 228	-.2 235	4.6
238	6.8 240	8.3 245	8.3		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2322	.125	200	.035	245	.125

Bank Sta: Left Right Coeff Contr. Expan.

200	245	.1	.3
-----	-----	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-2322	201	9	F
237	245	9	F

Downstream Deck/Roadway Coordinates

num= 8

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
-2000	9		194	9.32		201	9.32	
202	9.32	5.5	202	9.32	8.48	236	9.32	8.48
236	9.32	4.72	242	9.32				

Downstream Bridge Cross Section Data

Station Elevation Data num= 137

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2322	10.323	-2278.3	10.568-2270.92	10.603-2268.23	10.622-2245.33	10.708			
-2233.31	10.985-2219.75	11.419-2182.56	11.508-2168.57	11.604 -2152.5	11.218				

ExpandedLocal.rep

-2117.39	10.484-2093.62	10.295-2086.82	10.266-2066.21	10.207-2058.69	10.222
-2042.54	10.285-2015.04	10.397-1991.09	10.404-1988.85	10.406-1987.56	10.402
-1983.5	10.396-1953.94	10.356-1924.36	10.23-1919.03	10.214-1915.34	10.195
-1895.04	9.934-1887.03	9.858 -1881.7	9.872-1849.22	10.013-1839.05	10.134
-1784.62	10.632-1779.41	10.652-1759.01	10.648-1713.42	10.45-1709.59	10.421
-1707.81	10.425-1702.88	10.448-1676.02	10.551-1652.12	10.589-1641.93	10.587
-1620.61	10.564-1596.56	10.51-1557.59	10.382 -1528	10.271-1510.58	10.248
-1479.79	10.413 -1444.9	10.538-1431.54	10.463-1412.07	10.367-1388.93	10.096
-1346.39	9.579-1337.01	9.487-1313.55	9.364 -1305.5	9.351-1253.75	9.248
-1247.88	9.213-1242.48	9.22-1215.04	9.172-1200.59	9.139-1186.13	9.102
-1182.22	9.105-1173.91	9.06 -1130.5	8.813-1089.57	8.672-1083.77	8.593
-1057.38	8.334-1044.28	8.295-1018.14	7.868-1010.82	7.856-985.334	8.034
-960.821	7.952-943.889	7.931-896.445	7.812-886.891	7.832-866.621	7.992
-832.267	8.267-821.262	8.405-799.881	8.665-789.521	8.731-788.418	8.738
-772.45	8.848-754.714	8.883-728.375	8.702-721.009	8.668-716.449	8.636
-697.069	8.548-667.511	8.364-653.601	8.261-640.226	8.14-607.312	7.827
-586.192	7.765-553.826	7.839-525.458	7.892-518.784	7.915-498.174	7.964
-485.079	7.993-462.159	8.035-419.852	8.077-417.671	8.08-410.583	8.075
-387.844	8.057-386.661	8.057 -379.04	8.035-322.303	7.774-318.438	7.755
-288.801	7.654-284.083	7.643-252.808	7.569 -251.6	7.564-219.993	7.529
-219.118	7.524-187.177	7.42-186.636	7.417-185.077	7.408-133.891	7.105
-121.795	7.033-121.288	7.029 -57.484	6.62 -55.916	6.613 2.239	6.809
3.851	6.814 9.742	6.841 23.852	6.841 85.814	6.852 127.592	6.779
141.488	6.746 178.245	6.477 199	8.4 200	2.8 200	1.2
202	-.2 217	-.3 219	.3 229	-.6 236	3.2
238	5.4 242	8.8			

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2322	.125	199	.035	242	.125

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	199	242		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-2322	201.5	9	F
236.5	242	9	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 1

ExpandedLocal.rep

Pier Data

Pier Station      Upstream=      219      Downstream=      219  
 Upstream      num=      2  
     Width      Elev      Width      Elev  
 \*\*\*\*\*  
     1      8      1      9  
 Downstream      num=      2  
     Width      Elev      Width      Elev  
 \*\*\*\*\*  
     1      8      1      9

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

    Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

    Energy Only

Additional Bridge Parameters

    Add Friction component to Momentum

    Do not add Weight component to Momentum

    Class B flow critical depth computations use critical depth  
     inside the bridge at the upstream end

    Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main

REACH: Lower                      RS: 36698

INPUT

Description: 1' DS Cousin Street Bridge

copy of SELA 6.931

Station Elevation Data      num=      137  
     Sta      Elev      Sta      Elev      Sta      Elev      Sta      Elev      Sta      Elev  
 \*\*\*\*\*  
     -2322    10.323   -2278.3    10.568-2270.92    10.603-2268.23    10.622-2245.33    10.708  
     -2233.31    10.985-2219.75    11.419-2182.56    11.508-2168.57    11.604   -2152.5    11.218  
     -2117.39    10.484-2093.62    10.295-2086.82    10.266-2066.21    10.207-2058.69    10.222  
     -2042.54    10.285-2015.04    10.397-1991.09    10.404-1988.85    10.406-1987.56    10.402  
     -1983.5    10.396-1953.94    10.356-1924.36    10.23-1919.03    10.214-1915.34    10.195  
     -1895.04    9.934-1887.03    9.858   -1881.7    9.872-1849.22    10.013-1839.05    10.134  
     -1784.62    10.632-1779.41    10.652-1759.01    10.648-1713.42    10.45-1709.59    10.421  
     -1707.81    10.425-1702.88    10.448-1676.02    10.551-1652.12    10.589-1641.93    10.587

ExpandedLocal.rep

-1620.61	10.564-1596.56	10.51-1557.59	10.382	-1528	10.271-1510.58	10.248			
-1479.79	10.413 -1444.9	10.538-1431.54	10.463-1412.07		10.367-1388.93	10.096			
-1346.39	9.579-1337.01	9.487-1313.55	9.364	-1305.5	9.351-1253.75	9.248			
-1247.88	9.213-1242.48	9.22-1215.04	9.172-1200.59		9.139-1186.13	9.102			
-1182.22	9.105-1173.91	9.06	-1130.5	8.813-1089.57	8.672-1083.77	8.593			
-1057.38	8.334-1044.28	8.295-1018.14	7.868-1010.82		7.856-985.334	8.034			
-960.821	7.952-943.889	7.931-896.445	7.812-886.891		7.832-866.621	7.992			
-832.267	8.267-821.262	8.405-799.881	8.665-789.521		8.731-788.418	8.738			
-772.45	8.848-754.714	8.883-728.375	8.702-721.009		8.668-716.449	8.636			
-697.069	8.548-667.511	8.364-653.601	8.261-640.226		8.14-607.312	7.827			
-586.192	7.765-553.826	7.839-525.458	7.892-518.784		7.915-498.174	7.964			
-485.079	7.993-462.159	8.035-419.852	8.077-417.671		8.08-410.583	8.075			
-387.844	8.057-386.661	8.057	-379.04	8.035-322.303	7.774-318.438	7.755			
-288.801	7.654-284.083	7.643-252.808	7.569	-251.6	7.564-219.993	7.529			
-219.118	7.524-187.177	7.42-186.636	7.417-185.077		7.408-133.891	7.105			
-121.795	7.033-121.288	7.029	-57.484	6.62	-55.916	6.613	2.239	6.809	
3.851	6.814	9.742	6.841	23.852	6.841	85.814	6.852	127.592	6.779
141.488	6.746	178.245	6.477	199	8.4	200	2.8	200	1.2
202	-.2	217	-.3	219	.3	229	-.6	236	3.2
238	5.4	242	8.8						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2322	.125	199	.035	242	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	199	242		18	18	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-2322	201.5	9	F
236.5	242	9	F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 36680

INPUT  
 Description: 20' DS Cousin Street  
 copy of SELA 6.928

Reach Lengths adjusted

Station Elevation Data num= 134

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-2322	10.323	-2278.3	10.568-2270.92	10.603-2268.23	10.622-2245.33	10.708			

ExpandedLocal.rep

-2233.31	10.985-2219.75	11.419-2182.56	11.508-2168.57	11.604	-2152.5	11.218			
-2117.39	10.484-2093.62	10.295-2086.82	10.266-2066.21	10.207	-2058.69	10.222			
-2042.54	10.285-2015.04	10.397-1991.09	10.404-1988.85	10.406	-1987.56	10.402			
-1983.5	10.396-1953.94	10.356-1924.36	10.23-1919.03	10.214	-1915.34	10.195			
-1895.04	9.934-1887.03	9.858	-1881.7	9.872	-1849.22	10.013-1839.05	10.134		
-1784.62	10.632-1779.41	10.652-1759.01	10.648-1713.42	10.45	-1709.59	10.421			
-1707.81	10.425-1702.88	10.448-1676.02	10.551-1652.12	10.589	-1641.93	10.587			
-1620.61	10.564-1596.56	10.51-1557.59	10.382	-1528	10.271-1510.58	10.248			
-1479.79	10.413	-1444.9	10.538-1431.54	10.463-1412.07	10.367-1388.93	10.096			
-1346.39	9.579-1337.01	9.487-1313.55	9.364	-1305.5	9.351-1253.75	9.248			
-1247.88	9.213-1242.48	9.22-1215.04	9.172-1200.59	9.139	-1186.13	9.102			
-1182.22	9.105-1173.91	9.06	-1130.5	8.813-1089.57	8.672-1083.77	8.593			
-1057.38	8.334-1044.28	8.295-1018.14	7.868-1010.82	7.856	-985.334	8.034			
-960.821	7.952-943.889	7.931-896.445	7.812-886.891	7.832	-866.621	7.992			
-832.267	8.267-821.262	8.405-799.881	8.665-789.521	8.731	-788.418	8.738			
-772.45	8.848-754.714	8.883-728.375	8.702-721.009	8.668	-716.449	8.636			
-697.069	8.548-667.511	8.364-653.601	8.261-640.226	8.14	-607.312	7.827			
-586.192	7.765-553.826	7.839-525.458	7.892-518.784	7.915	-498.174	7.964			
-485.079	7.993-462.159	8.035-419.852	8.077-417.671	8.08	-410.583	8.075			
-387.844	8.057-386.661	8.057	-379.04	8.035-322.303	7.774-318.438	7.755			
-288.801	7.654-284.083	7.643-252.808	7.569	-251.6	7.564-219.993	7.529			
-219.118	7.524-187.177	7.42-186.636	7.417-185.077	7.408	-133.891	7.105			
-121.795	7.033-121.288	7.029	-57.484	6.62	-55.916	6.613	2.239	6.809	
3.851	6.814	9.742	6.841	23.852	6.841	85.814	6.852	127.592	6.779
141.488	6.746	178.245	6.477	186.5	8.5	200.5	4.9	208.6	-.5
219.6	-1.2	227.7	-.5	242.7	8.5	250.8	8.6		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-2322	.125	186.5	.035	242.7	.125

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	186.5	242.7		1003	1003	1003		.1	.3
Ineffective Flow			num=	2					
Sta L	Sta R	Elev	Permanent						
-2322	193.61	9	F						
245.45	250.8	9	F						

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 35677

INPUT  
 Description: Copy of SELA 6.738\*  
 Reach Lengths adjusted



ExpandedLocal.rep

Station Elevation Data num= 31

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1986.67	10.33	-1560.28	9.46	-1311.88	9.17	-1132.27	8.72	-524.77	8.05
-408.94	7.96	-273.01	7.57	91.08	7.17	139.63	7.15	187.91	7.13
188.17	7.13	206.29	7.17	231.77	7.09	236.72	7.1	246.43	7.17
250.14	7.14	257.25	7.17	282.73	7.68	285.26	7.73	287.81	7.78
294	7.6	301	8.5	305.07	3.54	306.29	3.24	313.41	-.69
323.07	-1.6	331.74	-.62	333.67	.22	337.2	3.01	347.8	8.83
353.2	8.9								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1986.67	.05	301	.035	347.8	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	301	347.8		251	251		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
-1986.67	301	8.5	F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 35426

INPUT

Description: copy of SELA 6.6905\*

Station Elevation Data num= 31

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-1913.33	10.67	-1480.56	9.91	-1228.44	9.59	-1046.13	8.86	-429.53	8.11
-311.97	7.98	-174.01	7.29	195.54	6.68	244.81	6.68	293.82	6.67
294.09	6.67	312.47	6.74	338.34	6.78	343.36	6.8	353.21	6.93
356.99	6.89	364.2	6.84	390.06	6.86	392.63	6.87	395.21	6.86
401.5	6.7	405	8.5	411.04	1.82	412.09	1.59	418.21	-.87
426.53	-2	435.78	-.73	437.83	-.14	441.6	3.45	452.9	9.17
455.6	9.2								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-1913.33	.05	405	.035	452.9	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	405	452.9		257	257		.1	.3

ExpandedLocal.rep

Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 -1913.33 405 8.5 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 35169

INPUT

Description: 5' US Daney Street

Station Elevation Data num= 36

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	9.077	25.057	9.075	173.443	8.6	321.83	7.939	518.879	6.635
556.999	6.54	568.096	6.417	589.871	6.349	647.191	5.97	815.418	5.397
913.878	5.6111	1012.338	5.437	1165	8	1173	7.5	1180	6
1187	3.2	1193	1.3	1196	-1.7	1203	-1.9	1213	-3.2
1221	-3.2	1228	-1.5	1230	2.4	1234	5.3	1238	6.3
1258.69	7.4471	1300.635	7.0031	1319.902	7.0041	1358.531	6.5814	1451.865	6.524
1573.392	6.0731	1771.766	6.1180	5.054	6.2562	001.913	6.2722	011.008	6.359
2021.483	6.293								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	1165	.035	1238	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1165 1238 38 38 38 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 1170.53 6.4 F  
 1237.582021.483 6.4 F

BRIDGE

RIVER: W14 Main  
 REACH: Lower RS: 35150

INPUT

Description: Daney Street Bridge  
 taken from O&W/Duplantis Summit Fremaux  
 development model of W-14

Distance from Upstream XS = 5  
 Deck/Roadway Width = 28

ExpandedLocal.rep

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 23

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0	9.81				72	9.94				261	9.06			
357	8.31				483	7.58				542	7.25			
596	7.15				846	6.65				908	6.68			
957	6.45				1007	6.4				1066	7			
1121	8.3				1165.9	8.7				1175.5	11.6	8.1		
1194	11.6	8.1			1195.01	11.6	8.1			1213	11.6	8.1		
1214.01	11.6	8.1			1232.5	11.6	8.1			1232.7	9.9	7.9		
1235.5	9.3				1258.69	7.45								

Upstream Bridge Cross Section Data

Station Elevation Data num= 36

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	9.077	25.057	9.075	173.443	8.6	321.83	7.939	518.879	6.635
556.999	6.54	568.096	6.417	589.871	6.349	647.191	5.97	815.418	5.397
913.878	5.6111	1012.338	5.437	1165	8	1173	7.5	1180	6
1187	3.2	1193	1.3	1196	-1.7	1203	-1.9	1213	-3.2
1221	-3.2	1228	-1.5	1230	2.4	1234	5.3	1238	6.3
1258.69	7.4471	1300.635	7.0031	1319.902	7.0041	1358.531	6.5814	151.865	6.524
1573.392	6.0731	1771.766	6.1180	1805.054	6.2562	2001.913	6.2722	2011.008	6.359
2021.483	6.293								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	1165	.035	1238	.1

Bank Sta: Left 1165 Right 1238 Coeff Contr. .1 Expan. .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	1170.53	6.4	F
1237.58	2021.483	6.4	F

Downstream Deck/Roadway Coordinates

num= 23

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0	9.81				72	9.94				261	9.06			
357	8.31				483	7.58				542	7.25			
596	7.15				846	6.65				908	6.68			
957	6.45				1007	6.4				1066	7			
1121	8.3				1165.9	8.7				1175.5	11.6	8.1		

ExpandedLocal.rep

1194	11.6	8.1	1195.01	11.6	8.1	1213	11.6	8.1
1214.01	11.6	8.1	1232.5	11.6	8.1	1232.7	9.9	7.9
1235.5	9.3		1258.69	7.45				

Downstream Bridge Cross Section Data

Station Elevation Data num= 27

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	9.08	25.06	9.07	173.44	8.6	321.83	7.94	518.88	6.64
557	6.54	568.1	6.42	589.87	6.35	647.19	5.97	815.42	5.4
913.88	5.61	1012.34	5.44	1148.72	7.73	1181.5	-3.2	1221.5	-3.2
1252.39	7.1	1258.69	7.45	1300.64	7	1319.9	7	1358.53	6.58
1451.86	6.52	1573.39	6.07	1771.77	6.1	1805.05	6.26	2001.91	6.27
2011.01	6.36	2021.48	6.29						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	1148.72	.035	1252.39	.1

Bank Sta: Left Right Coeff Contr. Expan.

1148.72	1252.39		.1	.3
---------	---------	--	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	1173.03	6.4	F
1235.08	2021.48	6.4	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 2

Pier Data

Pier Station Upstream=1194.505 Downstream=1194.505

Upstream num= 2

Width	Elev	Width	Elev
1	-2	1	8.1

Downstream num= 2

Width	Elev	Width	Elev
1	-.29	1	8.1

ExpandedLocal.rep

Pier Data

Pier Station Upstream=1213.505 Downstream=1213.505

Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 -2.05 1 8.1

Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 -1.91 1 8.1

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth  
 inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main

REACH: Lower

RS: 35131

INPUT

Description: 5' DS Daney Street

Station Elevation Data		num= 27									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	9.08	25.06	9.07	173.44	8.6	321.83	7.94	518.88	6.64		
557	6.54	568.1	6.42	589.87	6.35	647.19	5.97	815.42	5.4		
913.88	5.61	1012.34	5.44	1148.72	7.73	1181.5	-3.2	1221.5	-3.2		
1252.39	7.1	1258.69	7.45	1300.64	7	1319.9	7	1358.53	6.58		
1451.86	6.52	1573.39	6.07	1771.77	6.1	1805.05	6.26	2001.91	6.27		
2011.01	6.36	2021.48	6.29								

Manning's n Values

num= 3

Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*

ExpandedLocal.rep

0 .06 1148.72 .035 1252.39 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1148.72 1252.39 239 232 225 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 1173.03 6.4 F  
 1235.08 2021.48 6.4 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 34899

INPUT

Description:

Station Elevation Data num= 26  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 8.62 142.95 8.86 200.48 8.83 364.92 8.51 664.78 7.37  
 1010.61 6.41 1117.03 6.24 1276.37 6.27 1306.69 6.34 1332.98 6.63  
 1344.15 7.52 1376 -3.1 1416 -3.1 1443.39 6.03 1469.79 6.36  
 1503.85 6.05 1553.08 6.07 1700.79 6.35 1799.26 6.4 1807.81 6.32  
 1891.75 6.36 1897.73 6.46 2019.79 6.32 2191.55 6.52 2242.38 6.7  
 2294.97 7.09

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .06 1344.15 .035 1443.39 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1344.15 1443.39 850 853 856 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 34046

INPUT

Description:

Station Elevation Data num= 30  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 8.22 14.47 8.18 52.81 7.57 142.05 7.05 204.55 6.78  
 281.28 6.58 448.65 6.34 498.18 6.15 572.21 6.21 795.34 6.1

ExpandedLocal.rep

841.87	6.2	1042.97	6.29	1075.35	6.62	1090.35	6.68	1120	-3.2
1160	-3.2	1186.16	5.52	1193.45	5.43	1290.59	5.77	1664.62	6.43
1739.54	6.68	1808.23	6.81	1951.84	6.79	1975.44	6.72	2089.2	6.82
2239.05	7.24	2338.96	7.12	2438.86	7.16	2538.76	7.38	2552.04	7.49

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	1090.35	.035	1186.16	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	1090.35	1186.16		819	841		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 33199

INPUT

Description:

Station Elevation Data num= 25

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	6.31	54.51	6.55	75.05	6.55	103.98	6.53	154.99	6.43
197.35	6.13	230.14	5.94	270.8	5.56	278.43	5.48	290.73	4.76
322.09	5.97	352	-4	392	-4	417.43	4.48	429.46	4.21
462.88	6.26	515.01	9.43	528.22	9.83	539.43	9.93	577.59	9.97
605.21	9.89	650.57	9.88	676.34	9.56	702.04	9.44	707	9.42

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	322.09	.035	417.43	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	322.09	417.43		639	633		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 32566

INPUT

Description:

Station Elevation Data num= 60

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-----	------	-----	------	-----	------	-----	------	-----	------

ExpandedLocal.rep

```
*****
  0      9.11  48.74   9.02  95.86   8.91  97.96   8.91 102.29   8.9
147.18  8.78 158.19   8.76 224.46   8.6  245.63   8.53 266.36   8.46
294.85  8.39 315.07   8.32 373.69   8.17  431.3    7.98 442.52   7.94
448.31  7.92 491.74   7.78 534.28   7.64 554.77   7.56 624.16   7.41
639.41  7.36 652.01   7.33 656.71   7.32 708.72   7.2  741.2    7.11
767.76  7.03 792.34   6.94 822.66   6.86 830.38   6.84 848.19   6.8
892.18  6.4  940.26   5.93 941.59   5.93 943.92   5.91 970.19   5.71
982.41  5.6  1010    -3.6 1050    -3.6 1082.94  7.38 1091.15  6.36
1122.08 6.83 1139.3   7.14 1209.73  7.46  1222    7.45 1236.09  7.44
1252.44 7.36 1284.48   7.29 1336.17   7.16 1368.79  7.39 1399.39  7.53
1424.74 7.51 1453.86   7.49 1492.32   7.41 1525.82  7.72 1537.38  7.78
1550.65 7.74 1604.96   7.09 1644.44   6.66 1652.26  6.65 1667.99  6.76
*****
```

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	982.41	.035	1082.94	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	982.41	1082.94		613	625		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 31941

INPUT

Description:

Station Elevation Data num= 28

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	9.39	105.12	9.65	164.94	9.67	266.58	9.46	393.61	8.44
464.59	7.67	489.47	6.91	521	-3.6	561	-3.6	594.8	7.67
608.09	7.52	708.21	7.2	791.43	7.59	832.09	7.62	1001.52	6.7
1067.72	6.56	1232.58	6.76	1250.34	6.88	1266.31	6.82	1396.07	7.2
1431.94	7.11	1488.28	7.83	1596.87	8.48	1608.51	8.47	1836.48	9.39
1871.75	9.66	1916.63	9.61	2065.92	9.86				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	489.47	.035	594.8	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	489.47	594.8		727	761		.1	.3



ExpandedLocal.rep

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 31180

INPUT

Description:

Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	9.17	29.42	9.35	187.32	10.7	232.55	10.95	347.38	10.72
431.09	9.05	450.56	8.78	499.38	8.66	540.28	8.37	575	-3.2
615	-3.2	647.5	7.63	647.86	7.49	672.29	7.59	719.32	8.27
724	8.31	746.44	8.54	775.98	7.77	845.01	7.83	871	8.44
907.34	8.54	943.69	8.22	974.57	8.27	993.03	8.2	1008.99	8.3
1042.38	8.25	1140.9	8.6	1237.55	8.62	1288.65	8.54	1387.44	8.63
1604.39	9.11	1879.65	9.05	1928.9	8.86	1966.82	8.85		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	540.28	.035	647.5	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	540.28	647.5		694	701	702	.1
							.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 30479

INPUT

Description:

Station Elevation Data num= 24

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	9.46	65.29	9.83	203.78	10.78	251.89	10.93	332.11	10.86
473.61	10.32	689.1	10.19	782.7	8.93	933.63	8.56	969.5	-3.4
1009.5	-3.4	1045.84	8.71	1063.85	7.79	1106.25	7.3	1129.38	7.2
1207.45	7.56	1359.64	7.25	1436.13	7.45	1545.59	8.15	1761.12	8.89
1975.22	9.85	2175.81	10.18	2228.25	10.09	2287.01	10.16		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	933.63	.035	1045.84	.06

ExpandedLocal.rep

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 933.63 1045.84 674 725 748 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 29754

INPUT

Description:

Station Elevation Data num= 50

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	11.15	11.67	11.13	64.56	10.98	74.51	10.95	81.06	10.93
161.64	10.67	200.19	10.61	210.21	10.58	222.83	10.58	263.03	10.59
280.27	10.61	301.97	10.76	335.48	10.9	381.1	10.9	388.71	10.91
418.07	10.91	451.56	10.91	455.4	10.91	460.24	10.9	514.4	10.76
539.38	10.67	566.48	10.58	626.85	10.17	640.08	10.04	665.56	9.76
697.65	9.39	735.62	8.89	765.65	8.77	765.78	8.77	772.13	8.74
845.26	10.01	887	-3.9	927	-3.9	965.04	8.78	972.28	7.59
980.12	7.94	990.22	7.96	998.1	7.98	1039.57	8.12	1090.66	8.14
1102.9	8.23	1161.1	8.34	1191.24	8.37	1199.26	8.38	1241.53	8.47
1269.11	8.52	1326.6	8.58	1352.22	8.57	1362.92	8.56	1400.49	8.49

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	845.26	.035	965.04	.06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 845.26 965.04 838 832 830 .1 .3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 28922

INPUT

Description:

Station Elevation Data num= 27

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	11.04	64.2	10.88	87.56	10.83	107.74	10.76	143.25	10.53
170.17	10.43	188.04	10.26	200.77	10.1	232.12	9.82	276.13	9.34
313.98	8.92	342.43	8.65	370.59	8.37	396.03	8.19	406.55	8.1

ExpandedLocal.rep

460.72	7.3	462.4	7.77	498	-4.1	538	-4.1	578.65	9.45
581.71	9.34	625.28	12.14	631.11	12.88	641.38	13.08	674	13.35
680.48	13.4	682.76	13.34						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.09	462.4	.035	578.65	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	462.4	578.65		309	311		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 28661

INPUT

Description: US I-10

Station Elevation Data num= 20

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.283	14.653	13.171	39.244	12.336	44	13.7	55	11.6
68	5.7	76	1.3	87	-3.1	99	-3.1	108	-1.3
119	-4.4	127	-5	138	1.4	147	6.2	155	9.9
165	12	197.265	12.73	220.224	13.258	263.66	13.48	265.526	13.483

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.09	55	.035	165	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	55	165		189	189		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	55.56	14	T
161.85	265.526	14	T

BRIDGE

RIVER: W14 Main  
 REACH: Lower RS: 28567

INPUT

Description: I-10 Bridge

ExpandedLocal.rep

Distance from Upstream XS = 3  
 Deck/Roadway Width = 184  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 15

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-1	14				58.6	16.94	13.5	60.01	16.94	13.5	16.94	13.5		
78.1	16.94	13.5			79.51	16.94	13.5	97.6	16.94	13.5	16.94	13.5		
99.01	16.94	13.5			117.1	16.94	13.5	118.51	16.94	13.5	16.94	13.5		
136.6	16.94	13.5			138.01	16.94	13.5	158.8	16.94	13.5	16.94	13.5		
199	14				249	14		299	14					

Upstream Bridge Cross Section Data

Station Elevation Data num= 20

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.283	14.653	13.171	39.244	12.336	44	13.7	55	11.6
68	5.7	76	1.3	87	-3.1	99	-3.1	108	-1.3
119	-4.4	127	-5	138	1.4	147	6.2	155	9.9
165	12	197.265	12.73	220.224	13.258	263.66	13.48	265.526	13.483

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.09	55	.035	165	.06

Bank Sta: Left Right Coeff Contr. Expan.  
 55 165 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	55.56	14	T
161.85	265.526	14	T

Downstream Deck/Roadway Coordinates

num= 15

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-11	14				48	16.94	13.5	50	16.94	13.5	16.94	13.5		
68	16.94	13.5			70	16.94	13.5	88	16.94	13.5	16.94	13.5		
89	16.94	13.5			107	16.94	13.5	109	16.94	13.5	16.94	13.5		
127	16.94	13.5			128	16.94	13.5	149	16.94	13.5	16.94	13.5		
189	14				239	14		289	14					

Downstream Bridge Cross Section Data

Station Elevation Data num= 23

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev

ExpandedLocal.rep

0	13.561	4.066	13.625	7.723	13.584	13.661	13.134	39	12.8
47	11	57	5.9	64	1.3	77	-4	88	-4.6
100	-2.5	110	-3.6	120	-2.2	128	1.4	135	5.6
146	10.6	151	11.7	154	13.1	161.451	12.899	163.868	13.01
178.533	13.622	208.353	13.49	212.284	13.522				

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .125 47 .035 151 .125

Bank Sta: Left Right Coeff Contr. Expan.  
 47 151 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 46.44 14 T  
 150.5 212.284 14 T

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 4

Pier Data  
 Pier Station Upstream= 78 Downstream= 78  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.5 -5 1.5 16.94  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.5 -5 1.5 16.94

Pier Data  
 Pier Station Upstream= 98 Downstream= 98  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1.4 -5 1.4 17  
 Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*

1.4 -5 1.4 17

Pier Data

Pier Station Upstream= 118 Downstream= 118

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1.4 -5 1.4 16.94

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1.4 -5 1.4 16.94

Pier Data

Pier Station Upstream= 137 Downstream= 137

Upstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1.4 -5 1.4 16.94

Downstream num= 2

Width Elev Width Elev

\*\*\*\*\*

1.4 -5 1.4 16.94

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Momentum Cd = 2

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Pressure and Weir flow

Submerged Inlet Cd =

Submerged Inlet + Outlet Cd = .8

Max Low Cord = 13.5

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth

inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main

ExpandedLocal.rep

REACH: Lower

RS: 28472

INPUT

Description: DS I-10

Station Elevation Data num= 23

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.561	4.066	13.625	7.723	13.584	13.661	13.134	39	12.8
47	11	57	5.9	64	1.3	77	-4	88	-4.6
100	-2.5	110	-3.6	120	-2.2	128	1.4	135	5.6
146	10.6	151	11.7	154	13.1	161.451	12.899	163.868	13.01
178.533	13.622	208.353	13.49	212.284	13.522				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	47	.035	151	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	47	151	674	674	674	.1	.3

Ineffective Flow	num=	2	
Sta L	Sta R	Elev	Permanent
0	46.44	14	T
150.5	212.284	14	T

CROSS SECTION

RIVER: W14 Main

REACH: Lower

RS: 27798

INPUT

Description:

Station Elevation Data num= 62

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	5.508	32.031	6.044	90.674	6.493	159.724	5.427	169.55	4.106
208.937	-.802	286.854	-1.016	302.207	-1.044	312.537	-1.044	356.575	-1.101
1193.194	-1.183	1206.81	-1.211	1638.235	-1.221	1708.093	-1.083	1777.951	-.802
1812.88	-.802	1846.785	7.088	1847.809	7.351	1849.028	7.184	1857	3.57
1860	2.43	1867	-.16	1882	-3.73	1887	-4.62	1903	-5.37
1920	-3.47	1924	-3.55	1934	-3.84	1948	-2.63	1949	-2.51
1959	.33	1967	3.18	1969	3.6	1976	5.51	1979.624	6.368
1979.642	6.372	1987.286	7.382	2049.239	-.802	2091.682	3.201	2118.836	6.127
2126.48	5.484	2134.124	4.685	2161.279	-.802	2188.433	-.802	2198.625	-.825
2203.721	-.843	2265.674	-1.173	2300.473	-1.226	2335.271	-1.229	2350.559	-1.215
2436.58	-1.043	2459.665	-.965	2494.814	-.802	2528.844	3.786	2544.186	4.904
2550.965	4.941	2568.474	5.194	2642.931	1.107	2689.964	8.448	2692.304	8.748

ExpandedLocal.rep

2694.294 8.6982741.676 9.966

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .031849.028 .0351979.642 .03

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 1849.0281979.642 828 828 828 .1 .3  
 Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 1847.8 7.35 F  
 1987.292741.676 7.382 F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 26970

INPUT

Description:

Station Elevation Data num= 48  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 8.337 6.377 8.352 8.458 8.359 43.345 8.398 62.562 8.418  
 79.573 8.454 118.747 8.464 138.982 8.513 167.867 8.454 205.06 8.399  
 231.117 8.265 260.716 7.925 289.522 8.318 322.817 8.798 348.607 9.114  
 367.027 9.509 391.588 9.685 402.179 9.609 410 7.577 417 3.08  
 424 .94 427 0 434 -1.81 449 -4.79 453 -5.32  
 469 -6.23 483 -4.56 487 -4.36 495 -4.11 507.5 -3.11  
 508 -3.05 517 -.88 525 1.09 526 1.35 532 2.67  
 535 5.04 539 6.27 541 7.334 542.875 7.565 576.886 9.663  
 609.48 9.911 611.693 9.898 614.002 9.896 659.191 9.406 745.805 9.557  
 749.19 9.573 752.671 9.613 815.496 9.794

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .125 410 .035 541 .125

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 410 541 546 546 536 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev Permanent  
 0 391.59 9.69 F

CROSS SECTION



ExpandedLocal.rep

RIVER: W14 Main  
 REACH: Lower RS: 26424

INPUT

Description:

Station Elevation Data num= 26

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	9.317	45.765	10.224	89.239	10.19	106.334	10.399	142.378	9.918
150.911	9.848	153.644	9.227	206	10	214	5.4	219	1.2
226	-1.6	241	-5.5	255	-6.8	267	-4.9	281	-3.4
292	-.3	297	.8	299	3.6	303	5.4	308	8
329.942	10.013	349.321	10.02	359.402	10.236	364.859	10.252	373.632	10.005
405.032	9.619								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	206	.035	308	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	206	308		204 204	204	.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 26220

INPUT

Description:

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	11	129	10.78	154	11.52	167	1.21	180	-4.92
200	-7.37	220	-5.67	240	-3.67	246	1.23	260	10.81
285	10.65	400	11						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	154	.035	260	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	154	260		51 51	51	.1	.3

CROSS SECTION

RIVER: W14 Main
REACH: Lower RS: 26169

INPUT

Description: 3' US Kingspoint Blvd

Station Elevation Data num= 12

Table with 10 columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains elevation data for stations 0, 11, 129, 154, 167, 180, 200, 220, 240, 246, 260, 285, 400.

Manning's n Values num= 3

Table with 6 columns: Sta, n Val, Sta, n Val, Sta, n Val. Contains Manning's n values for stations 0, 154, 260.

Table with 8 columns: Bank Sta, Left, Right, Lengths, Left, Channel, Right, Coeff Contr., Expan. Contains bank and channel data.

BRIDGE

RIVER: W14 Main
REACH: Lower RS: 26152

INPUT

Description: Kingspoint Blvd Bridge

Distance from Upstream XS = 3

Deck/Roadway Width = 32

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 6

Table with 10 columns: Sta, Hi, Cord, Lo, Cord, Sta, Hi, Cord, Lo, Cord, Sta, Hi, Cord, Lo, Cord. Contains upstream coordinates for stations 0, 11, 154, 171.5, 188.5, 189.5, 400.

Upstream Bridge Cross Section Data

Station Elevation Data num= 12

Table with 10 columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains elevation data for stations 0, 11, 129, 154, 167, 180, 200, 220, 240, 246, 260, 285, 400.

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .125 154 .035 260 .125

Bank Sta: Left Right Coeff Contr. Expan.  
 154 260 .1 .3

Downstream Deck/Roadway Coordinates

num= 6  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 0 11 11 154 10.43 9.34 171.5 10.43 9.34  
 188.5 10.43 9.34 189.5 10.43 9.34 400 11 11

Downstream Bridge Cross Section Data

Station Elevation Data num= 12  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 11 129 10.78 154 11.52 167 1.21 180 -4.92  
 200 -7.37 220 -5.67 240 -3.67 246 1.23 260 10.81  
 285 10.65 400 11

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .125 154 .035 260 .125

Bank Sta: Left Right Coeff Contr. Expan.  
 154 260 .1 .3

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 3

Pier Data

Pier Station Upstream= 189 Downstream= 189  
 Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 0 1 11

```

Downstream      num=      2
  Width  Elev   Width  Elev
*****
      1      0      1     11

```

Pier Data

Pier Station Upstream= 207 Downstream= 207

```

Upstream      num=      2
  Width  Elev   Width  Elev
*****
      1      0      1     11

```

```

Downstream      num=      2
  Width  Elev   Width  Elev
*****
      1      0      1     11

```

Pier Data

Pier Station Upstream= 225 Downstream= 225

```

Upstream      num=      2
  Width  Elev   Width  Elev
*****
      1      0      1     11

```

```

Downstream      num=      2
  Width  Elev   Width  Elev
*****
      1      0      1     11

```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main

REACH: Lower

RS: 26131

ExpandedLocal.rep

INPUT

Description: 3' DS Kingspoint Blvd

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	11	129	10.78	154	11.52	167	1.21	180	-4.92
200	-7.37	220	-5.67	240	-3.67	246	1.23	260	10.81
285	10.65	400	11						

\*\*\*\*\*

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	154	.035	260	.125

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	154	260		93 93	93		.1	.3

CROSS SECTION

RIVER: W14 Main  
REACH: Lower RS: 26038

INPUT

Description:

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	11	129	10.78	154	11.52	167	1.21	180	-4.92
200	-7.37	220	-5.67	240	-3.67	246	1.23	260	10.81
285	10.65	400	11						

\*\*\*\*\*

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	154	.035	260	.125

\*\*\*\*\*

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	154	260		879 879	879		.1	.3

CROSS SECTION

RIVER: W14 Main  
REACH: Lower RS: 25159

INPUT

ExpandedLocal.rep

Description:

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	10	3.15	8.09	340	7.3	346	3.11	360	3.26
380	-6.96	390	-6.86	400	-7.06	420	-7.26	430	-4.26
440	1.99	449	8.32	474	10.33				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	340	.035	449	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	340	449		52	52		.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 25107

INPUT

Description: US Voters Road

Station Elevation Data num= 8

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	10	315	8.09	340	8.2	381	8.2	381.01	-4.2
455	-4.2	455.01	8.7	474	10.33				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	381	.035	455.01	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	381	455.01		27	27		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	380	10	F
456	474	10	F

BRIDGE

RIVER: W14 Main  
 REACH: Lower RS: 25086

ExpandedLocal.rep

INPUT

Description: Voters Road Bridge  
 Distance from Upstream XS = 1  
 Deck/Roadway Width = 25  
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 11

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
0	10	10	315	11	8.09	340	11	8.2
346	11	8.2	381	11	8.2	398	11	8.7
399	11	8.7	416	11	8.7	435	11	8.7
455	11	8.7	474	10.33	10.33			

Upstream Bridge Cross Section Data

Station Elevation Data num= 8

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	10	315	8.09	340	8.2	381	8.2	381.01	-4.2
455	-4.2	455.01	8.7	474	10.33				

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.125	381	.035	455.01	.125

Bank Sta: Left Right Coeff Contr. Expan.  
 381 455.01 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	380	10	F
456	474	10	F

Downstream Deck/Roadway Coordinates

num= 11

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
0	10	10	315	11	8.09	340	11	8.2
346	11	8.2	381	11	8.2	398	11	8.7
399	11	8.7	416	11	8.7	435	11	8.7
455	11	8.7	474	10.33	10.33			

Downstream Bridge Cross Section Data

Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	10	315	8.09	340	8.2	346	8.2	360	8.2
381	8.2	381.01	-4.2	398	-4.2	398.01	-4.2	399	-4.2

455 -4.2 455.01 8.7 474 10.33

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .125 381 .035 455.01 .125

Bank Sta: Left Right Coeff Contr. Expan.  
 381 455.01 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 380 10 F  
 456 474 10 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 3

Pier Data

Pier Station Upstream= 398.5 Downstream= 398.5

Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 0 1 10.33

Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 0 1 10.33

Pier Data

Pier Station Upstream= 416.5 Downstream= 416.5

Upstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 0 1 10.33

Downstream num= 2  
 Width Elev Width Elev  
 \*\*\*\*\*  
 1 0 1 10.33

Pier Data

Pier Station Upstream= 435.5 Downstream= 435.5



```

Upstream      num=      2
  Width  Elev   Width  Elev
*****
      1      0      1  10.33
Downstream    num=      2
  Width  Elev   Width  Elev
*****
      1      0      1  10.33
    
```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Energy Only

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth  
inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: W14 Main

REACH: Lower

RS: 25080

INPUT

Description: DS Voters Road

```

Station Elevation Data      num=      13
  Sta   Elev   Sta   Elev   Sta   Elev   Sta   Elev   Sta   Elev
*****
      0     10   315   8.09   340     8.2   346     8.2   360     8.2
    381     8.2 381.01  -4.2   398    -4.2 398.01  -4.2   399    -4.2
    455    -4.2 455.01   8.7   474   10.33
    
```

```

Manning's n Values      num=      3
  Sta  n Val   Sta  n Val   Sta  n Val
*****
      0   .125   381   .035 455.01   .125
    
```

```

Bank Sta: Left   Right   Lengths: Left Channel   Right   Coeff Contr.   Expan.
           381 455.01           90    90    90           .1           .3
Ineffective Flow      num=      2
    
```

ExpandedLocal.rep

Sta L	Sta R	Elev	Permanent
0	380	10	F
456	474	10	F

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 24990

INPUT

Description:

Station Elevation Data num= 18

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
22	9.14	26	7.04	33	4.54	40	2.04	43.28	.95
46	.04	60	-2.29	80	-5.19	100	-4.39	120	-3.49
131	.04	135	3.64	140	5.84	145	8.64	155	9.14
164	9.64	170	11.34	176	13.14				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
22	.125	40	.035	135	.125

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	40	135		2724	2724	.1	.3

CROSS SECTION

RIVER: W14 Main  
 REACH: Lower RS: 22266

INPUT

Description:

Station Elevation Data num= 22

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.16	15	11.06	30	9.36	45	7.46	56	6.36
70	5.66	85	4.86	93	4.46	96	2.46	98	.76
100	-.99	120	-5.59	140	-6.89	160	-6.19	180	.21
186	.76	190	2.96	200	5.76	210	5.66	213	6.26
225	10.16	236	13.86						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

ExpandedLocal.rep

0 .065 96 .035 190 .065

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
96 190 1252 1252 1252 .1 .3

CROSS SECTION

RIVER: W14 Main  
REACH: Lower RS: 21014

INPUT

Description:

Station Elevation Data num= 22

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.16	15	11.06	30	9.36	45	7.46	56	6.36
70	5.66	85	4.86	93	4.46	96	2.46	98	.76
100	-.99	120	-5.59	140	-6.89	160	-6.19	180	.21
186	.76	190	2.96	200	5.76	210	5.66	213	6.26
225	10.16	236	13.86						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	96	.035	190	.06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
96 190 1394 1394 1394 .1 .3

CROSS SECTION

RIVER: W14 Main  
REACH: Lower RS: 19620

INPUT

Description: 55' US Confluence with W-15 Main

Station Elevation Data num= 22

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.16	15	11.06	30	9.36	45	7.46	56	6.36
70	5.66	85	4.86	93	4.46	96	2.46	98	.76
100	-.99	120	-5.59	140	-6.89	160	-6.19	180	.21
186	.76	190	2.96	200	5.76	210	5.66	213	6.26
225	10.16	236	13.86						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	96	.035	190	.06

ExpandedLocal.rep

Sta	n Val	Sta	n Val	Sta	n Val
0	.06	96	.035	190	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	96	190		0	0		.1	.3

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 4743

INPUT

Description:

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	12.8	29	13.2	47	13.1	53	8.3	59	7.5
72	5.8	80	7.1	89	12.5	117	13.9	162	13.7

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	47	.05	89	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	47	89		1	1		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	48.5	14.5	F
89.5	162	14.5	F

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 4742

INPUT

Description:

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	12.8	29	13.2	47	13.1	53	8.3	59	7.5
72	5.8	80	7.1	89	12.5	117	13.9	162	13.7

Manning's n Values num= 3

ExpandedLocal.rep

Sta n Val      Sta n Val      Sta n Val  
 \*\*\*\*\*  
           0   .035      47   .05      89   .035

Bank Sta: Left   Right   Lengths: Left Channel   Right   Coeff Contr.   Expan.  
                   47     89           54     54     54           .1     .3  
 Ineffective Flow   num=     2  
   Sta L   Sta R   Elev Permanent  
           0   48.5   14.5     F  
          89.5   162   14.5     F

CULVERT

RIVER: West Diversion  
 REACH: Main                   RS: 4716

INPUT

Description: West Diversion Canal #8

LA Hwy No. 11

Distance from Upstream XS =     6.5

Deck/Roadway Width           =     41

Weir Coefficient              =     2.6

Upstream Deck/Roadway Coordinates

num=     5

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0		14.5			18		14.5			62		14.6		
130		14.6			185		14.7							

Upstream Bridge Cross Section Data

Station Elevation Data   num=     10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	12.8	29	13.2	47	13.1	53	8.3	59	7.5
72	5.8	82	7.1	89	12.5	117	13.9	162	13.7

Manning's n Values   num=     3

Sta n Val      Sta n Val      Sta n Val  
 \*\*\*\*\*  
           0   .035      47   .05      89   .035

Bank Sta: Left   Right   Coeff Contr.   Expan.  
                   47     89           .1     .3

Ineffective Flow   num=     2  
   Sta L   Sta R   Elev Permanent  
           0   48.5   14.5     F  
          89.5   162   14.5     F

ExpandedLocal.rep

Downstream Deck/Roadway Coordinates

num= 5

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
0	14.5		29	14.5		73	14.6	
141	14.6		196	14.7				

Downstream Bridge Cross Section Data

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	12.5	29	12.6	51	10.1	54	5.5	61	2.2
68	5	74	6.6	76	4.8	81	4.2	90	5.4
95	12.6	116	13.1						

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	51	.05	95	.035

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	51	95		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	54.75	14.5	F
89.25	116	14.5	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 5

Culvert Name	Shape	Rise	Span	Top n	Bottom n	Depth Blocked	Entrance Loss Coef
Culvert #3	Box	4.15	4				
FHWA Chart # 8 - flared wingwalls							
FHWA Scale # 1 - Wingwall flared 30 to 75 deg.							
Solution Criteria = Highest U.S. EG							
Culvert Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef	
1	6.5	41	.012	.012	0	.5	
Upstream Elevation	= 8.1						

Centerline Station = 57  
Downstream Elevation = 7.9  
Centerline Station = 60

Culvert Name      Shape      Rise      Span  
Culvert #2            Box      4.15      4  
FHWA Chart # 8 - flared wingwalls  
FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
Solution Criteria = Highest U.S. EG  
Culvert Upstrm Dist   Length      Top n    Bottom n    Depth Blocked    Entrance Loss Coef  
Exit Loss Coef  
                         6.5      41      .012      .012            0                    .5

1  
Upstream Elevation = 8.1  
Centerline Station = 63  
Downstream Elevation = 7.9  
Centerline Station = 66

Culvert Name      Shape      Rise      Span  
Culvert #1            Box      4.15      4  
FHWA Chart # 8 - flared wingwalls  
FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
Solution Criteria = Highest U.S. EG  
Culvert Upstrm Dist   Length      Top n    Bottom n    Depth Blocked    Entrance Loss Coef  
Exit Loss Coef  
                         6.5      41      .012      .012            0                    .5

1  
Upstream Elevation = 8.1  
Centerline Station = 69  
Downstream Elevation = 7.9  
Centerline Station = 72

Culvert Name      Shape      Rise      Span  
Culvert #4            Box      4.15      4  
FHWA Chart # 8 - flared wingwalls  
FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
Solution Criteria = Highest U.S. EG  
Culvert Upstrm Dist   Length      Top n    Bottom n    Depth Blocked    Entrance Loss Coef  
Exit Loss Coef  
                         6.5      42      .012      .012            0                    .5

1  
Upstream Elevation = 8.1  
Centerline Station = 75  
Downstream Elevation = 7.9  
Centerline Station = 78

Culvert Name      Shape      Rise      Span  
Culvert #5            Box      4.15      4

ExpandedLocal.rep

FHWA Chart # 8 - flared wingwalls

FHWA Scale # 1 - Wingwall flared 30 to 75 deg.

Solution Criteria = Highest U.S. EG

Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
Exit Loss Coef

6.5 42 .012 .012 0 .5

1

Upstream Elevation = 8.1  
Centerline Station = 81  
Downstream Elevation = 7.9  
Centerline Station = 84

CROSS SECTION

RIVER: West Diversion  
REACH: Main RS: 4688

INPUT

Description:

Station Elevation Data num= 12  
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
\*\*\*\*\*  
0 12.5 29 12.6 51 10.1 54 5.5 61 2.2  
68 5 74 6.6 76 4.8 81 4.2 90 5.4  
95 12.6 116 13.1

Manning's n Values num= 3  
Sta n Val Sta n Val Sta n Val  
\*\*\*\*\*  
0 .035 51 .05 95 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
51 95 1 1 1 .1 .3

Ineffective Flow num= 2  
Sta L Sta R Elev Permanent  
0 54.75 14.5 F  
89.25 116 14.5 F

CROSS SECTION

RIVER: West Diversion  
REACH: Main RS: 4687

INPUT

Description:

Station Elevation Data num= 8



ExpandedLocal.rep

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-315.5	14	-293	6.5	54	6.5	61	2.2	68	5
74	6.6	421	6.5	442	14				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-315.5	.035	54	.03	74	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	54	74		627	627		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
-315.5	53.75	14.5	F
90.25	442	14.5	F

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 4060

INPUT

Description:

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-370	14	-347	6.5	0	6.5	46	5.1	62	4.6
67	3.7	75	5	102	6.5	449	6.5	472	14

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-370	.035	46	.03	75	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	46	75		369	369		.1	.3

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 3692

INPUT

Description:

Station Elevation Data num= 11

ExpandedLocal.rep

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-342	14	-319	6.5	28	6.5	72	5.4	77	3.6
80	2.9	87	3.7	90	5.4	107	6.5	454	6.5
477	14								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-342	.035	72	.03	90	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	72	90		1	1		.1	.3
Ineffective Flow			num=	2				
Sta L	Sta R	Elev	Permanent					
-342	63.14	14.1	F					
96.86	477	14.1	F					

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 3691

INPUT  
 Description:

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	7.1	28	6.8	72	5.4	77	3.6	80	2.9
87	3.7	90	5.4	107	5.8	131	5.3	162	5

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.01	72	.05	90	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	72	90		131	131		.1	.3
Ineffective Flow			num=	2				
Sta L	Sta R	Elev	Permanent					
0	64.14	14.1	F					
95.86	162	14.1	F					

CULVERT

RIVER: West Diversion

REACH: Main

RS: 3626

INPUT

Description: West Diversion Canal #6

Distance from Upstream XS = 11.5

Deck/Roadway Width = 108

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 6

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0		14.1			23		14.1			56		14.3		
80		14.5			112		14.5			162		14.5		

Upstream Bridge Cross Section Data

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	7.1	28	6.8	72	5.4	77	3.6	80	2.9
87	3.7	90	5.4	107	5.8	131	5.3	162	5

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.01	72	.05	90	.1

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	72	90		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	64.14	14.1	F
95.86	162	14.1	F

Downstream Deck/Roadway Coordinates

num= 6

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0		14.1			31		14.1			65		14.3		
88		14.5			121		14.5			139		14.5		

Downstream Bridge Cross Section Data

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.5	27	13.6	56	12.9	74	10.5	83	4.2
88	2.8	95	4.5	107	9.3	121	9.7	139	9.9

Manning's n Values

num= 3

ExpandedLocal.rep

Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .01 74 .05 107 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 74 107 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 77.89 14.1 F  
 98.11 139 14.1 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name Shape Rise Span  
 Culvert #1 Pipe Arch 6 8.71  
 FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
 FHWA Scale # 1 - 90 Degree headwall  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 1 11.5 108 .024 .024 0 .7

Upstream Elevation = 4  
 Centerline Station = 80  
 Downstream Elevation = 3.1  
 Centerline Station = 88

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 3560

INPUT

Description:

Station Elevation Data num= 10  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 13.5 27 13.6 56 12.9 74 10.5 83 4.6  
 88 3.5 95 4.5 107 9.3 121 9.7 139 9.9

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .01 74 .05 107 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 74 107 783 783 783 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 77.89 14.1 F  
 98.11 139 14.1 F

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 2777

INPUT

Description:

Station Elevation Data num= 10  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 9 25 9.4 45 8.9 49 3.1 52 2.5  
 57 3.3 63 8.7 72 12 78 10.4 95 9.3

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .01 45 .05 63 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 45 63 551 551 551 .1 .3

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 2226

INPUT

Description:

Station Elevation Data num= 7  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 8.2 30 8.6 34 2.8 37 2.6 39 2.7  
 43 7.1 69 9.2

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .01 30 .05 43 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 30 43 116 116 116 .1 .3

BRIDGE

RIVER: West Diversion  
 REACH: Main RS: 2168

INPUT

Description: Railroad  
 Bridge from Survey  
 Distance from Upstream XS = 52  
 Deck/Roadway Width = 12  
 Weir Coefficient = 2.6  
 Upstream Deck/Roadway Coordinates

num= 5  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 0 14.7 3 14.8 12 63 14.9 12  
 122 14.8 183 14.8

Upstream Bridge Cross Section Data

Station Elevation Data num= 7  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 8.2 30 8.6 34 2.8 37 2.6 39 2.7  
 43 7.1 69 9.2

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .01 30 .05 43 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 30 43 .1 .3

Downstream Deck/Roadway Coordinates

num= 5  
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord  
 \*\*\*\*\*  
 -41 14.7 -10 14.8 12 52 14.9 12

110 14.8 177 14.8

Downstream Bridge Cross Section Data

Station Elevation Data num= 8

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-41	8.7	0	8	6	3	12	2.4	17	3.2
24	8.7	38	4.3	63	7.4				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-41	.01	0	.05	24	.1

Bank Sta: Left Right Coeff Contr. Expan.

	0	24	.1	.3
--	---	----	----	----

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Piers = 5

Pier Data

Pier Station	Upstream=	Downstream=	
	13	-3	
Upstream	num= 2		
Width	Elev	Width	Elev
1	0	1	12
Downstream	num= 2		
Width	Elev	Width	Elev
1	0	1	12

Pier Data

Pier Station	Upstream=	Downstream=	
	24	3	
Upstream	num= 2		
Width	Elev	Width	Elev
1	0	1	12
Downstream	num= 2		
Width	Elev	Width	Elev
1	0	1	12

ExpandedLocal.rep

Pier Data

Pier Station      Upstream=      37      Downstream=      11  
Upstream      num=      2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1      0      1      12  
Downstream      num=      2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1      0      1      12

Pier Data

Pier Station      Upstream=      48      Downstream=      19  
Upstream      num=      2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1      0      1      12  
Downstream      num=      2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1      0      1      12

Pier Data

Pier Station      Upstream=      57      Downstream=      34  
Upstream      num=      2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1      0      1      12  
Downstream      num=      2  
    Width    Elev      Width    Elev  
\*\*\*\*\*  
    1      0      1      12

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

    Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

    Energy Only

Additional Bridge Parameters

    Add Friction component to Momentum

    Do not add Weight component to Momentum

    Class B flow critical depth computations use critical depth  
        inside the bridge at the upstream end



ExpandedLocal.rep

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 2110

INPUT

Description:

Station Elevation Data		num= 8							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-41	8.7	0	8	6	3	12	2.4	17	3.2
24	8.7	38	4.3	63	7.4				

Manning's n Values		num= 3			
Sta	n Val	Sta	n Val	Sta	n Val
-41	.01	0	.05	24	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	0	24		350	350		.1	.3

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 1760

INPUT

Description:

Station Elevation Data		num= 9							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	8.7	24	8.2	43	6	49	2.1	53	1.5
55	1.4	57	5.6	77	7	104	7.9		

Manning's n Values		num= 3			
Sta	n Val	Sta	n Val	Sta	n Val
0	.01	43	.05	57	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	43	57		54	54		.1	.3

Ineffective Flow		num= 2	
Sta L	Sta R	Elev	Permanent
0	34.74	10.3	F

68.45 104 10.3 F

CULVERT

RIVER: West Diversion
REACH: Main RS: 1733

INPUT

Description: Carnation Street
Culvert from Survey
Distance from Upstream XS = 12.5
Deck/Roadway Width = 29
Weir Coefficient = 2.6
Upstream Deck/Roadway Coordinates

Table with 4 columns: Sta, Hi, Cord, Lo Cord. Contains 4 rows of coordinate data for the upstream deck/roadway.

Upstream Bridge Cross Section Data

Table with 11 columns: Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev, Sta, Elev. Contains 2 rows of elevation data for the upstream bridge cross section.

Manning's n Values

Table with 6 columns: Sta, n Val, Sta, n Val, Sta, n Val. Contains 1 row of Manning's n values.

Table with 5 columns: Bank Sta, Left, Right, Coeff Contr., Expan. Contains 1 row of bank and coefficient data.

Table with 5 columns: Ineffective Flow, Sta L, Sta R, Elev, Permanent. Contains 2 rows of ineffective flow data.

Downstream Deck/Roadway Coordinates

Table with 4 columns: Sta, Hi, Cord, Lo Cord. Contains 4 rows of coordinate data for the downstream deck/roadway.

Downstream Bridge Cross Section Data

ExpandedLocal.rep

Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	9	20	8.1	38	8.1	43	1.1	51	.3
55	1.6	62	8	82	8.2	106	8.7		

\*\*\*\*\*

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.01	38	.05	62	.1

\*\*\*\*\*

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	38	62		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	38.39	10.3	F
59.61	106	10.3	F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name	Shape	Rise	Span
Culvert #1	Pipe Arch	6	8.71

FHWA Chart # 34- 18 inch corner radius; Corrugated metal  
 FHWA Scale # 1 - 90 Degree headwall  
 Solution Criteria = Highest U.S. EG

Culvert	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
1	12.5	29	.024	.024	0		.7

Upstream Elevation = 2.2  
 Centerline Station = 51.6  
 Downstream Elevation = 2.1  
 Centerline Station = 49

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 1706

ExpandedLocal.rep

INPUT

Description:

Station Elevation Data num= 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	9	20	8.1	38	8.1	43	1.1	51	.3
55	1.6	62	8	82	8.2	106	8.7		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.01	38	.05	62	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	38	62		437	437		.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	38.39	10.3	F
59.61	106	10.3	F

CROSS SECTION

RIVER: West Diversion

REACH: Main RS: 1269

INPUT

Description:

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	8.4	9	6.8	18	5.9	25	5	27	1.9
35	1.1	40	2.1	43	5	54	6.5	73	7.6

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.01	25	.05	43	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	25	43		87	87		.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
71.25	73	9	F

CULVERT

ExpandedLocal.rep

RIVER: West Diversion  
REACH: Main RS: 1226

INPUT

Description: Magnolia Street

Bridge Data from Survey

Distance from Upstream XS = 26

Deck/Roadway Width = 35

Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates

num= 4

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0		9			12		9			63		9.1		
117		9.1												

Upstream Bridge Cross Section Data

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	8.4	9	6.8	18	5.9	23	5	25	1.9
35	1.1	46	2.1	47	5	54	6.5	73	7.6

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.01	23	.05	47	.1

Bank Sta: Left Right Coeff Contr. Expan.  
23 47 .1 .3

Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
71.25	73	9	F

Downstream Deck/Roadway Coordinates

num= 5

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0		9.2			27		9.1			83		9		
134		9.1			188		9.1							

Downstream Bridge Cross Section Data

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	6.7	24	8	43	5.6	49	1.4	58	0
70	.4	71	4.3	83	6.2	99	7.4	117	7

ExpandedLocal.rep

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .1 43 .05 71 .1

Bank Sta: Left Right Coeff Contr. Expan.  
 43 71 .1 .3

Ineffective Flow num= 2  
 Sta L Sta R Elev Permanent  
 0 34.75 9 F  
 81.25 117 9 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical  
 Maximum allowable submergence for weir flow = .98  
 Elevation at which weir flow begins =  
 Energy head used in spillway design =  
 Spillway height used in design =  
 Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name Shape Rise Span  
 Culvert #1 Box 4 6.5  
 FHWA Chart # 8 - flared wingwalls  
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.  
 Solution Criteria = Highest U.S. EG  
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef  
 Exit Loss Coef  
 1 26 35 .012 .012 0 .5

Number of Barrels = 3  
 Upstream Elevation = 2.5  
 Centerline Stations  
 Sta. Sta. Sta.  
 28 35 42  
 Downstream Elevation = 2.5  
 Centerline Stations  
 Sta. Sta. Sta.  
 51 58 65

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 1182

INPUT

ExpandedLocal.rep

Description:

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	6.7	24	8	43	5.6	50	1.4	58	0
61	.4	63	4.3	83	6.2	99	7.4	117	7

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	43	.05	63	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

43	63	1182	1182	1182	.1	.3
----	----	------	------	------	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	34.75	9	F
81.25	117	9	F

CROSS SECTION

RIVER: West Diversion  
 REACH: Main RS: 0

INPUT

Description:

Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	4.3	27	3.8	51	4.3	56	-.9	62	-.3
72	5	84	7.9	91	9.6	116	8.3	147	7.7

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	51	.05	72	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

51	72	0	0	0	.1	.3
----	----	---	---	---	----	----

STORAGE AREA: David Vey Pond  
 Volume Method : Area times depth  
 Area : 24  
 Min Elev : 15.6

STORAGE AREA: Haas Rd Pond  
Volume Method : Rating Curve

Elevation	Volume
12	0
13	27.43
14	55.15
15	83.17
16	111.48
17	140.09
18	169
19	198.21
20	227.72
21	257.53
22	287.65
23	318.07
24	348.8

STORAGE AREA: Tenant Pond  
Volume Method : Rating Curve

Elevation	Volume
6	0
7	45.243
8	91.035
9	137.38
10	184.28
11	231.735
12	279.749
13	328.323
14	377.46
15	427.161
16	477.428



HEC-RAS Plan: ABTb10Yr Profile: Max WS

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
West Diversion	Main	4743	Max WS	146.93	5.80	12.62		12.63	0.000091	0.76	192.27	43.91	0.06
West Diversion	Main	4742	Max WS	146.93	5.80	12.62		12.63	0.000091	0.76	192.26	43.90	0.06
West Diversion	Main	4716		Culvert									
West Diversion	Main	4688	Max WS	134.87	2.20	12.56		12.57	0.000018	0.49	277.34	83.55	0.03
West Diversion	Main	4687	Max WS	134.95	2.20	12.56		12.57	0.000010	0.58	259.19	749.15	0.04
West Diversion	Main	4060	Max WS	182.40	3.70	12.56		12.56	0.000000	0.05	5043.25	833.16	0.00
West Diversion	Main	3692	Max WS	210.40	2.90	12.55		12.56	0.000018	0.87	266.92	810.13	0.05
West Diversion	Main	3691	Max WS	210.48	2.90	12.55		12.59	0.000017	0.50	253.53	162.00	0.03
West Diversion	Main	3626		Culvert									
West Diversion	Main	3560	Max WS	210.32	3.50	11.55		11.58	0.000227	1.53	137.22	72.85	0.10
West Diversion	Main	2777	Max WS	265.23	2.50	11.44		11.48	0.000051	0.65	264.19	91.38	0.04
West Diversion	Main	2226	Max WS	296.97	2.60	11.40	6.58	11.46	0.000065	0.71	266.95	69.00	0.05
West Diversion	Main	2168		Bridge									
West Diversion	Main	2110	Max WS	299.24	2.40	11.41		11.43	0.000022	0.47	502.69	104.00	0.03
West Diversion	Main	1760	Max WS	320.86	1.40	11.40		11.43	0.000020	0.47	479.86	104.00	0.03
West Diversion	Main	1733		Culvert									
West Diversion	Main	1706	Max WS	276.67	0.30	11.18		11.19	0.000024	0.52	436.99	106.00	0.03
West Diversion	Main	1269	Max WS	296.50	1.10	11.16		11.19	0.000019	0.51	416.45	73.00	0.03
West Diversion	Main	1226		Culvert									
West Diversion	Main	1182	Max WS	296.50	0.00	11.16		11.17	0.000058	0.90	621.77	117.00	0.05
West Diversion	Main	0	Max WS	293.53	-0.90	11.11		11.12	0.000035	0.72	788.02	147.00	0.04
W14 Main	Upper	54648	Max WS	10.00	12.65	15.97		15.97	0.000005	0.15	64.65	23.64	0.02
W14 Main	Upper	54337	Max WS	9.96	12.60	15.97		15.97	0.000005	0.15	65.08	23.64	0.02
W14 Main	Upper	54284	Max WS	16.52	12.30	15.97		15.97	0.000026	0.40	40.89	17.48	0.04
W14 Main	Upper	54280		Culvert									
W14 Main	Upper	54178	Max WS	15.95	12.00	15.93		15.93	0.000025	0.40	40.04	16.85	0.04
W14 Main	Upper	54157	Max WS	18.60	12.40	15.93		15.93	0.000036	0.39	47.39	16.76	0.04
W14 Main	Upper	53993	Max WS	39.25	12.05	15.90		15.91	0.000129	0.76	51.80	18.84	0.08
W14 Main	Upper	53830	Max WS	59.88	11.70	15.85		15.87	0.000235	1.04	57.39	20.89	0.11
W14 Main	Upper	53666	Max WS	80.67	11.35	15.78		15.81	0.000327	1.26	63.97	22.77	0.13
W14 Main	Upper	53502	Max WS	101.50	11.00	15.71		15.74	0.000382	1.41	71.94	24.32	0.14
W14 Main	Upper	53222	Max WS	137.03	10.80	15.45		15.53	0.000908	2.22	61.60	17.69	0.21
W14 Main	Upper	53154	Max WS	145.66	10.50	15.45		15.48	0.000209	1.41	103.03	44.28	0.12
W14 Main	Upper	53150		Culvert									
W14 Main	Upper	53112	Max WS	145.61	10.40	15.32		15.37	0.000544	1.79	81.22	31.01	0.17
W14 Main	Upper	53064	Max WS	151.69	10.30	15.30		15.34	0.000459	1.53	98.89	32.11	0.15
W14 Main	Upper	52895	Max WS	173.04	9.76	15.21		15.25	0.000472	1.63	106.38	33.06	0.16
W14 Main	Upper	52726	Max WS	194.36	9.22	15.12		15.16	0.000471	1.70	114.66	33.97	0.16
W14 Main	Upper	52557	Max WS	215.63	8.68	15.03		15.07	0.000463	1.75	123.55	34.79	0.16
W14 Main	Upper	52388	Max WS	236.78	8.14	14.94		14.99	0.000446	1.78	133.31	35.57	0.16
W14 Main	Upper	52219	Max WS	257.84	7.60	14.86		14.91	0.000421	1.79	144.03	36.22	0.16
W14 Main	Upper	51937	Max WS	292.70	7.10	14.72		14.78	0.000412	1.85	157.96	37.18	0.16
W14 Main	Upper	51654	Max WS	327.40	6.60	14.59		14.65	0.000398	1.90	172.06	37.85	0.16
W14 Main	Upper	51372	Max WS	361.70	6.10	14.47		14.53	0.000381	1.94	186.24	38.31	0.16
W14 Main	Upper	51089	Max WS	395.86	5.60	14.35		14.41	0.000365	1.98	200.23	38.56	0.15

HEC-RAS Plan: ABTb10Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Upper	50807	Max WS	429.62	5.10	14.24		14.30	0.000349	2.01	214.05	39.26	0.15
W14 Main	Upper	50524	Max WS	463.21	4.60	14.13		14.20	0.000335	2.03	235.00	95.13	0.15
W14 Main	Upper	50235	Max WS	497.06	4.52	14.01		14.08	0.000408	2.21	227.48	90.97	0.16
W14 Main	Upper	49946	Max WS	530.67	4.44	13.85		13.94	0.000501	2.41	221.03	69.70	0.18
W14 Main	Upper	49656	Max WS	563.55	4.36	13.66		13.77	0.000621	2.63	214.73	48.39	0.20
W14 Main	Upper	49367	Max WS	587.96	4.28	13.43		13.55	0.000762	2.84	207.29	39.16	0.22
W14 Main	Upper	49078	Max WS	590.10	4.20	13.15		13.29	0.000880	2.97	198.40	38.52	0.23
W14 Main	Upper	49062	Max WS	596.78	4.10	13.20	7.33	13.28	0.000365	2.30	259.07	36.73	0.15
W14 Main	Upper	49060		Bridge									
W14 Main	Upper	48993	Max WS	592.55	4.10	13.15		13.23	0.000367	2.30	257.33	36.67	0.15
W14 Main	Upper	48951	Max WS	572.70	4.20	13.00		13.19	0.001139	3.52	162.81	27.93	0.26
W14 Main	Upper	48591	Max WS	583.68	3.40	12.84		12.90	0.000221	2.13	477.24	76.05	0.13
W14 Main	Upper	48412	Max WS	544.46	4.60	12.70		12.82	0.000685	2.82	259.98	76.85	0.20
W14 Main	Upper	48301	Max WS	529.98	4.60	12.62		12.74	0.000682	2.80	253.30	76.08	0.20
W14 Main	Mid	48154	Max WS	383.05	3.50	12.62		12.70	0.000398	2.25	191.41	102.51	0.17
W14 Main	Mid	47747	Max WS	345.91	4.60	12.51		12.56	0.000240	1.88	244.57	75.18	0.13
W14 Main	Mid	47604	Max WS	323.57	4.10	12.46		12.52	0.000274	1.94	302.12	724.51	0.15
W14 Main	Mid	47278	Max WS	303.54	4.10	12.42		12.44	0.000108	1.21	701.24	937.64	0.09
W14 Main	Mid	47072	Max WS	296.39	2.90	12.37		12.42	0.000187	1.67	265.46	921.63	0.12
W14 Main	Mid	46231	Max WS	278.75	3.10	12.17		12.22	0.000238	1.78	157.48	183.76	0.13
W14 Main	Mid	45970	Max WS	280.17	2.10	12.12		12.16	0.000201	1.65	170.43	174.40	0.12
W14 Main	Mid	45631	Max WS	285.14	2.90	12.04		12.09	0.000207	1.68	172.58	1133.98	0.12
W14 Main	Mid	45461	Max WS	288.93	1.10	12.00		12.05	0.000211	1.67	173.35	1115.80	0.12
W14 Main	Mid	45123	Max WS	298.59	1.20	11.89		11.95	0.000398	1.99	184.78	1277.64	0.16
W14 Main	Mid	44719	Max WS	312.15	1.30	11.68		11.76	0.000507	2.29	136.28	1247.48	0.18
W14 Main	Mid	44444	Max WS	321.10	1.60	11.66		11.67	0.000043	0.94	345.77	1154.71	0.06
W14 Main	Mid	44393	Max WS	322.78	1.60	11.65		11.67	0.000043	0.94	345.61	1154.56	0.06
W14 Main	Mid	44040	Max WS	334.16	1.60	11.64		11.65	0.000040	0.90	371.31	108.18	0.06
W14 Main	Mid	44008	Max WS	335.23	1.60	11.64		11.65	0.000015	0.69	485.51	152.19	0.04
W14 Main	Mid	44006		Culvert									
W14 Main	Mid	43938	Max WS	333.82	1.40	11.58		11.59	0.000020	0.82	406.40	111.12	0.05
W14 Main	Mid	43892	Max WS	335.09	1.60	11.56		11.58	0.000087	1.26	265.67	40.39	0.09
W14 Main	Mid	43729	Max WS	334.64	1.60	11.55		11.57	0.000087	1.26	265.09	40.35	0.09
W14 Main	Lower	43600	Max WS	486.58	1.60	11.55		11.60	0.000184	1.84	265.09	40.35	0.13
W14 Main	Lower	43256	Max WS	486.53	1.80	11.46		11.52	0.000272	1.99	244.29	46.38	0.15
W14 Main	Lower	43246	Max WS	487.26	-5.40	11.44	4.46	11.51	0.000328	2.11	230.64	33.97	0.14
W14 Main	Lower	43220		Bridge									
W14 Main	Lower	43216	Max WS	487.22	1.40	11.39		11.47	0.000333	2.33	209.42	33.84	0.16
W14 Main	Lower	43174	Max WS	490.29	0.70	11.39		11.46	0.000263	2.12	230.93	36.05	0.15
W14 Main	Lower	42773	Max WS	519.40	0.85	11.28		11.35	0.000248	2.08	249.63	39.38	0.15
W14 Main	Lower	42372	Max WS	548.40	1.00	11.18		11.25	0.000236	2.03	270.19	124.33	0.14
W14 Main	Lower	41911	Max WS	581.54	0.70	11.03		11.12	0.000305	2.31	276.50	209.47	0.16
W14 Main	Lower	41449	Max WS	614.49	0.40	10.83		10.94	0.000423	2.69	229.18	74.74	0.19
W14 Main	Lower	40987	Max WS	645.91	0.10	10.53		10.69	0.000628	3.18	203.22	38.22	0.22
W14 Main	Lower	40967	Max WS	648.01	-3.60	10.63		10.64	0.000019	1.00	647.75	120.02	0.05

HEC-RAS Plan: ABTb10Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Lower	40900		Culvert									
W14 Main	Lower	40862	Max WS	647.85	-5.10	10.61		10.63	0.000015	0.94	686.51	110.77	0.04
W14 Main	Lower	40798	Max WS	651.99	-1.20	10.55		10.63	0.000259	2.28	286.15	39.27	0.15
W14 Main	Lower	40311	Max WS	684.43	-0.80	10.35		10.46	0.000407	2.67	256.03	39.64	0.19
W14 Main	Lower	40149	Max WS	694.21	-0.40	10.23		10.37	0.000631	3.06	227.06	39.75	0.23
W14 Main	Lower	40114	Max WS	696.13	1.35	10.20	5.15	10.35	0.000567	3.10	224.83	42.23	0.20
W14 Main	Lower	40100		Bridge									
W14 Main	Lower	40082	Max WS	694.94	1.35	10.13		10.29	0.000580	3.12	222.85	42.10	0.20
W14 Main	Lower	40080	Max WS	696.40	-0.70	10.22		10.28	0.000174	1.97	352.79	43.81	0.12
W14 Main	Lower	40038	Max WS	697.58	-0.50	10.11		10.27	0.000693	3.17	220.04	37.46	0.23
W14 Main	Lower	39282	Max WS	736.91	-0.65	9.65		9.77	0.000553	2.85	258.69	47.02	0.21
W14 Main	Lower	39029	Max WS	751.70	-0.80	9.55		9.65	0.000413	2.41	311.33	1802.73	0.18
W14 Main	Lower	38269	Max WS	799.35	-1.10	8.99		9.13	0.000882	2.95	270.57	947.07	0.26
W14 Main	Lower	38016	Max WS	815.19	-1.40	8.77		8.93	0.000724	3.24	328.35	989.90	0.24
W14 Main	Lower	38000	Max WS	816.27	-0.30	8.80	3.87	8.91	0.000382	2.64	325.96	1001.56	0.18
W14 Main	Lower	37950		Bridge									
W14 Main	Lower	37931	Max WS	815.76	-0.90	8.72		8.81	0.000270	2.39	353.19	906.79	0.16
W14 Main	Lower	37889	Max WS	818.18	-1.40	8.63		8.79	0.000808	3.21	256.87	642.46	0.26
W14 Main	Lower	37118	Max WS	866.48	-1.37	8.10		8.23	0.000706	3.04	764.48	1060.98	0.24
W14 Main	Lower	36925	Max WS	878.67	-1.33	7.93		8.05	0.001113	3.00	654.81	796.01	0.29
W14 Main	Lower	36733	Max WS	890.81	-1.30	7.63		7.89	0.001152	4.06	219.39	512.06	0.31
W14 Main	Lower	36713	Max WS	892.07	-1.00	7.68	2.92	7.87	0.000583	3.49	255.97	524.84	0.23
W14 Main	Lower	36710		Bridge									
W14 Main	Lower	36698	Max WS	892.07	-0.60	7.67		7.85	0.000459	3.39	262.83	525.76	0.22
W14 Main	Lower	36680	Max WS	893.21	-1.20	7.67		7.84	0.000627	3.24	275.87	529.62	0.24
W14 Main	Lower	35677	Max WS	956.60	-1.60	6.70		6.96	0.001064	4.09	234.12	41.46	0.30
W14 Main	Lower	35426	Max WS	972.64	-2.00	6.39		6.68	0.001164	4.25	228.68	40.51	0.32
W14 Main	Lower	35169	Max WS	989.05	-3.20	6.34	0.58	6.45	0.000415	2.72	363.28	1047.38	0.19
W14 Main	Lower	35150		Bridge									
W14 Main	Lower	35131	Max WS	989.07	-3.20	6.37		6.42	0.000100	1.80	550.98	1109.25	0.11
W14 Main	Lower	34899	Max WS	1003.87	-3.10	6.34		6.38	0.000109	1.55	707.01	692.73	0.11
W14 Main	Lower	34046	Max WS	1058.26	-3.20	6.25		6.29	0.000116	1.61	810.18	938.90	0.11
W14 Main	Lower	33199	Max WS	1112.00	-4.00	6.16		6.19	0.000093	1.53	827.24	267.69	0.10
W14 Main	Lower	32566	Max WS	1151.75	-3.60	6.07		6.12	0.000131	1.72	681.03	153.52	0.12
W14 Main	Lower	31941	Max WS	1192.55	-3.60	5.98		6.03	0.000149	1.81	658.34	97.46	0.12
W14 Main	Lower	31180	Max WS	1241.69	-3.20	5.83		5.89	0.000203	2.05	605.47	94.17	0.14
W14 Main	Lower	30479	Max WS	1286.99	-3.40	5.67		5.74	0.000214	2.11	609.63	94.42	0.15
W14 Main	Lower	29754	Max WS	1333.46	-3.90	5.52		5.59	0.000199	2.07	642.89	96.52	0.14
W14 Main	Lower	28922	Max WS	1388.19	-4.10	5.34		5.41	0.000214	2.15	644.60	96.61	0.15
W14 Main	Lower	28661	Max WS	1406.48	-5.00	5.20	-0.18	5.32	0.000377	2.78	505.06	76.20	0.19
W14 Main	Lower	28567		Bridge									
W14 Main	Lower	28472	Max WS	1406.47	-4.60	4.75		4.87	0.000394	2.86	492.39	74.83	0.20
W14 Main	Lower	27798	Max WS	1450.81	-5.37	4.63		4.68	0.000147	1.82	799.06	2378.45	0.12
W14 Main	Lower	26970	Max WS	1503.86	-6.23	4.52		4.56	0.000129	1.76	853.62	119.57	0.12
W14 Main	Lower	26424	Max WS	1538.29	-6.80	4.37		4.46	0.000235	2.40	640.28	85.50	0.15

HEC-RAS Plan: ABTb10Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Lower	26220	Max WS	1551.82	-7.37	4.35		4.42	0.000157	2.11	735.32	87.53	0.13
W14 Main	Lower	26169	Max WS	1555.11	-7.37	4.34	-3.02	4.41	0.000158	2.12	734.55	87.50	0.13
W14 Main	Lower	26152	Bridge										
W14 Main	Lower	26131	Max WS	1555.11	-7.37	4.33		4.40	0.000159	2.12	733.18	87.46	0.13
W14 Main	Lower	26038	Max WS	1561.09	-7.37	4.31		4.38	0.000161	2.13	731.75	87.41	0.13
W14 Main	Lower	25159	Max WS	1619.17	-7.26	4.14		4.22	0.000197	2.20	736.88	98.54	0.14
W14 Main	Lower	25107	Max WS	1622.24	-4.20	4.10	-1.74	4.21	0.000302	2.64	614.00	74.00	0.16
W14 Main	Lower	25086	Bridge										
W14 Main	Lower	25080	Max WS	1622.13	-4.20	4.08		4.19	0.000304	2.65	612.44	74.00	0.16
W14 Main	Lower	24990	Max WS	1628.11	-5.19	4.06		4.16	0.000269	2.48	662.51	101.63	0.17
W14 Main	Lower	22266	Max WS	1811.77	-6.89	3.25		3.36	0.000306	2.69	673.64	96.20	0.18
W14 Main	Lower	21014	Max WS	1898.09	-6.89	2.75		2.89	0.000423	3.03	626.60	94.06	0.21
W14 Main	Lower	19620	Max WS	14.94	-6.89	2.00	-6.40	2.00	0.000000	0.03	556.82	91.71	0.00
W-15 Main	Upper	41958	Max WS	10.00	23.20	26.10		26.10	0.000023	0.20	50.43	29.63	0.03
W-15 Main	Upper	41911	Max WS	10.00	23.10	26.10		26.10	0.000019	0.19	51.36	27.34	0.03
W-15 Main	Upper	41876	Culvert										
W-15 Main	Upper	41841	Max WS	10.00	21.40	26.10		26.10	0.000003	0.11	92.48	34.13	0.01
W-15 Main	Upper	40226	Max WS	68.80	20.70	26.00		26.01	0.000100	0.67	145.55	274.43	0.06
W-15 Main	Upper	39062	Max WS	110.58	21.10	25.88		25.88	0.000116	0.71	259.67	396.05	0.07
W-15 Main	Upper	38866	Max WS	117.59	20.60	25.85		25.86	0.000134	0.77	152.80	218.34	0.07
W-15 Main	Upper	38831	Culvert										
W-15 Main	Upper	38796	Max WS	117.47	19.90	25.70		25.71	0.000183	0.94	125.29	195.95	0.09
W-15 Main	Upper	36942	Max WS	173.70	19.70	25.23		25.25	0.000326	1.20	321.48	551.72	0.11
W-15 Main	Upper	36875	Culvert										
W-15 Main	Upper	36808	Max WS	171.25	19.60	25.10		25.13	0.000663	1.69	180.35	271.22	0.16
W-15 Main	Upper	36792	Max WS	170.26	19.60	25.02	22.21	25.06	0.000777	1.81	159.56	253.06	0.17
W-15 Main	Upper	36741	Bridge										
W-15 Main	Upper	36690	Max WS	169.67	19.90	25.00		25.02	0.000365	1.23	287.52	482.80	0.12
W-15 Main	Upper	36328	Max WS	175.63	19.50	24.92		24.92	0.000173	0.92	537.49	757.95	0.08
W-15 Main	Upper	35441	Max WS	196.50	18.60	24.82		24.82	0.000055	0.55	1063.53	1347.73	0.04
W-15 Main	Upper	34175	Max WS	229.62	18.40	23.75		23.86	0.001753	2.92	148.04	487.19	0.26
W-15 Main	Upper	34100	Lat Struct										
W-15 Main	Upper	33708	Max WS	241.88	17.90	23.18		23.22	0.001038	2.22	271.96	439.01	0.19
W-15 Main	Upper	33500	Lat Struct										
W-15 Main	Upper	33031	Max WS	107.43	17.40	22.70		22.73	0.000555	1.56	121.73	241.48	0.13
W-15 Main	Upper	33000	Lat Struct										
W-15 Main	Upper	32178	Max WS	77.81	16.80	22.43		22.44	0.000153	0.84	133.02	197.44	0.08
W-15 Main	Upper	32158	Max WS	78.41	16.80	22.43		22.44	0.000152	0.84	111.82	195.84	0.08
W-15 Main	Upper	32123	Culvert										
W-15 Main	Upper	32088	Max WS	77.54	17.00	22.33		22.34	0.000146	0.75	103.97	91.30	0.07
W-15 Main	Upper	31779	Max WS	86.98	16.80	22.27		22.29	0.000192	0.98	144.71	321.72	0.08
W-15 Main	Upper	30955	Max WS	112.79	16.20	22.04		22.06	0.000348	1.31	128.80	134.04	0.11
W-15 Main	Upper	29994	Max WS	145.46	15.60	21.56		21.60	0.000598	1.67	92.54	185.72	0.15
W-15 Main	Upper	28993	Max WS	181.78	15.40	21.19		21.25	0.000068	1.87	100.78	39.79	0.17
W-15 Main	Upper	28463	Max WS	201.17	15.20	21.16		21.20	0.000053	1.63	128.61	49.27	0.15

HEC-RAS Plan: ABTb10Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W-15 Main	Upper	27930	Max WS	220.45	14.40	21.10	17.19	21.16	0.000077	2.00	110.13	27.71	0.18
W-15 Main	Upper	27864	Bridge										
W-15 Main	Upper	27797	Max WS	220.38	14.30	21.08		21.14	0.000072	1.92	114.71	29.83	0.17
W-15 Main	Upper	27008	Max WS	245.77	13.60	20.74		20.80	0.000810	2.17	239.91	330.98	0.17
W-15 Main	Upper	26388	Max WS	264.55	12.60	20.37		20.41	0.000441	1.67	415.82	644.47	0.12
W-15 Main	Upper	25748	Max WS	284.40	12.20	20.03		20.09	0.000605	2.05	212.89	285.97	0.15
W-15 Main	Upper	25098	Max WS	305.05	9.40	19.76		19.79	0.000284	1.40	635.71	1078.29	0.10
W-15 Main	Upper	24312	Max WS	327.61	11.10	19.53		19.56	0.000328	1.52	360.36	370.68	0.11
W-15 Main	Upper	23662	Max WS	342.65	9.20	19.30	12.79	19.34	0.000326	1.73	214.05	118.43	0.11
W-15 Main	Upper	23634	Bridge										
W-15 Main	Upper	23606	Max WS	340.20	9.60	19.23		19.27	0.000245	1.52	223.90	50.67	0.10
W-15 Main	Upper	23462	Max WS	337.13	10.80	19.16		19.21	0.000526	1.98	186.21	56.45	0.15
W-15 Main	Mid	22961	Max WS	250.08	10.60	19.16		19.19	0.000283	1.46	199.83	112.81	0.10
W-15 Main	Mid	22285	Max WS	246.68	10.40	18.98	13.26	19.01	0.000248	1.44	312.53	720.64	0.10
W-15 Main	Mid	22250	Bridge										
W-15 Main	Mid	22227	Max WS	246.18	10.50	18.96		18.99	0.000213	1.34	257.65	506.58	0.10
W-15 Main	Mid	21477	Max WS	290.00	11.21	18.84		18.86	0.000118	0.89	325.62	68.34	0.07
W-15 Main	Mid	21400	Culvert										
W-15 Main	Mid	21329	Max WS	288.14	11.10	18.76		18.77	0.000116	0.90	321.75	67.74	0.07
W-15 Main	Mid	21028	Max WS	306.68	10.00	18.67		18.70	0.000306	1.53	201.36	94.93	0.12
W-15 Main	Mid	21000	Culvert										
W-15 Main	Mid	20870	Max WS	305.18	10.65	18.57		18.61	0.000316	1.67	182.94	93.65	0.12
W-15 Main	Mid	20827	Max WS	307.79	10.54	18.54		18.60	0.000432	2.23	236.82	145.12	0.15
W-15 Main	Mid	20700	Culvert										
W-15 Main	Mid	20648	Max WS	306.97	10.48	18.48		18.55	0.000446	2.25	207.61	140.12	0.15
W-15 Main	Mid	19997	Max WS	349.27	8.70	18.12		18.18	0.000641	2.03	171.85	163.77	0.16
W-15 Main	Mid	19018	Max WS	416.50	8.40	17.23		17.33	0.001034	2.56	162.74	31.72	0.20
W-15 Main	Mid	18298	Max WS	468.63	7.50	15.98		16.16	0.002111	3.42	136.87	27.61	0.27
W-15 Main	Mid	17456	Max WS	535.61	6.40	14.83		14.90	0.000810	2.51	290.44	91.12	0.18
W-15 Main	Mid	17221	Max WS	554.80	6.53	14.61		14.68	0.000968	2.20	251.64	65.28	0.20
W-15 Main	Mid	17201	Max WS	556.41	6.53	14.58	10.36	14.66	0.000988	2.22	250.26	65.09	0.20
W-15 Main	Mid	17091	Bridge										
W-15 Main	Mid	16981	Max WS	556.22	6.53	14.02		14.12	0.001473	2.59	214.85	59.89	0.24
W-15 Main	Mid	16926	Max WS	560.76	5.70	14.03	9.15	14.07	0.000352	1.64	341.85	63.77	0.12
W-15 Main	Mid	16901	Bridge										
W-15 Main	Mid	16876	Max WS	560.52	6.60	13.59		13.81	0.002471	3.77	148.62	32.50	0.31
W-15 Main	Mid	16482	Max WS	558.51	4.39	12.63		12.83	0.002543	3.65	190.29	140.65	0.31
W-15 Main	Upper1	16088	Max WS	299.36	4.39	12.63		12.69	0.000729	1.95	191.93	144.84	0.17
W-15 Main	Upper1	15793	Max WS	239.42	4.39	12.45		12.49	0.000539	1.66	166.75	114.78	0.14
W-15 Main	Upper1	15693	Max WS	238.86	4.39	12.39		12.44	0.000559	1.68	160.49	106.87	0.14
W-15 Main	Upper1	15299	Max WS	237.68	4.31	12.24	7.25	12.27	0.000275	1.50	193.16	208.21	0.11
W-15 Main	Upper1	15280	Bridge										
W-15 Main	Upper1	15262	Max WS	237.45	4.15	12.21		12.25	0.000356	1.51	161.00	63.35	0.12
W-15 Main	Upper1	15261	Max WS	237.40	3.81	12.21		12.25	0.000446	1.72	155.45	61.38	0.13
W-15 Main	New	800	Max WS	53.24	6.00	12.43	7.47	12.45	0.000663	1.05	50.85		0.07









HEC-RAS Plan: ABTb10Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Gum Bayou	Upper	10682	Max WS	526.18	2.40	9.94		10.00	0.000321	1.92	274.33	4579.61	0.13
Gum Bayou	Upper	10555	Max WS	528.65	4.10	9.93		9.94	0.000058	0.68	845.97	4571.40	0.05
Gum Bayou	Upper	10046	Max WS	528.57	3.70	9.92		9.92	0.000004	0.20	7301.74	4555.67	0.01
Gum Bayou	Lower	9910	Max WS	672.89	3.90	9.92		9.92	0.000007	0.22	7185.23	4555.67	0.02
Gum Bayou	Lower	9149	Max WS	672.80	1.64	9.92		9.92	0.000003	0.17	8934.65	3702.42	0.01
Gum Bayou	Lower	8649	Max WS	787.05	0.76	9.91		9.91	0.000005	0.24	7766.42	3322.19	0.02
Gum Bayou	Lower	8532	Max WS	813.79	0.76	9.91		9.91	0.000006	0.24	7764.36	3322.18	0.02
Gum Bayou	Lower	7891	Max WS	960.26	0.70	9.91		9.91	0.000003	0.21	8774.06	2856.85	0.01
Gum Bayou	Lower	7813	Max WS	978.08	0.50	9.91		9.91	0.000003	0.18	8223.23	2920.42	0.01
Gum Bayou	Lower	7775		Culvert									
Gum Bayou	Lower	7737	Max WS	931.06	1.30	7.33		7.82	0.006740	5.61	166.08	1381.70	0.53
Gum Bayou	Lower	7656	Max WS	931.78	0.60	7.14		7.14	0.000021	0.41	3623.35	1590.99	0.03
Gum Bayou	Lower	2746	Max WS	15.35	-3.37	5.80	-2.80	5.80	0.000000	0.03	461.89	91.46	0.00
Doubloon	to Marsh	19396	Max WS	566.08	-2.36	6.62		6.62	0.000057	0.81	1255.36	533.49	0.05
Doubloon	to Marsh	18926	Max WS	565.19	-1.55	6.37		6.51	0.000741	2.90	194.61	468.95	0.20
Doubloon	to Marsh	18916		Culvert									
Doubloon	to Marsh	18906	Max WS	547.30	-1.55	5.23		5.40	0.001287	3.38	161.76	335.32	0.25
Doubloon	to Marsh	18661	Max WS	541.85	-1.72	5.13		5.13	0.000040	0.60	1393.73	1073.88	0.04
Doubloon	to Marsh	18361	Max WS	735.40	-1.93	5.11		5.12	0.000048	0.66	1838.20	1068.29	0.05
Doubloon	to Marsh	18061	Max WS	736.43	-2.14	5.10		5.10	0.000036	0.59	2193.91	1065.36	0.04
Doubloon	to Marsh	17782	Max WS	737.84	-2.51	5.09		5.10	0.000026	0.51	3116.72	1473.94	0.04
Doubloon	to Marsh	17504	Max WS	736.56	-2.88	5.08		5.09	0.000045	0.68	2048.27	1884.04	0.05
Doubloon	to Marsh	17225	Max WS	854.78	-3.25	4.97	0.11	5.04	0.000491	2.27	394.17	2293.02	0.16
Doubloon	to Marsh	17207		Bridge									
Doubloon	to Marsh	17188	Max WS	829.01	-3.25	4.87		4.95	0.000514	2.30	368.76	2118.92	0.16
Doubloon	to Marsh	16717	Max WS	810.35	-2.92	4.77		4.78	0.000115	1.07	1296.89	2081.02	0.08
Doubloon	to Marsh	16246	Max WS	811.31	-2.59	4.73		4.73	0.000075	0.85	2001.87	2255.12	0.06
Doubloon	to Marsh	15776	Max WS	816.43	-2.25	4.70		4.70	0.000068	0.78	1987.74	2171.31	0.06
Doubloon	to Marsh	15305	Max WS	822.19	-1.92	4.66		4.67	0.000065	0.75	2139.10	1991.33	0.06
Doubloon	to Marsh	14834	Max WS	828.73	-1.59	4.63		4.64	0.000071	0.76	2157.27	1909.45	0.06
Doubloon	to Marsh	14363	Max WS	835.72	-1.26	4.60		4.60	0.000074	0.74	2118.90	1889.16	0.06
Doubloon	to Marsh	13893	Max WS	843.58	-0.93	4.56		4.57	0.000079	0.74	2067.05	1887.79	0.06
Doubloon	to Marsh	13422	Max WS	852.07	-0.59	4.52		4.53	0.000086	0.74	2004.46	1948.19	0.06
Doubloon	to Marsh	12951	Max WS	861.09	-0.26	4.48		4.49	0.000097	0.75	1929.27	1950.10	0.07
Doubloon	to Marsh	12480	Max WS	870.17	0.07	4.43		4.44	0.000114	0.78	1841.41	2024.27	0.07
Doubloon	to Marsh	12009	Max WS	879.48	0.40	4.37		4.38	0.000140	0.81	1742.80	2132.61	0.08
Doubloon	to Marsh	11539	Max WS	888.94	0.74	4.29		4.30	0.000179	0.86	1627.44	2145.63	0.08
Doubloon	to Marsh	11068	Max WS	898.41	1.07	4.19		4.20	0.000259	0.95	1493.37	2286.93	0.10
Doubloon	to Marsh	10597	Max WS	907.58	1.40	4.03		4.05	0.000406	1.07	1318.17	2280.74	0.12
Doubloon	to Marsh	10500	Max WS	909.72	1.37	4.01		4.02	0.000159	0.68	1959.78	1285.98	0.08
Doubloon	to Marsh	10108	Max WS	918.61	1.27	3.95		3.95	0.000179	0.71	1884.00	1268.39	0.08
Doubloon	to Marsh	9619	Max WS	929.79	1.14	3.85		3.85	0.000223	0.83	1686.81	1205.63	0.09
Doubloon	to Marsh	9130	Max WS	940.93	1.02	3.74		3.74	0.000232	0.88	1571.73	1039.41	0.10
Doubloon	to Marsh	8641	Max WS	952.20	0.89	3.63		3.64	0.000195	0.93	1560.74	965.35	0.11
Doubloon	to Marsh	8152	Max WS	963.52	0.77	3.54		3.55	0.000192	0.92	1592.06	982.47	0.10

HEC-RAS Plan: ABTb10Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Doubloon	to Marsh	7663	Max WS	974.91	0.64	3.44		3.45	0.000189	0.92	1635.05	1017.99	0.10
Doubloon	to Marsh	7231	Max WS	984.99	0.54	3.36		3.37	0.000211	0.96	1535.55	937.02	0.11
Doubloon	to Marsh	6800	Max WS	995.05	0.44	3.26		3.27	0.000239	1.02	1450.57	893.65	0.12
Doubloon	to Marsh	6368	Max WS	1005.12	0.34	3.15		3.16	0.000278	1.09	1399.22	937.74	0.13
Doubloon	to Marsh	5937	Max WS	1015.13	0.24	3.02		3.04	0.000293	1.10	1357.03	864.07	0.13
Doubloon	to Marsh	5505	Max WS	1025.11	0.14	2.88		2.90	0.000344	1.18	1208.06	708.88	0.14
Doubloon	to Marsh	5083	Max WS	1038.35	0.01	2.73		2.74	0.000262	1.01	1580.84	1045.52	0.12
Doubloon	to Marsh	4661	Max WS	1051.54	-0.11	2.60		2.61	0.000226	0.93	1861.00	1345.05	0.11
Doubloon	to Marsh	4239	Max WS	1064.73	-0.24	2.49		2.50	0.000207	0.88	2070.50	1616.23	0.11
Doubloon	to Marsh	3745	Max WS	1075.78	-0.34	2.39		2.40	0.000208	0.88	2135.98	1732.54	0.11
Doubloon	to Marsh	3250	Max WS	1087.12	-0.44	2.29		2.30	0.000190	0.83	2232.41	1736.39	0.10
Doubloon	to Marsh	2756	Max WS	1098.42	-0.54	2.20		2.21	0.000171	0.79	2373.76	1817.64	0.10
Doubloon	to Marsh	2262	Max WS	1109.73	-0.64	2.13		2.13	0.000150	0.75	2536.66	1908.71	0.09
Doubloon	to Marsh	1767	Max WS	1121.05	-0.74	2.06		2.06	0.000130	0.70	2707.49	1963.97	0.08
Doubloon	to Marsh	1273	Max WS	5.00	-0.84	2.00	-0.54	2.00	0.000000	0.00	2886.29	2040.32	0.00
Doubloon	to Pearl	15291	Max WS	887.18	-3.39	6.62		6.63	0.000127	1.25	1278.91	533.49	0.08
Doubloon	to Pearl	14393	Max WS	872.47	-3.39	6.48		6.51	0.000172	1.43	1079.63	533.83	0.09
Doubloon	to Pearl	13496	Max WS	933.46	-3.39	6.32		6.33	0.000113	1.14	1474.10	576.18	0.07
Doubloon	to Pearl	12598	Max WS	948.19	-3.39	6.13		6.17	0.000269	1.74	760.19	244.45	0.11
Doubloon	to Pearl	11636	Max WS	964.99	-3.94	5.98		5.99	0.000083	0.96	2031.95	935.86	0.06
Doubloon	to Pearl	10674	Max WS	962.70	-4.49	5.93		5.93	0.000042	0.69	2328.41	1195.51	0.05
Doubloon	to Pearl	9711	Max WS	1112.73	-5.04	5.88		5.88	0.000063	0.86	2055.34	846.94	0.06
Doubloon	to Pearl	8749	Max WS	1152.83	-5.60	5.66		5.72	0.000316	1.91	706.91	221.29	0.13
Doubloon	to Pearl	7787	Max WS	1190.43	-6.15	5.34		5.40	0.000348	1.97	626.19	127.00	0.13
Doubloon	to Pearl	6824	Max WS	1232.04	-6.70	4.99		5.05	0.000367	1.98	629.20	659.69	0.13
Doubloon	to Pearl	5862	Max WS	1271.86	-7.25	4.62		4.68	0.000388	1.99	639.27	101.38	0.14
Doubloon	to Pearl	4900	Max WS	1308.67	-7.80	4.41		4.44	0.000124	1.40	1115.07	711.06	0.10
Doubloon	to Pearl	4420	Max WS	1328.46	-7.88	4.35		4.38	0.000135	1.47	1071.99	767.56	0.10
Doubloon	to Pearl	3940	Max WS	1348.25	-7.96	4.28		4.31	0.000146	1.54	1040.09	705.35	0.11
Doubloon	to Pearl	3460	Max WS	1368.01	-8.04	4.21		4.24	0.000159	1.61	1016.29	715.31	0.11
Doubloon	to Pearl	2980	Max WS	1387.82	-8.12	4.16		4.18	0.000093	1.24	1541.48	766.69	0.08
Doubloon	to Pearl	2500	Max WS	1407.58	-8.20	4.12		4.13	0.000095	1.27	1560.87	845.93	0.09
Doubloon	to Pearl	2020	Max WS	1427.36	-8.29	4.07		4.09	0.000100	1.31	1582.97	934.72	0.09
Doubloon	to Pearl	1540	Max WS	1447.16	-8.37	4.02		4.04	0.000096	1.29	1671.32	987.92	0.09
Doubloon	to Pearl	1060	Max WS	1467.06	-8.45	3.98		4.00	0.000082	1.20	1730.99	1050.43	0.08
Doubloon	to Pearl	580	Max WS	1486.98	-8.53	3.95		3.96	0.000079	1.17	1801.73	1096.89	0.08
Doubloon	to Pearl	100	Max WS	10.00	-8.61	3.91	-7.67	3.91	0.000000	0.01	1880.99	1140.95	0.00
Bayou Vincent	Upper	6072	Max WS	2789.36	5.31	17.90		18.13	0.000938	4.05	925.97	190.00	0.23
Bayou Vincent	Upper	5509	Max WS	2787.73	3.64	17.54		17.69	0.000549	3.37	1175.38	190.00	0.18
Bayou Vincent	Upper	5227	Max WS	2822.70	2.81	17.42		17.55	0.000434	3.12	1309.81	190.00	0.16
Bayou Vincent	Upper	5174	Max WS	2829.36	3.00	17.43	9.49	17.51	0.000355	2.24	1307.43	170.00	0.14
Bayou Vincent	Upper	5166		Bridge									
Bayou Vincent	Upper	5158	Max WS	2828.45	3.00	17.22		17.30	0.000386	2.30	1271.37	170.00	0.14
Bayou Vincent	Upper	4963	Max WS	2834.49	3.00	17.20		17.28	0.000391	2.31	1267.88	170.00	0.14
Bayou Vincent	Upper	4083	Max WS	2943.87	3.52	16.52		16.67	0.001025	3.23	1063.93	555.80	0.23

HEC-RAS Plan: ABTb10Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Bayou Vincent	Upper	3643	Max WS	2998.74	3.78	15.23		15.62	0.003913	5.12	633.34	149.30	0.42
Bayou Vincent	Upper	3590	Max WS	3005.36	4.30	15.31	10.33	15.40	0.000600	2.49	1769.08	1000.00	0.17
Bayou Vincent	Upper	3582	Bridge										
Bayou Vincent	Upper	3574	Max WS	3005.32	4.30	15.28		15.37	0.000618	2.51	1730.98	1000.00	0.18
Bayou Vincent	Upper	3379	Max WS	3011.94	2.78	15.06		15.34	0.002370	4.32	762.06	160.11	0.33
Bayou Vincent	Upper	2851	Max WS	3077.56	1.84	13.79		14.09	0.002350	4.58	804.22	177.65	0.34
Bayou Vincent	Upper	1795	Max WS	3207.98	-0.05	11.71		11.93	0.001760	4.85	1903.18	1051.58	0.30
Bayou Vincent	Upper	1267	Max WS	3207.85	-0.99	11.11		11.15	0.000816	3.41	3428.98	1290.76	0.19
Bayou Vincent	Lower	1214	Max WS	3501.38	-0.99	11.11		11.16	0.000973	3.73	3428.98	1290.76	0.21
Bayou Vincent	Lower	1126	Max WS	3501.32	-1.07	11.03		11.08	0.000977	3.73	3422.62	1290.43	0.21
Bayou Vincent	Lower	686	Max WS	3503.70	-1.49	10.60		10.65	0.000986	3.75	3413.31	1289.95	0.21
Bayou Vincent	Lower	86	Max WS	3507.03	-3.07	10.22		10.24	0.000326	2.32	5013.46	1350.00	0.12
Bayou Vincent	Lower	0	Max WS	15.06	-3.30	10.20	-2.56	10.20	0.000000	0.01	5290.82	1350.00	0.00

HEC-RAS Plan: ABTb4v\_noVey-Has Profile: Max WS

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
West Diversion	Main	4743	Max WS	156.58	5.80	13.07		13.08	0.000077	0.74	210.49	72.88	0.06
West Diversion	Main	4742	Max WS	156.58	5.80	13.07		13.08	0.000077	0.74	210.49	72.88	0.06
West Diversion	Main	4716		Culvert									
West Diversion	Main	4688	Max WS	152.66	2.20	12.99		12.99	0.000019	0.52	292.05	111.31	0.03
West Diversion	Main	4687	Max WS	152.60	2.20	12.99		12.99	0.000010	0.61	274.76	751.63	0.04
West Diversion	Main	4060	Max WS	205.02	3.70	12.99		12.99	0.000000	0.05	5399.09	835.78	0.00
West Diversion	Main	3692	Max WS	235.83	2.90	12.98		12.99	0.000020	0.93	281.28	812.74	0.05
West Diversion	Main	3691	Max WS	235.91	2.90	12.97		13.03	0.000018	0.53	267.01	162.00	0.03
West Diversion	Main	3626		Culvert									
West Diversion	Main	3560	Max WS	235.91	3.50	11.71		11.75	0.000263	1.68	140.54	74.08	0.11
West Diversion	Main	2777	Max WS	300.86	2.50	11.59		11.63	0.000056	0.68	277.95	92.35	0.05
West Diversion	Main	2226	Max WS	318.89	2.60	11.54	6.73	11.61	0.000066	0.73	276.90	69.00	0.05
West Diversion	Main	2168		Bridge									
West Diversion	Main	2110	Max WS	333.46	2.40	11.56		11.58	0.000025	0.50	517.89	104.00	0.03
West Diversion	Main	1760	Max WS	342.29	1.40	11.55		11.58	0.000021	0.48	494.94	104.00	0.03
West Diversion	Main	1733		Culvert									
West Diversion	Main	1706	Max WS	320.31	0.30	11.40		11.42	0.000027	0.56	460.80	106.00	0.03
West Diversion	Main	1269	Max WS	344.12	1.10	11.39		11.42	0.000022	0.56	432.68	73.00	0.03
West Diversion	Main	1226		Culvert									
West Diversion	Main	1182	Max WS	344.12	0.00	11.39		11.40	0.000070	1.01	647.83	117.00	0.06
West Diversion	Main	0	Max WS	341.39	-0.90	11.32		11.33	0.000043	0.81	819.12	147.00	0.05
W14 Main	Upper	54648	Max WS	10.00	12.65	16.27		16.27	0.000004	0.14	104.66	163.86	0.01
W14 Main	Upper	54337	Max WS	9.98	12.60	16.27		16.27	0.000004	0.13	104.94	163.69	0.01
W14 Main	Upper	54284	Max WS	17.25	12.30	16.27		16.27	0.000021	0.39	44.53	176.50	0.04
W14 Main	Upper	54280		Culvert									
W14 Main	Upper	54178	Max WS	16.87	12.00	16.23		16.23	0.000021	0.39	43.66	153.81	0.04
W14 Main	Upper	54157	Max WS	19.80	12.40	16.23		16.23	0.000029	0.37	78.73	146.56	0.04
W14 Main	Upper	53993	Max WS	42.64	12.05	16.21		16.22	0.000107	0.72	80.57	148.63	0.07
W14 Main	Upper	53830	Max WS	65.36	11.70	16.18		16.19	0.000198	1.00	82.23	150.05	0.10
W14 Main	Upper	53666	Max WS	88.22	11.35	16.12		16.15	0.000280	1.22	83.38	149.70	0.12
W14 Main	Upper	53502	Max WS	111.17	11.00	16.06		16.09	0.000334	1.38	86.98	139.40	0.14
W14 Main	Upper	53222	Max WS	150.34	10.80	15.83		15.91	0.000811	2.20	69.04	27.48	0.20
W14 Main	Upper	53154	Max WS	160.04	10.50	15.83		15.87	0.000190	1.43	112.18	46.16	0.12
W14 Main	Upper	53150		Culvert									
W14 Main	Upper	53112	Max WS	159.70	10.40	15.68		15.73	0.000464	1.77	90.02	31.92	0.16
W14 Main	Upper	53064	Max WS	166.55	10.30	15.67		15.71	0.000395	1.50	110.99	33.24	0.14
W14 Main	Upper	52895	Max WS	190.64	9.76	15.59		15.63	0.000413	1.60	119.20	34.34	0.15
W14 Main	Upper	52726	Max WS	214.79	9.22	15.51		15.55	0.000421	1.68	128.17	35.41	0.16
W14 Main	Upper	52557	Max WS	238.94	8.68	15.42		15.47	0.000422	1.74	137.67	36.42	0.16
W14 Main	Upper	52388	Max WS	263.01	8.14	15.34		15.39	0.000416	1.78	147.95	37.38	0.16
W14 Main	Upper	52219	Max WS	286.92	7.60	15.26		15.31	0.000402	1.80	159.09	38.24	0.16
W14 Main	Upper	51937	Max WS	326.66	7.10	15.13		15.18	0.000401	1.88	173.48	39.04	0.16
W14 Main	Upper	51654	Max WS	366.12	6.60	15.00		15.06	0.000394	1.95	187.84	39.56	0.16
W14 Main	Upper	51372	Max WS	404.39	6.10	14.88		14.94	0.000383	2.00	202.10	39.88	0.16
W14 Main	Upper	51089	Max WS	441.75	5.60	14.75		14.82	0.000371	2.04	216.06	40.00	0.16

HEC-RAS Plan: ABTb4v\_noVey-Has Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Upper	50807	Max WS	478.11	5.10	14.64		14.71	0.000357	2.08	237.57	111.79	0.15
W14 Main	Upper	50524	Max WS	514.35	4.60	14.54		14.60	0.000333	2.09	307.78	244.35	0.15
W14 Main	Upper	50235	Max WS	552.52	4.52	14.41		14.49	0.000403	2.27	307.60	302.37	0.16
W14 Main	Upper	49946	Max WS	587.34	4.44	14.26		14.36	0.000486	2.46	296.44	285.96	0.18
W14 Main	Upper	49656	Max WS	619.87	4.36	14.09		14.20	0.000587	2.65	285.29	260.77	0.19
W14 Main	Upper	49367	Max WS	649.59	4.28	13.88		14.00	0.000718	2.87	265.41	231.32	0.21
W14 Main	Upper	49078	Max WS	664.89	4.20	13.61		13.75	0.000877	3.07	222.71	178.77	0.23
W14 Main	Upper	49062	Max WS	671.76	4.10	13.65	7.55	13.74	0.000387	2.44	275.87	37.24	0.16
W14 Main	Upper	49060		Bridge									
W14 Main	Upper	48993	Max WS	666.18	4.10	13.60		13.69	0.000388	2.43	273.99	37.18	0.16
W14 Main	Upper	48951	Max WS	643.99	4.20	13.44		13.65	0.001181	3.67	175.38	28.88	0.26
W14 Main	Upper	48591	Max WS	652.56	3.40	13.29		13.35	0.000229	2.25	512.35	82.42	0.13
W14 Main	Upper	48412	Max WS	613.11	4.60	13.14		13.27	0.000692	2.91	294.51	80.27	0.20
W14 Main	Upper	48301	Max WS	566.83	4.60	13.07		13.18	0.000619	2.74	287.88	79.53	0.19
W14 Main	Mid	48154	Max WS	410.24	3.50	13.07		13.14	0.000345	2.17	239.16	111.00	0.16
W14 Main	Mid	47747	Max WS	374.37	4.60	12.97		13.02	0.000222	1.86	279.88	78.75	0.13
W14 Main	Mid	47604	Max WS	353.07	4.10	12.94		12.98	0.000208	1.75	563.65	948.59	0.13
W14 Main	Mid	47278	Max WS	323.00	4.10	12.90		12.91	0.000102	1.22	1037.12	1339.80	0.09
W14 Main	Mid	47072	Max WS	324.51	2.90	12.86		12.90	0.000153	1.56	532.39	1328.75	0.11
W14 Main	Mid	46231	Max WS	309.54	3.10	12.69		12.74	0.000227	1.80	187.91	426.04	0.13
W14 Main	Mid	45970	Max WS	314.52	2.10	12.65		12.69	0.000201	1.69	199.55	424.12	0.12
W14 Main	Mid	45631	Max WS	321.15	2.90	12.57		12.62	0.000201	1.73	206.77	1190.39	0.12
W14 Main	Mid	45461	Max WS	326.36	1.10	12.53		12.58	0.000217	1.73	193.50	1159.86	0.12
W14 Main	Mid	45123	Max WS	336.39	1.20	12.42		12.48	0.000362	1.99	217.66	1301.87	0.16
W14 Main	Mid	44719	Max WS	350.26	1.30	12.22		12.30	0.000493	2.31	157.88	1323.96	0.18
W14 Main	Mid	44444	Max WS	360.65	1.60	12.20		12.21	0.000043	0.97	389.93	1190.79	0.06
W14 Main	Mid	44393	Max WS	362.56	1.60	12.19		12.21	0.000043	0.98	389.69	1190.63	0.06
W14 Main	Mid	44040	Max WS	375.82	1.60	12.18		12.19	0.000041	0.94	401.84	128.88	0.06
W14 Main	Mid	44008	Max WS	377.03	1.60	12.18		12.19	0.000015	0.73	514.95	174.08	0.04
W14 Main	Mid	44006		Culvert									
W14 Main	Mid	43938	Max WS	376.97	1.40	12.10		12.11	0.000021	0.88	429.60	127.04	0.05
W14 Main	Mid	43892	Max WS	378.69	1.60	12.08		12.11	0.000090	1.32	287.04	41.73	0.09
W14 Main	Mid	43729	Max WS	378.69	1.60	12.07		12.09	0.000090	1.32	286.42	41.69	0.09
W14 Main	Lower	43600	Max WS	548.67	1.60	12.07		12.12	0.000189	1.92	286.42	41.69	0.13
W14 Main	Lower	43256	Max WS	548.48	1.80	11.98		12.04	0.000267	2.04	269.06	48.57	0.15
W14 Main	Lower	43246	Max WS	549.27	-5.40	11.96	4.80	12.04	0.000339	2.21	248.58	35.26	0.15
W14 Main	Lower	43220		Bridge									
W14 Main	Lower	43216	Max WS	549.09	1.40	11.91		12.00	0.000341	2.42	227.22	35.12	0.17
W14 Main	Lower	43174	Max WS	552.54	0.70	11.91		11.98	0.000270	2.21	252.05	51.79	0.15
W14 Main	Lower	42773	Max WS	585.33	0.85	11.80		11.87	0.000254	2.17	270.21	40.80	0.15
W14 Main	Lower	42372	Max WS	617.62	1.00	11.70		11.76	0.000233	2.11	311.37	217.41	0.14
W14 Main	Lower	41911	Max WS	654.09	0.70	11.55		11.64	0.000294	2.37	345.43	297.28	0.16
W14 Main	Lower	41449	Max WS	689.59	0.40	11.36		11.48	0.000411	2.77	272.22	259.05	0.19
W14 Main	Lower	40987	Max WS	723.49	0.10	11.07		11.24	0.000608	3.27	238.09	181.94	0.22
W14 Main	Lower	40967	Max WS	726.27	-3.60	11.17		11.19	0.000021	1.08	675.40	178.17	0.05

HEC-RAS Plan: ABTb4v\_noVey-Has Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Lower	40900		Culvert									
W14 Main	Lower	40862	Max WS	725.95	-5.10	11.15		11.17	0.000017	1.02	713.05	181.90	0.05
W14 Main	Lower	40798	Max WS	730.28	-1.20	11.08		11.17	0.000268	2.38	307.34	120.34	0.15
W14 Main	Lower	40311	Max WS	763.89	-0.80	10.88		10.99	0.000405	2.75	278.02	48.42	0.19
W14 Main	Lower	40149	Max WS	774.47	-0.40	10.76		10.91	0.000602	3.11	251.99	55.92	0.22
W14 Main	Lower	40114	Max WS	776.45	1.35	10.72	5.35	10.89	0.000570	3.22	240.95	43.25	0.20
W14 Main	Lower	40100		Bridge									
W14 Main	Lower	40082	Max WS	775.03	1.35	10.66		10.82	0.000583	3.24	238.88	43.12	0.21
W14 Main	Lower	40080	Max WS	776.89	-0.70	10.75		10.82	0.000180	2.07	376.20	44.63	0.13
W14 Main	Lower	40038	Max WS	777.95	-0.50	10.64		10.80	0.000733	3.23	240.51	42.06	0.24
W14 Main	Lower	39282	Max WS	818.63	-0.65	10.16		10.29	0.000535	2.89	283.58	49.40	0.21
W14 Main	Lower	39029	Max WS	834.61	-0.80	10.08		10.18	0.000406	2.43	343.26	2017.28	0.18
W14 Main	Lower	38269	Max WS	885.41	-1.10	9.45		9.58	0.001150	2.86	309.56	1612.76	0.29
W14 Main	Lower	38016	Max WS	902.74	-1.40	9.19		9.34	0.000676	3.28	378.54	1297.93	0.24
W14 Main	Lower	38000	Max WS	903.89	-0.30	9.21	4.16	9.32	0.000380	2.75	362.28	1315.64	0.18
W14 Main	Lower	37950		Bridge									
W14 Main	Lower	37931	Max WS	903.64	-0.90	9.06		9.15	0.000284	2.53	381.45	1166.25	0.16
W14 Main	Lower	37889	Max WS	906.39	-1.40	8.97		9.14	0.000858	3.32	283.09	1026.83	0.27
W14 Main	Lower	37118	Max WS	958.98	-1.37	8.48		8.57	0.000549	2.78	1058.91	1192.89	0.22
W14 Main	Lower	36925	Max WS	972.20	-1.33	8.35		8.43	0.000834	2.61	1001.06	1150.40	0.25
W14 Main	Lower	36733	Max WS	985.36	-1.30	8.06		8.33	0.001149	4.14	239.41	1006.68	0.31
W14 Main	Lower	36713	Max WS	986.73	-1.00	8.10	3.13	8.31	0.000587	3.64	271.35	1050.44	0.23
W14 Main	Lower	36710		Bridge									
W14 Main	Lower	36698	Max WS	986.74	-0.60	8.09		8.29	0.000467	3.55	277.68	1051.02	0.22
W14 Main	Lower	36680	Max WS	987.97	-1.20	8.11		8.28	0.000615	3.33	296.64	1056.11	0.24
W14 Main	Lower	35677	Max WS	1056.28	-1.60	7.15		7.42	0.001049	4.18	252.67	119.87	0.30
W14 Main	Lower	35426	Max WS	1073.66	-2.00	6.84		7.13	0.001148	4.35	246.97	294.81	0.32
W14 Main	Lower	35169	Max WS	1091.66	-3.20	6.77	0.79	6.83	0.000250	2.16	1277.49	1344.78	0.15
W14 Main	Lower	35150		Bridge									
W14 Main	Lower	35131	Max WS	1091.66	-3.20	6.77		6.80	0.000081	1.36	1577.93	1372.67	0.09
W14 Main	Lower	34899	Max WS	1107.90	-3.10	6.74		6.78	0.000103	1.55	1171.32	1345.25	0.10
W14 Main	Lower	34046	Max WS	1167.25	-3.20	6.65		6.69	0.000103	1.56	1322.01	1472.42	0.10
W14 Main	Lower	33199	Max WS	1225.52	-4.00	6.57		6.60	0.000093	1.59	961.27	467.91	0.10
W14 Main	Lower	32566	Max WS	1268.60	-3.60	6.48		6.53	0.000132	1.78	752.84	205.98	0.12
W14 Main	Lower	31941	Max WS	1313.17	-3.60	6.38		6.44	0.000153	1.88	698.22	99.89	0.13
W14 Main	Lower	31180	Max WS	1367.57	-3.20	6.22		6.29	0.000208	2.13	643.55	96.57	0.15
W14 Main	Lower	30479	Max WS	1417.61	-3.40	6.07		6.14	0.000220	2.19	647.37	96.79	0.15
W14 Main	Lower	29754	Max WS	1470.04	-3.90	5.91		5.98	0.000206	2.16	680.92	98.85	0.14
W14 Main	Lower	28922	Max WS	1531.68	-4.10	5.72		5.80	0.000223	2.25	681.81	98.90	0.15
W14 Main	Lower	28661	Max WS	1552.21	-5.00	5.57	0.02	5.70	0.000392	2.91	533.64	77.57	0.20
W14 Main	Lower	28567		Bridge									
W14 Main	Lower	28472	Max WS	1552.04	-4.60	5.10		5.24	0.000412	2.99	519.09	75.96	0.20
W14 Main	Lower	27798	Max WS	1601.88	-5.37	4.98		5.04	0.000155	1.90	841.02	2415.86	0.13
W14 Main	Lower	26970	Max WS	1661.49	-6.23	4.86		4.92	0.000137	1.86	895.06	120.55	0.12
W14 Main	Lower	26424	Max WS	1700.27	-6.80	4.71		4.81	0.000253	2.54	668.90	86.63	0.16

HEC-RAS Plan: ABTb4v\_noVey-Has Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Lower	26220	Max WS	1715.72	-7.37	4.68		4.76	0.000171	2.24	764.42	88.43	0.13
W14 Main	Lower	26169	Max WS	1719.44	-7.37	4.67	-2.84	4.75	0.000173	2.25	763.57	88.40	0.14
W14 Main	Lower	26152	Bridge										
W14 Main	Lower	26131	Max WS	1719.15	-7.37	4.66		4.74	0.000174	2.26	762.03	88.35	0.14
W14 Main	Lower	26038	Max WS	1726.06	-7.37	4.64		4.72	0.000176	2.27	760.45	88.30	0.14
W14 Main	Lower	25159	Max WS	1791.54	-7.26	4.46		4.54	0.000214	2.33	767.75	99.43	0.15
W14 Main	Lower	25107	Max WS	1795.03	-4.20	4.40	-1.57	4.53	0.000331	2.82	636.58	74.00	0.17
W14 Main	Lower	25086	Bridge										
W14 Main	Lower	25080	Max WS	1794.91	-4.20	4.38		4.50	0.000333	2.83	634.84	74.00	0.17
W14 Main	Lower	24990	Max WS	1801.80	-5.19	4.37		4.47	0.000285	2.63	693.64	103.17	0.17
W14 Main	Lower	22266	Max WS	2009.54	-6.89	3.47		3.60	0.000339	2.89	695.37	97.34	0.19
W14 Main	Lower	21014	Max WS	2107.29	-6.89	2.91		3.07	0.000485	3.29	641.29	94.57	0.22
W14 Main	Lower	19620	Max WS	14.94	-6.89	2.00	-6.40	2.00	0.000000	0.03	556.82	91.71	0.00
W-15 Main	Upper	41958	Max WS	10.00	23.20	26.23		26.23	0.000018	0.18	54.36	31.43	0.02
W-15 Main	Upper	41911	Max WS	10.00	23.10	26.23		26.23	0.000016	0.18	54.94	28.20	0.02
W-15 Main	Upper	41876	Culvert										
W-15 Main	Upper	41841	Max WS	10.00	21.40	26.23		26.23	0.000003	0.10	96.70	36.23	0.01
W-15 Main	Upper	40226	Max WS	75.99	20.70	26.14		26.15	0.000095	0.67	189.02	353.22	0.06
W-15 Main	Upper	39062	Max WS	122.77	21.10	26.03		26.03	0.000104	0.70	324.35	466.04	0.06
W-15 Main	Upper	38866	Max WS	130.59	20.60	26.00		26.01	0.000147	0.82	159.35	299.13	0.08
W-15 Main	Upper	38831	Culvert										
W-15 Main	Upper	38796	Max WS	130.28	19.90	25.81		25.83	0.000204	1.01	129.08	255.15	0.09
W-15 Main	Upper	36942	Max WS	195.64	19.70	25.37		25.39	0.000283	1.14	408.46	666.03	0.10
W-15 Main	Upper	36875	Culvert										
W-15 Main	Upper	36808	Max WS	195.13	19.60	25.22		25.26	0.000654	1.72	216.23	299.98	0.16
W-15 Main	Upper	36792	Max WS	198.34	19.60	25.15	22.38	25.19	0.000800	1.88	193.80	282.34	0.17
W-15 Main	Upper	36741	Bridge										
W-15 Main	Upper	36690	Max WS	198.20	19.90	25.13		25.14	0.000363	1.25	349.51	545.49	0.12
W-15 Main	Upper	36328	Max WS	210.28	19.50	25.03		25.04	0.000176	0.95	630.99	830.25	0.08
W-15 Main	Upper	35441	Max WS	240.73	18.60	24.93		24.94	0.000060	0.59	1221.74	1456.25	0.05
W-15 Main	Upper	34175	Max WS	283.33	18.40	23.91		24.00	0.001712	2.96	244.39	755.22	0.25
W-15 Main	Upper	34100	Lat Struct										
W-15 Main	Upper	33708	Max WS	297.06	17.90	23.36		23.40	0.000935	2.17	361.39	522.66	0.18
W-15 Main	Upper	33500	Lat Struct										
W-15 Main	Upper	33031	Max WS	130.80	17.40	22.91		22.94	0.000503	1.53	186.12	352.31	0.13
W-15 Main	Upper	33000	Lat Struct										
W-15 Main	Upper	32178	Max WS	94.15	16.80	22.65		22.66	0.000163	0.90	185.82	294.08	0.08
W-15 Main	Upper	32158	Max WS	94.74	16.80	22.64		22.65	0.000178	0.94	123.56	291.84	0.08
W-15 Main	Upper	32123	Culvert										
W-15 Main	Upper	32088	Max WS	85.56	17.00	22.50		22.51	0.000151	0.78	109.74	130.09	0.08
W-15 Main	Upper	31779	Max WS	96.84	16.80	22.46		22.47	0.000161	0.92	212.60	414.31	0.08
W-15 Main	Upper	30955	Max WS	127.31	16.20	22.26		22.28	0.000319	1.30	160.19	153.63	0.11
W-15 Main	Upper	29994	Max WS	164.11	15.60	21.77		21.82	0.000627	1.77	101.37	239.19	0.15
W-15 Main	Upper	28993	Max WS	204.17	15.40	21.39		21.45	0.000073	2.00	109.11	45.80	0.17
W-15 Main	Upper	28463	Max WS	225.91	15.20	21.36		21.40	0.000057	1.73	141.97	155.11	0.16

HEC-RAS Plan: ABTb4v\_noVey-Has Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W-15 Main	Upper	27930	Max WS	247.48	14.40	21.28	17.36	21.36	0.000086	2.15	115.32	28.35	0.19
W-15 Main	Upper	27864	Bridge										
W-15 Main	Upper	27797	Max WS	247.42	14.30	21.27		21.33	0.000081	2.06	120.26	30.61	0.18
W-15 Main	Upper	27008	Max WS	275.63	13.60	20.94		20.99	0.000764	2.17	313.77	410.11	0.17
W-15 Main	Upper	26388	Max WS	295.65	12.60	20.60		20.63	0.000360	1.55	578.06	780.93	0.11
W-15 Main	Upper	25748	Max WS	317.42	12.20	20.32		20.37	0.000503	1.93	307.08	332.68	0.14
W-15 Main	Upper	25098	Max WS	340.03	9.40	20.11		20.13	0.000182	1.16	1084.30	1484.64	0.08
W-15 Main	Upper	24312	Max WS	366.69	11.10	19.93		19.96	0.000271	1.43	543.23	533.02	0.10
W-15 Main	Upper	23662	Max WS	385.24	9.20	19.71	12.98	19.76	0.000338	1.82	230.19	355.82	0.12
W-15 Main	Upper	23634	Bridge										
W-15 Main	Upper	23606	Max WS	382.85	9.60	19.64		19.68	0.000255	1.61	237.49	73.55	0.11
W-15 Main	Upper	23462	Max WS	379.51	10.80	19.56		19.63	0.000517	2.06	212.41	91.46	0.15
W-15 Main	Mid	22961	Max WS	285.18	10.60	19.56		19.60	0.000269	1.49	265.71	209.81	0.10
W-15 Main	Mid	22285	Max WS	283.22	10.40	19.40	13.47	19.43	0.000223	1.42	385.36	1011.24	0.09
W-15 Main	Mid	22250	Bridge										
W-15 Main	Mid	22227	Max WS	282.53	10.50	19.38		19.41	0.000206	1.38	306.35	840.02	0.10
W-15 Main	Mid	21477	Max WS	326.45	11.21	19.26		19.28	0.000116	0.92	358.86	98.76	0.07
W-15 Main	Mid	21400	Culvert										
W-15 Main	Mid	21329	Max WS	323.05	11.10	19.15		19.16	0.000114	0.93	348.46	86.79	0.07
W-15 Main	Mid	21028	Max WS	340.65	10.00	19.06		19.10	0.000299	1.58	216.27	100.01	0.12
W-15 Main	Mid	21000	Culvert										
W-15 Main	Mid	20870	Max WS	336.84	10.65	18.93		18.98	0.000315	1.73	194.25	98.38	0.12
W-15 Main	Mid	20827	Max WS	339.75	10.54	18.91		18.97	0.000401	2.22	278.33	180.58	0.14
W-15 Main	Mid	20700	Culvert										
W-15 Main	Mid	20648	Max WS	338.30	10.48	18.82		18.89	0.000439	2.31	231.44	172.19	0.15
W-15 Main	Mid	19997	Max WS	378.86	8.70	18.45		18.52	0.000639	2.07	183.87	208.03	0.16
W-15 Main	Mid	19018	Max WS	451.38	8.40	17.57		17.68	0.001013	2.60	173.86	32.57	0.20
W-15 Main	Mid	18298	Max WS	514.27	7.50	16.33		16.52	0.002106	3.51	146.51	28.34	0.27
W-15 Main	Mid	17456	Max WS	592.92	6.40	15.14		15.22	0.000851	2.63	320.77	109.11	0.19
W-15 Main	Mid	17221	Max WS	615.29	6.53	14.91		14.99	0.000972	2.26	271.91	68.07	0.20
W-15 Main	Mid	17201	Max WS	617.20	6.53	14.89	10.63	14.97	0.000991	2.28	270.46	67.88	0.20
W-15 Main	Mid	17091	Bridge										
W-15 Main	Mid	16981	Max WS	617.19	6.53	14.31		14.42	0.001468	2.65	232.90	62.59	0.24
W-15 Main	Mid	16926	Max WS	622.43	5.70	14.32	9.30	14.37	0.000369	1.73	360.77	64.46	0.13
W-15 Main	Mid	16901	Bridge										
W-15 Main	Mid	16876	Max WS	622.43	6.60	13.84		14.09	0.002626	3.97	156.91	33.21	0.32
W-15 Main	Mid	16482	Max WS	451.69	4.39	13.22		13.30	0.000940	2.39	313.63	298.13	0.19
W-15 Main	Upper1	16088	Max WS	315.08	4.39	13.22		13.26	0.000447	1.65	315.72	276.60	0.13
W-15 Main	Upper1	15793	Max WS	314.54	4.39	13.08		13.12	0.000532	1.76	273.47	251.98	0.14
W-15 Main	Upper1	15693	Max WS	314.39	4.39	13.02		13.07	0.000563	1.79	260.01	234.49	0.15
W-15 Main	Upper1	15299	Max WS	314.13	4.31	12.85	7.68	12.89	0.000332	1.77	219.99	247.16	0.12
W-15 Main	Upper1	15280	Bridge										
W-15 Main	Upper1	15262	Max WS	193.77	4.15	14.20		14.21	0.000043	0.62	763.64	756.09	0.04
W-15 Main	Upper1	15261	Max WS	314.03	3.81	12.80		12.86	0.000528	2.02	176.96	118.92	0.15
W-15 Main	New	800	Max WS	58.51	6.00	13.10	7.53	13.12	0.000801	1.15	50.85		0.08









HEC-RAS Plan: ABTb4v\_noVey-Has Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Gum Bayou	Upper	10682	Max WS	799.44	2.40	10.06		10.19	0.000698	2.86	279.28	4734.39	0.19
Gum Bayou	Upper	10555	Max WS	803.32	4.10	10.04		10.06	0.000124	1.01	864.37	4691.44	0.08
Gum Bayou	Upper	10046	Max WS	800.07	3.70	10.02		10.02	0.000008	0.28	7739.81	4662.24	0.02
Gum Bayou	Lower	9910	Max WS	1076.83	3.90	10.02		10.02	0.000015	0.33	7623.30	4662.24	0.03
Gum Bayou	Lower	9149	Max WS	1076.27	1.64	10.01		10.01	0.000006	0.27	9270.43	3702.68	0.02
Gum Bayou	Lower	8649	Max WS	1248.31	0.76	10.00		10.00	0.000012	0.35	8059.29	3323.55	0.02
Gum Bayou	Lower	8532	Max WS	1288.91	0.76	10.00		10.00	0.000012	0.37	8054.63	3323.53	0.02
Gum Bayou	Lower	7891	Max WS	1510.00	0.70	10.00		10.00	0.000007	0.32	9014.61	2874.99	0.02
Gum Bayou	Lower	7813	Max WS	1537.09	0.50	9.99		9.99	0.000007	0.28	8466.09	2938.44	0.02
Gum Bayou	Lower	7775		Culvert									
Gum Bayou	Lower	7737	Max WS	1281.54	1.30	8.35		8.90	0.005443	5.97	214.50	1892.11	0.50
Gum Bayou	Lower	7656	Max WS	1265.72	0.60	8.21		8.21	0.000014	0.38	5532.63	2080.45	0.03
Gum Bayou	Lower	2746	Max WS	15.35	-3.37	5.80	-2.80	5.80	0.000000	0.03	461.89	91.46	0.00
Doubloon	to Marsh	19396	Max WS	602.97	-2.36	7.02		7.02	0.000044	0.73	1467.31	533.49	0.05
Doubloon	to Marsh	18926	Max WS	602.28	-1.55	6.79		6.92	0.000691	2.92	206.48	489.97	0.19
Doubloon	to Marsh	18916		Culvert									
Doubloon	to Marsh	18906	Max WS	593.75	-1.55	5.46		5.65	0.001324	3.53	168.40	343.83	0.26
Doubloon	to Marsh	18661	Max WS	592.07	-1.72	5.36		5.36	0.000039	0.60	1499.48	1169.16	0.04
Doubloon	to Marsh	18361	Max WS	824.40	-1.93	5.34		5.35	0.000050	0.70	1995.19	1162.89	0.05
Doubloon	to Marsh	18061	Max WS	826.95	-2.14	5.33		5.33	0.000037	0.61	2385.04	1157.93	0.04
Doubloon	to Marsh	17782	Max WS	829.73	-2.51	5.32		5.33	0.000025	0.51	3464.82	1548.07	0.04
Doubloon	to Marsh	17504	Max WS	829.09	-2.88	5.31		5.32	0.000044	0.69	2238.15	1923.28	0.05
Doubloon	to Marsh	17225	Max WS	976.41	-3.25	5.18	0.35	5.27	0.000573	2.51	408.11	2336.98	0.17
Doubloon	to Marsh	17207		Bridge									
Doubloon	to Marsh	17188	Max WS	931.32	-3.25	5.04		5.13	0.000594	2.52	378.85	2308.13	0.17
Doubloon	to Marsh	16717	Max WS	909.82	-2.92	4.92		4.93	0.000123	1.13	1379.83	2293.02	0.08
Doubloon	to Marsh	16246	Max WS	911.35	-2.59	4.88		4.89	0.000076	0.86	2218.31	2296.57	0.06
Doubloon	to Marsh	15776	Max WS	917.36	-2.25	4.85		4.85	0.000071	0.82	2149.11	2266.77	0.06
Doubloon	to Marsh	15305	Max WS	925.04	-1.92	4.82		4.82	0.000067	0.77	2331.69	2195.52	0.06
Doubloon	to Marsh	14834	Max WS	933.79	-1.59	4.79		4.79	0.000072	0.78	2381.83	2008.29	0.06
Doubloon	to Marsh	14363	Max WS	942.94	-1.26	4.75		4.76	0.000075	0.77	2334.51	1973.75	0.06
Doubloon	to Marsh	13893	Max WS	952.90	-0.93	4.71		4.72	0.000080	0.76	2274.50	2045.20	0.06
Doubloon	to Marsh	13422	Max WS	963.28	-0.59	4.67		4.68	0.000089	0.77	2202.99	2115.25	0.06
Doubloon	to Marsh	12951	Max WS	974.12	-0.26	4.63		4.64	0.000101	0.78	2120.04	2184.39	0.07
Doubloon	to Marsh	12480	Max WS	985.12	0.07	4.58		4.58	0.000118	0.81	2027.55	2270.27	0.07
Doubloon	to Marsh	12009	Max WS	996.18	0.40	4.52		4.52	0.000143	0.84	1925.12	2270.25	0.08
Doubloon	to Marsh	11539	Max WS	1007.50	0.74	4.44		4.45	0.000186	0.90	1809.18	2348.61	0.09
Doubloon	to Marsh	11068	Max WS	1018.63	1.07	4.33		4.34	0.000258	0.98	1692.40	2491.44	0.10
Doubloon	to Marsh	10597	Max WS	1029.97	1.40	4.18		4.19	0.000376	1.07	1521.16	2413.41	0.12
Doubloon	to Marsh	10500	Max WS	1032.51	1.37	4.16		4.17	0.000157	0.70	2153.24	1324.53	0.08
Doubloon	to Marsh	10108	Max WS	1043.19	1.27	4.10		4.10	0.000176	0.73	2076.10	1307.60	0.08
Doubloon	to Marsh	9619	Max WS	1056.44	1.14	4.00		4.00	0.000221	0.86	1873.62	1277.74	0.09
Doubloon	to Marsh	9130	Max WS	1069.75	1.02	3.89		3.89	0.000235	0.92	1732.54	1104.94	0.10
Doubloon	to Marsh	8641	Max WS	1083.12	0.89	3.78		3.79	0.000199	0.97	1706.53	1004.53	0.11
Doubloon	to Marsh	8152	Max WS	1096.53	0.77	3.68		3.69	0.000196	0.97	1737.47	1013.48	0.11

HEC-RAS Plan: ABTb4v\_noVey-Has Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Doubloon	to Marsh	7663	Max WS	1109.95	0.64	3.59		3.60	0.000194	0.96	1784.02	1053.23	0.11
Doubloon	to Marsh	7231	Max WS	1121.83	0.54	3.50		3.51	0.000217	1.02	1670.17	964.88	0.11
Doubloon	to Marsh	6800	Max WS	1133.64	0.44	3.40		3.41	0.000250	1.09	1576.23	933.69	0.12
Doubloon	to Marsh	6368	Max WS	1145.48	0.34	3.28		3.29	0.000286	1.15	1526.49	968.86	0.13
Doubloon	to Marsh	5937	Max WS	1157.27	0.24	3.15		3.17	0.000304	1.17	1469.31	880.02	0.13
Doubloon	to Marsh	5505	Max WS	1169.01	0.14	3.00		3.02	0.000368	1.26	1293.46	722.01	0.14
Doubloon	to Marsh	5083	Max WS	1184.64	0.01	2.84		2.85	0.000281	1.08	1694.39	1068.14	0.13
Doubloon	to Marsh	4661	Max WS	1200.19	-0.11	2.70		2.71	0.000243	0.99	1993.05	1372.11	0.12
Doubloon	to Marsh	4239	Max WS	1215.70	-0.24	2.58		2.58	0.000225	0.95	2212.26	1642.54	0.11
Doubloon	to Marsh	3745	Max WS	1228.71	-0.34	2.47		2.47	0.000230	0.95	2270.52	1768.54	0.11
Doubloon	to Marsh	3250	Max WS	1242.02	-0.44	2.36		2.36	0.000218	0.91	2345.20	1775.53	0.11
Doubloon	to Marsh	2756	Max WS	1255.30	-0.54	2.25		2.26	0.000202	0.87	2464.02	1843.84	0.11
Doubloon	to Marsh	2262	Max WS	1268.58	-0.64	2.16		2.17	0.000183	0.83	2600.52	1920.96	0.10
Doubloon	to Marsh	1767	Max WS	1281.90	-0.74	2.08		2.08	0.000164	0.79	2740.52	1969.95	0.10
Doubloon	to Marsh	1273	Max WS	5.00	-0.84	2.00	-0.54	2.00	0.000000	0.00	2886.29	2040.32	0.00
Doubloon	to Pearl	15291	Max WS	1054.68	-3.39	7.02		7.03	0.000123	1.27	1491.26	533.49	0.08
Doubloon	to Pearl	14393	Max WS	1036.92	-3.39	6.88		6.90	0.000180	1.52	1319.68	691.89	0.10
Doubloon	to Pearl	13496	Max WS	1103.99	-3.39	6.70		6.72	0.000110	1.17	1700.56	587.73	0.07
Doubloon	to Pearl	12598	Max WS	1117.83	-3.39	6.52		6.56	0.000284	1.85	859.20	274.27	0.12
Doubloon	to Pearl	11636	Max WS	1137.93	-3.94	6.36		6.37	0.000077	0.96	2399.41	995.88	0.06
Doubloon	to Pearl	10674	Max WS	1136.04	-4.49	6.31		6.32	0.000041	0.71	2869.93	1792.27	0.05
Doubloon	to Pearl	9711	Max WS	1302.82	-5.04	6.26		6.27	0.000062	0.88	2399.54	935.48	0.06
Doubloon	to Pearl	8749	Max WS	1347.87	-5.60	6.03		6.09	0.000349	2.07	792.60	243.61	0.13
Doubloon	to Pearl	7787	Max WS	1390.16	-6.15	5.66		5.73	0.000405	2.19	670.49	155.40	0.14
Doubloon	to Pearl	6824	Max WS	1437.03	-6.70	5.24		5.32	0.000440	2.22	661.33	711.58	0.15
Doubloon	to Pearl	5862	Max WS	1481.83	-7.25	4.79		4.87	0.000483	2.26	657.60	113.03	0.15
Doubloon	to Pearl	4900	Max WS	1523.31	-7.80	4.54		4.57	0.000155	1.58	1170.08	818.31	0.11
Doubloon	to Pearl	4420	Max WS	1545.62	-7.88	4.46		4.49	0.000171	1.67	1125.72	887.94	0.11
Doubloon	to Pearl	3940	Max WS	1567.90	-7.96	4.38		4.42	0.000186	1.75	1082.59	835.90	0.12
Doubloon	to Pearl	3460	Max WS	1590.19	-8.04	4.30		4.34	0.000202	1.84	1055.13	856.63	0.12
Doubloon	to Pearl	2980	Max WS	1612.49	-8.12	4.24		4.26	0.000118	1.41	1605.88	900.96	0.09
Doubloon	to Pearl	2500	Max WS	1634.79	-8.20	4.18		4.20	0.000122	1.44	1619.27	951.32	0.10
Doubloon	to Pearl	2020	Max WS	1657.11	-8.29	4.12		4.14	0.000130	1.49	1632.26	995.27	0.10
Doubloon	to Pearl	1540	Max WS	1679.46	-8.37	4.06		4.08	0.000125	1.47	1708.67	1027.80	0.10
Doubloon	to Pearl	1060	Max WS	1701.86	-8.45	4.01		4.03	0.000109	1.38	1756.85	1073.42	0.09
Doubloon	to Pearl	580	Max WS	1724.38	-8.53	3.96		3.98	0.000105	1.36	1815.03	1102.73	0.09
Doubloon	to Pearl	100	Max WS	10.00	-8.61	3.91	-7.67	3.91	0.000000	0.01	1880.99	1140.95	0.00
Bayou Vincent	Upper	6072	Max WS	3288.08	5.31	18.50		18.76	0.001013	4.38	1039.81	190.00	0.24
Bayou Vincent	Upper	5509	Max WS	3286.34	3.64	18.10		18.28	0.000620	3.70	1281.93	190.00	0.19
Bayou Vincent	Upper	5227	Max WS	3327.74	2.81	17.96		18.11	0.000500	3.46	1412.86	190.00	0.17
Bayou Vincent	Upper	5174	Max WS	3335.62	3.00	17.98	10.06	18.07	0.000399	2.47	1400.09	170.00	0.15
Bayou Vincent	Upper	5166		Bridge									
Bayou Vincent	Upper	5158	Max WS	3334.59	3.00	17.76		17.86	0.000432	2.54	1363.94	170.00	0.15
Bayou Vincent	Upper	4963	Max WS	3342.01	3.00	17.74		17.84	0.000438	2.55	1360.00	170.00	0.15
Bayou Vincent	Upper	4083	Max WS	3471.15	3.52	17.04		17.21	0.001012	3.39	1427.39	723.33	0.23

HEC-RAS Plan: ABTb4v\_noVey-Has Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Bayou Vincent	Upper	3643	Max WS	3536.14	3.78	15.75		16.18	0.003932	5.41	712.35	156.03	0.42
Bayou Vincent	Upper	3590	Max WS	3543.97	4.30	15.84	10.73	15.93	0.000558	2.53	2299.60	1000.00	0.17
Bayou Vincent	Upper	3582	Bridge										
Bayou Vincent	Upper	3574	Max WS	3543.93	4.30	15.81		15.90	0.000571	2.55	2268.79	1000.00	0.17
Bayou Vincent	Upper	3379	Max WS	3551.77	2.78	15.58		15.89	0.002469	4.61	846.95	166.86	0.34
Bayou Vincent	Upper	2851	Max WS	3629.64	1.84	14.23		14.58	0.002527	4.99	884.27	188.59	0.35
Bayou Vincent	Upper	1795	Max WS	3783.62	-0.05	11.99		12.22	0.001904	5.16	2210.96	1148.52	0.31
Bayou Vincent	Upper	1267	Max WS	3783.60	-0.99	11.32		11.37	0.000917	3.67	3703.52	1304.86	0.20
Bayou Vincent	Lower	1214	Max WS	4124.98	-0.99	11.32		11.38	0.001090	4.00	3703.52	1304.86	0.22
Bayou Vincent	Lower	1126	Max WS	4124.97	-1.07	11.23		11.28	0.001109	4.03	3681.33	1303.73	0.22
Bayou Vincent	Lower	686	Max WS	4127.98	-1.49	10.71		10.78	0.001218	4.20	3561.14	1297.57	0.23
Bayou Vincent	Lower	86	Max WS	4132.21	-3.07	10.23		10.26	0.000449	2.73	5026.25	1350.00	0.14
Bayou Vincent	Lower	0	Max WS	15.06	-3.30	10.20	-2.56	10.20	0.000000	0.01	5290.82	1350.00	0.00

HEC-RAS Plan: ABTb4 50Yr Profile: Max WS

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
West Diversion	Main	4743	Max WS	164.68	5.80	13.33		13.34	0.000072	0.75	221.28	105.65	0.06
West Diversion	Main	4742	Max WS	164.68	5.80	13.33		13.34	0.000072	0.75	221.27	105.65	0.06
West Diversion	Main	4716		Culvert									
West Diversion	Main	4688	Max WS	159.55	2.20	13.24		13.25	0.000019	0.53	300.81	116.00	0.03
West Diversion	Main	4687	Max WS	159.50	2.20	13.24		13.25	0.000010	0.62	284.03	753.10	0.04
West Diversion	Main	4060	Max WS	216.29	3.70	13.24		13.24	0.000000	0.05	5611.60	837.33	0.00
West Diversion	Main	3692	Max WS	249.69	2.90	13.23		13.25	0.000020	0.95	289.84	814.30	0.05
West Diversion	Main	3691	Max WS	249.78	2.90	13.23		13.28	0.000018	0.54	275.05	162.00	0.03
West Diversion	Main	3626		Culvert									
West Diversion	Main	3560	Max WS	249.00	3.50	11.81		11.86	0.000280	1.75	142.61	74.85	0.12
West Diversion	Main	2777	Max WS	303.18	2.50	11.69		11.74	0.000051	0.66	287.61	93.02	0.04
West Diversion	Main	2226	Max WS	342.18	2.60	11.65	6.88	11.73	0.000069	0.75	284.32	69.00	0.05
West Diversion	Main	2168		Bridge									
West Diversion	Main	2110	Max WS	342.75	2.40	11.67		11.69	0.000024	0.50	529.11	104.00	0.03
West Diversion	Main	1760	Max WS	367.56	1.40	11.66		11.69	0.000022	0.50	506.20	104.00	0.03
West Diversion	Main	1733		Culvert									
West Diversion	Main	1706	Max WS	344.59	0.30	11.55		11.57	0.000028	0.57	476.46	106.00	0.03
West Diversion	Main	1269	Max WS	370.86	1.10	11.53		11.57	0.000024	0.59	443.38	73.00	0.03
West Diversion	Main	1226		Culvert									
West Diversion	Main	1182	Max WS	370.86	0.00	11.53		11.54	0.000076	1.06	665.03	117.00	0.06
West Diversion	Main	0	Max WS	368.01	-0.90	11.46		11.47	0.000046	0.85	839.93	147.00	0.05
W14 Main	Upper	54648	Max WS	10.00	12.65	16.47		16.47	0.000003	0.12	140.28	193.17	0.01
W14 Main	Upper	54337	Max WS	9.94	12.60	16.47		16.47	0.000003	0.12	140.58	193.03	0.01
W14 Main	Upper	54284	Max WS	17.73	12.30	16.47		16.47	0.000019	0.38	46.94	220.28	0.03
W14 Main	Upper	54280		Culvert									
W14 Main	Upper	54178	Max WS	16.95	12.00	16.43		16.43	0.000018	0.37	46.04	185.67	0.03
W14 Main	Upper	54157	Max WS	20.11	12.40	16.43		16.43	0.000022	0.33	110.38	172.36	0.03
W14 Main	Upper	53993	Max WS	44.69	12.05	16.41		16.42	0.000089	0.68	113.93	181.73	0.07
W14 Main	Upper	53830	Max WS	69.18	11.70	16.38		16.40	0.000170	0.96	117.89	189.83	0.10
W14 Main	Upper	53666	Max WS	93.84	11.35	16.34		16.36	0.000245	1.17	121.41	194.57	0.12
W14 Main	Upper	53502	Max WS	118.54	11.00	16.29		16.31	0.000299	1.33	124.84	193.64	0.13
W14 Main	Upper	53222	Max WS	160.82	10.80	16.08		16.15	0.000770	2.20	79.44	72.14	0.19
W14 Main	Upper	53154	Max WS	171.27	10.50	16.08		16.11	0.000184	1.45	118.06	49.17	0.12
W14 Main	Upper	53150		Culvert									
W14 Main	Upper	53112	Max WS	170.81	10.40	15.90		15.95	0.000439	1.79	95.35	32.47	0.16
W14 Main	Upper	53064	Max WS	178.25	10.30	15.90		15.93	0.000374	1.50	118.51	33.92	0.14
W14 Main	Upper	52895	Max WS	204.36	9.76	15.82		15.86	0.000395	1.61	127.05	35.10	0.15
W14 Main	Upper	52726	Max WS	230.56	9.22	15.73		15.78	0.000407	1.69	136.34	36.26	0.15
W14 Main	Upper	52557	Max WS	256.76	8.68	15.65		15.70	0.000413	1.76	146.13	37.36	0.16
W14 Main	Upper	52388	Max WS	282.86	8.14	15.57		15.62	0.000412	1.81	156.66	38.42	0.16
W14 Main	Upper	52219	Max WS	308.76	7.60	15.49		15.54	0.000404	1.84	168.00	39.39	0.16
W14 Main	Upper	51937	Max WS	351.38	7.10	15.36		15.41	0.000406	1.93	182.46	40.08	0.16
W14 Main	Upper	51654	Max WS	393.89	6.60	15.22		15.29	0.000403	2.00	196.78	40.50	0.16
W14 Main	Upper	51372	Max WS	435.41	6.10	15.09		15.16	0.000396	2.06	210.93	40.72	0.16
W14 Main	Upper	51089	Max WS	475.11	5.60	14.97		15.04	0.000386	2.11	225.81	61.80	0.16

HEC-RAS Plan: ABTb4 50Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Upper	50807	Max WS	513.21	5.10	14.85		14.92	0.000366	2.14	271.30	210.66	0.16
W14 Main	Upper	50524	Max WS	550.70	4.60	14.75		14.82	0.000335	2.13	362.10	266.09	0.15
W14 Main	Upper	50235	Max WS	587.71	4.52	14.63		14.71	0.000396	2.29	386.89	417.42	0.16
W14 Main	Upper	49946	Max WS	622.64	4.44	14.49		14.59	0.000467	2.46	377.17	416.21	0.18
W14 Main	Upper	49656	Max WS	656.02	4.36	14.33		14.44	0.000555	2.65	362.09	379.76	0.19
W14 Main	Upper	49367	Max WS	682.14	4.28	14.13		14.25	0.000662	2.83	339.14	347.21	0.21
W14 Main	Upper	49078	Max WS	695.95	4.20	13.88		14.02	0.000811	3.05	239.90	303.23	0.23
W14 Main	Upper	49062	Max WS	704.72	4.10	13.92	7.64	14.01	0.000385	2.47	285.88	37.54	0.16
W14 Main	Upper	49060		Bridge									
W14 Main	Upper	48993	Max WS	696.03	4.10	13.87		13.96	0.000383	2.45	284.00	37.49	0.16
W14 Main	Upper	48951	Max WS	685.50	4.20	13.71		13.93	0.001190	3.74	183.24	29.46	0.26
W14 Main	Upper	48591	Max WS	692.59	3.40	13.56		13.62	0.000231	2.30	535.14	86.30	0.14
W14 Main	Upper	48412	Max WS	676.48	4.60	13.41		13.54	0.000730	3.05	316.64	89.39	0.21
W14 Main	Upper	48301	Max WS	622.79	4.60	13.33		13.45	0.000654	2.86	309.07	81.57	0.20
W14 Main	Mid	48154	Max WS	458.11	3.50	13.33		13.41	0.000359	2.29	268.36	111.00	0.17
W14 Main	Mid	47747	Max WS	345.45	4.60	13.24		13.28	0.000165	1.63	301.54	80.85	0.11
W14 Main	Mid	47604	Max WS	339.38	4.10	13.22		13.25	0.000139	1.48	779.46	1148.42	0.11
W14 Main	Mid	47278	Max WS	342.11	4.10	13.20		13.20	0.000049	0.88	1883.24	1471.20	0.06
W14 Main	Mid	47072	Max WS	340.86	2.90	13.18		13.20	0.000121	1.42	782.77	1464.95	0.10
W14 Main	Mid	46231	Max WS	339.32	3.10	13.01		13.06	0.000222	1.84	272.27	708.60	0.13
W14 Main	Mid	45970	Max WS	347.18	2.10	12.98		13.00	0.000101	1.24	665.90	738.39	0.09
W14 Main	Mid	45631	Max WS	352.13	2.90	12.91		12.96	0.000202	1.77	276.08	1462.92	0.12
W14 Main	Mid	45461	Max WS	356.16	1.10	12.88		12.92	0.000241	1.76	240.00	1315.71	0.13
W14 Main	Mid	45123	Max WS	363.75	1.20	12.77		12.82	0.000348	2.00	252.50	1351.85	0.15
W14 Main	Mid	44719	Max WS	372.21	1.30	12.58		12.66	0.000454	2.25	202.96	1369.58	0.17
W14 Main	Mid	44444	Max WS	382.34	1.60	12.56		12.58	0.000041	0.98	429.65	1215.28	0.06
W14 Main	Mid	44393	Max WS	384.19	1.60	12.56		12.57	0.000042	0.98	429.36	1215.12	0.06
W14 Main	Mid	44040	Max WS	397.68	1.60	12.54		12.56	0.000040	0.94	423.02	149.13	0.06
W14 Main	Mid	44008	Max WS	399.03	1.60	12.55		12.56	0.000015	0.75	534.80	226.25	0.04
W14 Main	Mid	44006		Culvert									
W14 Main	Mid	43938	Max WS	395.93	1.40	12.45		12.46	0.000021	0.89	445.36	146.17	0.05
W14 Main	Mid	43892	Max WS	397.11	1.60	12.43		12.46	0.000086	1.31	302.01	42.64	0.09
W14 Main	Mid	43729	Max WS	396.98	1.60	12.42		12.45	0.000086	1.32	303.66	54.89	0.09
W14 Main	Lower	43600	Max WS	592.32	1.60	12.42		12.48	0.000192	1.96	303.66	54.89	0.13
W14 Main	Lower	43256	Max WS	592.05	1.80	12.33		12.40	0.000262	2.07	286.68	92.38	0.15
W14 Main	Lower	43246	Max WS	592.87	-5.40	12.32	4.97	12.40	0.000344	2.27	261.24	72.17	0.15
W14 Main	Lower	43220		Bridge									
W14 Main	Lower	43216	Max WS	592.45	1.40	12.26		12.36	0.000343	2.47	239.81	36.00	0.17
W14 Main	Lower	43174	Max WS	596.05	0.70	12.26		12.34	0.000272	2.26	269.65	81.92	0.15
W14 Main	Lower	42773	Max WS	629.53	0.85	12.15		12.23	0.000255	2.21	284.84	109.19	0.15
W14 Main	Lower	42372	Max WS	662.37	1.00	12.04		12.11	0.000275	2.13	359.85	290.26	0.16
W14 Main	Lower	41911	Max WS	699.54	0.70	11.91		12.00	0.000274	2.37	456.93	636.57	0.16
W14 Main	Lower	41449	Max WS	736.43	0.40	11.75		11.86	0.000363	2.71	470.14	538.82	0.18
W14 Main	Lower	40987	Max WS	771.99	0.10	11.50		11.66	0.000551	3.25	298.39	400.92	0.21
W14 Main	Lower	40967	Max WS	774.40	-3.60	11.57		11.59	0.000022	1.11	696.02	404.23	0.05



HEC-RAS Plan: ABTb4 50Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Lower	40900		Culvert									
W14 Main	Lower	40862	Max WS	774.02	-5.10	11.54		11.56	0.000017	1.06	732.57	442.10	0.05
W14 Main	Lower	40798	Max WS	778.41	-1.20	11.47		11.56	0.000285	2.40	323.97	280.40	0.16
W14 Main	Lower	40311	Max WS	815.18	-0.80	11.26		11.38	0.000391	2.78	299.61	203.45	0.18
W14 Main	Lower	40149	Max WS	826.70	-0.40	11.14		11.30	0.000568	3.12	276.23	169.03	0.22
W14 Main	Lower	40114	Max WS	828.95	1.35	11.11	5.48	11.27	0.000561	3.28	252.74	132.13	0.20
W14 Main	Lower	40100		Bridge									
W14 Main	Lower	40082	Max WS	827.97	1.35	11.04		11.21	0.000574	3.30	250.63	96.02	0.20
W14 Main	Lower	40080	Max WS	829.33	-0.70	11.13		11.20	0.000181	2.11	393.47	141.61	0.13
W14 Main	Lower	40038	Max WS	831.24	-0.50	11.03		11.19	0.000818	3.22	258.52	85.88	0.25
W14 Main	Lower	39282	Max WS	879.10	-0.65	10.51		10.64	0.000574	2.91	301.64	524.55	0.22
W14 Main	Lower	39029	Max WS	897.06	-0.80	10.44		10.51	0.000330	2.20	640.57	2100.63	0.17
W14 Main	Lower	38269	Max WS	951.07	-1.10	9.73		9.85	0.001505	2.73	348.52	1879.77	0.32
W14 Main	Lower	38016	Max WS	968.95	-1.40	9.43		9.59	0.000668	3.35	408.41	1718.59	0.24
W14 Main	Lower	38000	Max WS	970.15	-0.30	9.45	4.28	9.57	0.000389	2.84	383.92	1736.93	0.18
W14 Main	Lower	37950		Bridge									
W14 Main	Lower	37931	Max WS	969.73	-0.90	9.27		9.37	0.000298	2.64	399.45	1372.24	0.17
W14 Main	Lower	37889	Max WS	972.57	-1.40	9.18		9.36	0.000864	3.40	304.20	1232.51	0.27
W14 Main	Lower	37118	Max WS	1027.41	-1.37	8.72		8.79	0.000476	2.65	1247.60	1291.99	0.20
W14 Main	Lower	36925	Max WS	1041.15	-1.33	8.61		8.68	0.000637	2.39	1228.33	1244.27	0.23
W14 Main	Lower	36733	Max WS	1054.80	-1.30	8.33		8.61	0.001161	4.22	253.63	1140.27	0.32
W14 Main	Lower	36713	Max WS	1056.21	-1.00	8.37	3.29	8.59	0.000599	3.76	280.96	1147.77	0.24
W14 Main	Lower	36710		Bridge									
W14 Main	Lower	36698	Max WS	1056.23	-0.60	8.36		8.57	0.000480	3.68	286.88	1141.88	0.23
W14 Main	Lower	36680	Max WS	1057.49	-1.20	8.38		8.56	0.000619	3.41	309.70	1148.72	0.24
W14 Main	Lower	35677	Max WS	1128.47	-1.60	7.40		7.68	0.001066	4.28	263.53	429.12	0.31
W14 Main	Lower	35426	Max WS	1146.55	-2.00	7.08		7.39	0.001170	4.46	257.32	494.52	0.32
W14 Main	Lower	35169	Max WS	1165.37	-3.20	7.02	0.93	7.06	0.000211	2.01	1619.66	1444.29	0.14
W14 Main	Lower	35150		Bridge									
W14 Main	Lower	35131	Max WS	1165.37	-3.20	7.01		7.03	0.000075	1.33	1915.16	1465.85	0.09
W14 Main	Lower	34899	Max WS	1182.38	-3.10	6.98		7.02	0.000097	1.53	1510.03	1468.20	0.10
W14 Main	Lower	34046	Max WS	1244.77	-3.20	6.91		6.94	0.000093	1.52	1754.78	1944.78	0.10
W14 Main	Lower	33199	Max WS	1305.65	-4.00	6.82		6.86	0.000091	1.61	1081.79	472.12	0.10
W14 Main	Lower	32566	Max WS	1350.39	-3.60	6.74		6.79	0.000133	1.82	813.13	281.19	0.12
W14 Main	Lower	31941	Max WS	1396.59	-3.60	6.64		6.69	0.000157	1.93	727.41	199.61	0.13
W14 Main	Lower	31180	Max WS	1452.56	-3.20	6.47		6.55	0.000212	2.18	667.80	98.06	0.15
W14 Main	Lower	30479	Max WS	1504.65	-3.40	6.31		6.39	0.000224	2.24	671.31	98.26	0.15
W14 Main	Lower	29754	Max WS	1558.81	-3.90	6.15		6.23	0.000210	2.21	704.99	100.30	0.15
W14 Main	Lower	28922	Max WS	1623.42	-4.10	5.95		6.04	0.000228	2.30	705.43	100.32	0.15
W14 Main	Lower	28661	Max WS	1644.85	-5.00	5.80	0.14	5.94	0.000400	2.98	551.77	78.47	0.20
W14 Main	Lower	28567		Bridge									
W14 Main	Lower	28472	Max WS	1643.57	-4.60	5.33		5.47	0.000420	3.07	536.14	76.67	0.20
W14 Main	Lower	27798	Max WS	1696.61	-5.37	5.21		5.27	0.000159	1.95	867.91	2445.46	0.13
W14 Main	Lower	26970	Max WS	1760.20	-6.23	5.08		5.14	0.000140	1.91	921.48	121.24	0.12
W14 Main	Lower	26424	Max WS	1801.33	-6.80	4.92		5.02	0.000262	2.62	687.30	87.35	0.16

HEC-RAS Plan: ABTb4 50Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Lower	26220	Max WS	1817.76	-7.37	4.89		4.98	0.000179	2.32	783.09	89.00	0.14
W14 Main	Lower	26169	Max WS	1821.95	-7.37	4.88	-2.74	4.97	0.000181	2.33	782.18	88.97	0.14
W14 Main	Lower	26152	Bridge										
W14 Main	Lower	26131	Max WS	1821.63	-7.37	4.86		4.95	0.000182	2.33	780.55	88.92	0.14
W14 Main	Lower	26038	Max WS	1828.97	-7.37	4.85		4.93	0.000184	2.35	778.87	88.87	0.14
W14 Main	Lower	25159	Max WS	1899.54	-7.26	4.66		4.75	0.000223	2.41	787.67	100.00	0.15
W14 Main	Lower	25107	Max WS	1903.20	-4.20	4.60	-1.46	4.73	0.000347	2.92	651.05	74.00	0.17
W14 Main	Lower	25086	Bridge										
W14 Main	Lower	25080	Max WS	1902.79	-4.20	4.57		4.71	0.000350	2.93	649.20	74.00	0.17
W14 Main	Lower	24990	Max WS	1910.44	-5.19	4.56		4.68	0.000293	2.71	713.87	104.16	0.18
W14 Main	Lower	22266	Max WS	2136.16	-6.89	3.62		3.76	0.000358	3.02	710.07	98.10	0.19
W14 Main	Lower	21014	Max WS	2243.40	-6.89	3.01		3.20	0.000523	3.44	651.49	95.03	0.23
W14 Main	Lower	19620	Max WS	14.94	-6.89	2.00	-6.40	2.00	0.000000	0.03	556.82	91.71	0.00
W-15 Main	Upper	41958	Max WS	10.00	23.20	26.33		26.33	0.000015	0.17	57.56	32.82	0.02
W-15 Main	Upper	41911	Max WS	10.00	23.10	26.33		26.33	0.000014	0.17	57.78	28.87	0.02
W-15 Main	Upper	41876	Culvert										
W-15 Main	Upper	41841	Max WS	10.00	21.40	26.33		26.33	0.000003	0.10	99.95	37.84	0.01
W-15 Main	Upper	40226	Max WS	80.90	20.70	26.25		26.25	0.000088	0.66	230.13	437.35	0.06
W-15 Main	Upper	39062	Max WS	130.93	21.10	26.14		26.15	0.000093	0.67	382.06	520.59	0.06
W-15 Main	Upper	38866	Max WS	139.36	20.60	26.11		26.12	0.000153	0.85	164.70	362.63	0.08
W-15 Main	Upper	38831	Culvert										
W-15 Main	Upper	38796	Max WS	139.06	19.90	25.90		25.92	0.000215	1.05	132.11	302.31	0.09
W-15 Main	Upper	36942	Max WS	216.16	19.70	25.46		25.47	0.000277	1.15	464.83	730.62	0.10
W-15 Main	Upper	36875	Culvert										
W-15 Main	Upper	36808	Max WS	216.13	19.60	25.28		25.32	0.000706	1.81	234.02	313.26	0.16
W-15 Main	Upper	36792	Max WS	220.34	19.60	25.20	22.51	25.24	0.000885	1.99	208.26	293.83	0.18
W-15 Main	Upper	36741	Bridge										
W-15 Main	Upper	36690	Max WS	220.34	19.90	25.17		25.19	0.000398	1.32	374.65	568.95	0.12
W-15 Main	Upper	36328	Max WS	235.24	19.50	25.07		25.07	0.000200	1.01	659.30	850.93	0.09
W-15 Main	Upper	35441	Max WS	271.65	18.60	24.95		24.95	0.000073	0.65	1246.44	1472.47	0.05
W-15 Main	Upper	34175	Max WS	323.00	18.40	23.99		24.08	0.001674	2.97	312.63	898.69	0.25
W-15 Main	Upper	34100	Lat Struct										
W-15 Main	Upper	33708	Max WS	338.75	17.90	23.49		23.52	0.000866	2.12	429.62	578.41	0.17
W-15 Main	Upper	33500	Lat Struct										
W-15 Main	Upper	33031	Max WS	150.66	17.40	23.10		23.12	0.000412	1.42	260.25	447.09	0.12
W-15 Main	Upper	33000	Lat Struct										
W-15 Main	Upper	32178	Max WS	107.79	16.80	22.88		22.89	0.000143	0.88	268.15	400.69	0.07
W-15 Main	Upper	32158	Max WS	108.47	16.80	22.88		22.89	0.000184	0.99	136.51	397.66	0.09
W-15 Main	Upper	32123	Culvert										
W-15 Main	Upper	32088	Max WS	108.37	17.00	22.68		22.69	0.000206	0.94	115.59	164.53	0.09
W-15 Main	Upper	31779	Max WS	119.05	16.80	22.62		22.63	0.000162	0.95	289.20	498.55	0.08
W-15 Main	Upper	30955	Max WS	147.47	16.20	22.41		22.43	0.000338	1.37	184.97	167.48	0.11
W-15 Main	Upper	29994	Max WS	177.00	15.60	21.89		21.94	0.000652	1.84	107.45	270.56	0.16
W-15 Main	Upper	28993	Max WS	220.64	15.40	21.49		21.56	0.000078	2.11	115.78	85.33	0.18
W-15 Main	Upper	28463	Max WS	244.28	15.20	21.46		21.51	0.000061	1.82	166.05	307.61	0.16

HEC-RAS Plan: ABTb4 50Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W-15 Main	Upper	27930	Max WS	267.74	14.40	21.38	17.48	21.46	0.000094	2.27	118.13	28.69	0.20
W-15 Main	Upper	27864	Bridge										
W-15 Main	Upper	27797	Max WS	267.70	14.30	21.37		21.44	0.000089	2.17	123.26	31.02	0.19
W-15 Main	Upper	27008	Max WS	297.72	13.60	21.05		21.11	0.000736	2.16	365.34	452.13	0.17
W-15 Main	Upper	26388	Max WS	318.24	12.60	20.75		20.77	0.000313	1.47	700.76	870.04	0.11
W-15 Main	Upper	25748	Max WS	340.70	12.20	20.50		20.54	0.000437	1.83	368.89	338.94	0.13
W-15 Main	Upper	25098	Max WS	364.21	9.40	20.34		20.34	0.000133	1.01	1439.87	1699.95	0.07
W-15 Main	Upper	24312	Max WS	392.00	11.10	20.19		20.21	0.000230	1.36	696.65	663.49	0.10
W-15 Main	Upper	23662	Max WS	411.80	9.20	19.98	13.10	20.04	0.000341	1.87	240.84	508.62	0.12
W-15 Main	Upper	23634	Bridge										
W-15 Main	Upper	23606	Max WS	408.27	9.60	19.89		19.93	0.000258	1.66	245.90	245.35	0.11
W-15 Main	Upper	23462	Max WS	404.81	10.80	19.82		19.88	0.000498	2.07	239.83	125.11	0.14
W-15 Main	Mid	22961	Max WS	307.11	10.60	19.82		19.85	0.000249	1.47	327.22	303.20	0.10
W-15 Main	Mid	22285	Max WS	305.55	10.40	19.67	13.58	19.69	0.000206	1.40	431.21	1194.17	0.09
W-15 Main	Mid	22250	Bridge										
W-15 Main	Mid	22227	Max WS	304.76	10.50	19.64		19.67	0.000201	1.40	340.06	1039.00	0.10
W-15 Main	Mid	21477	Max WS	349.35	11.21	19.53		19.54	0.000111	0.93	386.53	107.69	0.07
W-15 Main	Mid	21400	Culvert										
W-15 Main	Mid	21329	Max WS	345.72	11.10	19.40		19.41	0.000111	0.95	366.17	103.25	0.07
W-15 Main	Mid	21028	Max WS	364.49	10.00	19.31		19.35	0.000297	1.62	225.73	103.23	0.12
W-15 Main	Mid	21000	Culvert										
W-15 Main	Mid	20870	Max WS	360.68	10.65	19.16		19.21	0.000321	1.79	201.28	101.32	0.12
W-15 Main	Mid	20827	Max WS	363.35	10.54	19.14		19.20	0.000388	2.23	304.80	202.60	0.14
W-15 Main	Mid	20700	Culvert										
W-15 Main	Mid	20648	Max WS	359.47	10.48	19.03		19.10	0.000436	2.34	246.70	191.96	0.15
W-15 Main	Mid	19997	Max WS	402.05	8.70	18.66		18.73	0.000647	2.11	195.27	244.50	0.16
W-15 Main	Mid	19018	Max WS	476.15	8.40	17.77		17.88	0.001018	2.64	180.45	33.07	0.20
W-15 Main	Mid	18298	Max WS	543.61	7.50	16.51		16.71	0.002134	3.58	151.80	28.74	0.27
W-15 Main	Mid	17456	Max WS	627.71	6.40	15.31		15.40	0.000945	2.81	342.26	144.92	0.20
W-15 Main	Mid	17221	Max WS	651.85	6.53	15.07		15.16	0.000980	2.30	283.22	69.58	0.20
W-15 Main	Mid	17201	Max WS	653.90	6.53	15.05	10.78	15.14	0.001000	2.32	281.72	69.38	0.20
W-15 Main	Mid	17091	Bridge										
W-15 Main	Mid	16981	Max WS	653.90	6.53	14.46		14.58	0.001482	2.70	242.51	63.99	0.24
W-15 Main	Mid	16926	Max WS	659.55	5.70	14.47	9.39	14.52	0.000382	1.78	370.60	64.81	0.13
W-15 Main	Mid	16901	Bridge										
W-15 Main	Mid	16876	Max WS	527.00	6.60	14.00		14.17	0.001714	3.25	162.35	33.67	0.26
W-15 Main	Mid	16482	Max WS	498.72	4.39	13.60		13.66	0.000753	2.24	446.78	415.99	0.17
W-15 Main	Upper1	16088	Max WS	377.53	4.39	13.60		13.63	0.000416	1.67	431.41	343.86	0.13
W-15 Main	Upper1	15793	Max WS	377.21	4.39	13.46		13.50	0.000505	1.81	392.19	372.21	0.14
W-15 Main	Upper1	15693	Max WS	377.12	4.39	13.41		13.45	0.000537	1.85	372.67	355.25	0.15
W-15 Main	Upper1	15299	Max WS	377.05	4.31	13.26	7.98	13.28	0.000181	1.36	657.06	284.26	0.09
W-15 Main	Upper1	15280	Bridge										
W-15 Main	Upper1	15262	Max WS	377.02	4.15	13.18		13.23	0.000450	1.78	270.35	83.10	0.14
W-15 Main	Upper1	15261	Max WS	377.02	3.81	13.17		13.23	0.000589	2.07	287.75	244.19	0.16
W-15 Main	New	800	Max WS	61.25	6.00	13.51	7.56	13.53	0.000878	1.20	50.85		0.08







HEC-RAS Plan: ABTb4 50Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Gum Bayou	Upper	10682	Max WS	957.66	2.40	10.13		10.31	0.000971	3.40	281.89	4780.98	0.23
Gum Bayou	Upper	10555	Max WS	964.31	4.10	10.10		10.12	0.000172	1.20	874.32	4764.74	0.09
Gum Bayou	Upper	10046	Max WS	960.11	3.70	10.06		10.06	0.000011	0.33	7968.18	4734.83	0.02
Gum Bayou	Lower	9910	Max WS	1287.16	3.90	10.06		10.06	0.000019	0.38	7851.67	4734.83	0.03
Gum Bayou	Lower	9149	Max WS	1285.75	1.64	10.05		10.05	0.000008	0.31	9440.86	3702.82	0.02
Gum Bayou	Lower	8649	Max WS	1491.47	0.76	10.05		10.05	0.000016	0.41	8206.90	3324.24	0.03
Gum Bayou	Lower	8532	Max WS	1539.37	0.76	10.05		10.05	0.000017	0.43	8200.62	3324.21	0.03
Gum Bayou	Lower	7891	Max WS	1804.32	0.70	10.04		10.04	0.000010	0.38	9134.63	2884.00	0.02
Gum Bayou	Lower	7813	Max WS	1836.27	0.50	10.03		10.04	0.000010	0.32	8587.17	2947.38	0.02
Gum Bayou	Lower	7775		Culvert									
Gum Bayou	Lower	7737	Max WS	1470.28	1.30	9.06		9.61	0.004395	5.92	248.36	2051.88	0.46
Gum Bayou	Lower	7656	Max WS	1454.42	0.60	8.96		8.96	0.000010	0.35	7177.20	2304.26	0.02
Gum Bayou	Lower	2746	Max WS	15.35	-3.37	5.80	-2.80	5.80	0.000000	0.03	461.89	91.46	0.00
Doubloon	to Marsh	19396	Max WS	625.75	-2.36	7.28		7.28	0.000037	0.69	1605.68	533.49	0.04
Doubloon	to Marsh	18926	Max WS	625.47	-1.55	7.06		7.19	0.000659	2.92	214.22	503.50	0.19
Doubloon	to Marsh	18916		Culvert									
Doubloon	to Marsh	18906	Max WS	622.12	-1.55	5.60		5.81	0.001340	3.60	172.57	349.17	0.26
Doubloon	to Marsh	18661	Max WS	621.44	-1.72	5.51		5.51	0.000037	0.60	1566.36	1247.82	0.04
Doubloon	to Marsh	18361	Max WS	877.22	-1.93	5.49		5.49	0.000051	0.71	2104.11	1244.17	0.05
Doubloon	to Marsh	18061	Max WS	880.64	-2.14	5.48		5.48	0.000038	0.62	2515.26	1242.86	0.04
Doubloon	to Marsh	17782	Max WS	883.73	-2.51	5.47		5.47	0.000024	0.51	3703.00	1682.64	0.03
Doubloon	to Marsh	17504	Max WS	883.29	-2.88	5.46		5.46	0.000043	0.69	2358.58	1948.90	0.05
Doubloon	to Marsh	17225	Max WS	1051.22	-3.25	5.31	0.48	5.42	0.000619	2.64	417.10	2357.91	0.18
Doubloon	to Marsh	17207		Bridge									
Doubloon	to Marsh	17188	Max WS	1001.14	-3.25	5.15		5.25	0.000648	2.66	385.57	2331.85	0.18
Doubloon	to Marsh	16717	Max WS	976.61	-2.92	5.03		5.04	0.000128	1.16	1435.18	2317.38	0.08
Doubloon	to Marsh	16246	Max WS	979.94	-2.59	4.98		4.99	0.000076	0.87	2365.98	2316.86	0.06
Doubloon	to Marsh	15776	Max WS	987.83	-2.25	4.95		4.96	0.000065	0.79	2665.19	2321.75	0.06
Doubloon	to Marsh	15305	Max WS	997.80	-1.92	4.92		4.93	0.000069	0.79	2466.16	2253.50	0.06
Doubloon	to Marsh	14834	Max WS	1008.47	-1.59	4.89		4.89	0.000073	0.79	2537.53	2213.17	0.06
Doubloon	to Marsh	14363	Max WS	1019.25	-1.26	4.85		4.86	0.000076	0.78	2483.44	2029.66	0.06
Doubloon	to Marsh	13893	Max WS	1030.77	-0.93	4.82		4.82	0.000081	0.78	2417.34	2194.84	0.06
Doubloon	to Marsh	13422	Max WS	1042.78	-0.59	4.78		4.78	0.000090	0.79	2340.49	2242.88	0.06
Doubloon	to Marsh	12951	Max WS	1055.14	-0.26	4.73		4.74	0.000103	0.81	2254.33	2374.07	0.07
Doubloon	to Marsh	12480	Max WS	1067.67	0.07	4.68		4.69	0.000120	0.83	2158.96	2361.97	0.07
Doubloon	to Marsh	12009	Max WS	1080.64	0.40	4.61		4.62	0.000146	0.86	2054.10	2365.49	0.08
Doubloon	to Marsh	11539	Max WS	1093.45	0.74	4.53		4.54	0.000193	0.93	1948.33	2532.54	0.09
Doubloon	to Marsh	11068	Max WS	1106.36	1.07	4.43		4.44	0.000253	0.99	1839.73	2592.59	0.10
Doubloon	to Marsh	10597	Max WS	1119.45	1.40	4.28		4.30	0.000358	1.07	1668.92	2508.43	0.12
Doubloon	to Marsh	10500	Max WS	1122.30	1.37	4.26		4.27	0.000156	0.71	2291.15	1351.12	0.08
Doubloon	to Marsh	10108	Max WS	1134.30	1.27	4.20		4.20	0.000174	0.75	2212.98	1334.34	0.08
Doubloon	to Marsh	9619	Max WS	1149.23	1.14	4.10		4.11	0.000218	0.88	2009.47	1320.21	0.09
Doubloon	to Marsh	9130	Max WS	1164.10	1.02	3.99		4.00	0.000237	0.95	1850.20	1151.61	0.10
Doubloon	to Marsh	8641	Max WS	1179.04	0.89	3.88		3.89	0.000202	1.01	1811.57	1038.00	0.11
Doubloon	to Marsh	8152	Max WS	1194.06	0.77	3.78		3.79	0.000199	1.00	1841.87	1039.61	0.11

HEC-RAS Plan: ABTb4 50Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Doubloon	to Marsh	7663	Max WS	1209.09	0.64	3.69		3.70	0.000196	1.00	1891.08	1078.06	0.11
Doubloon	to Marsh	7231	Max WS	1222.35	0.54	3.60		3.61	0.000221	1.05	1766.44	984.60	0.11
Doubloon	to Marsh	6800	Max WS	1235.60	0.44	3.49		3.51	0.000257	1.13	1667.39	962.42	0.12
Doubloon	to Marsh	6368	Max WS	1248.82	0.34	3.37		3.39	0.000291	1.19	1618.04	990.10	0.13
Doubloon	to Marsh	5937	Max WS	1262.01	0.24	3.24		3.26	0.000311	1.21	1549.71	891.26	0.13
Doubloon	to Marsh	5505	Max WS	1275.17	0.14	3.09		3.11	0.000385	1.32	1354.35	734.14	0.15
Doubloon	to Marsh	5083	Max WS	1292.64	0.01	2.91		2.93	0.000294	1.13	1774.84	1083.86	0.13
Doubloon	to Marsh	4661	Max WS	1309.99	-0.11	2.77		2.78	0.000255	1.04	2087.82	1391.14	0.12
Doubloon	to Marsh	4239	Max WS	1327.35	-0.24	2.64		2.65	0.000237	0.99	2315.54	1662.29	0.12
Doubloon	to Marsh	3745	Max WS	1341.89	-0.34	2.52		2.53	0.000245	0.99	2370.12	1793.42	0.12
Doubloon	to Marsh	3250	Max WS	1356.75	-0.44	2.40		2.41	0.000237	0.96	2429.82	1805.25	0.11
Doubloon	to Marsh	2756	Max WS	1371.59	-0.54	2.29		2.30	0.000224	0.93	2533.26	1866.58	0.11
Doubloon	to Marsh	2262	Max WS	1386.43	-0.64	2.19		2.19	0.000207	0.89	2651.00	1930.58	0.11
Doubloon	to Marsh	1767	Max WS	1401.29	-0.74	2.09		2.10	0.000191	0.86	2767.29	1979.74	0.10
Doubloon	to Marsh	1273	Max WS	5.00	-0.84	2.00	-0.54	2.00	0.000000	0.00	2886.29	2040.32	0.00
Doubloon	to Pearl	15291	Max WS	1158.01	-3.39	7.28		7.29	0.000117	1.27	1629.89	533.49	0.08
Doubloon	to Pearl	14393	Max WS	1142.71	-3.39	7.14		7.16	0.000173	1.52	1515.59	782.07	0.09
Doubloon	to Pearl	13496	Max WS	1219.77	-3.39	6.97		6.98	0.000106	1.17	1858.77	594.96	0.07
Doubloon	to Pearl	12598	Max WS	1240.29	-3.39	6.78		6.82	0.000291	1.91	935.24	299.26	0.12
Doubloon	to Pearl	11636	Max WS	1263.66	-3.94	6.63		6.63	0.000074	0.97	2669.11	1052.73	0.06
Doubloon	to Pearl	10674	Max WS	1262.03	-4.49	6.58		6.58	0.000039	0.71	3385.80	2087.86	0.04
Doubloon	to Pearl	9711	Max WS	1440.26	-5.04	6.53		6.53	0.000062	0.90	2655.31	999.84	0.06
Doubloon	to Pearl	8749	Max WS	1488.35	-5.60	6.28		6.35	0.000366	2.17	855.89	255.20	0.14
Doubloon	to Pearl	7787	Max WS	1533.59	-6.15	5.88		5.97	0.000440	2.33	707.38	171.18	0.15
Doubloon	to Pearl	6824	Max WS	1583.87	-6.70	5.43		5.51	0.000488	2.38	686.88	747.33	0.16
Doubloon	to Pearl	5862	Max WS	1631.87	-7.25	4.92		5.01	0.000551	2.44	672.17	122.32	0.16
Doubloon	to Pearl	4900	Max WS	1676.46	-7.80	4.63		4.66	0.000177	1.71	1213.78	871.61	0.12
Doubloon	to Pearl	4420	Max WS	1700.45	-7.88	4.53		4.58	0.000197	1.81	1168.41	939.60	0.12
Doubloon	to Pearl	3940	Max WS	1724.43	-7.96	4.45		4.50	0.000214	1.90	1119.15	906.62	0.13
Doubloon	to Pearl	3460	Max WS	1748.40	-8.04	4.36		4.41	0.000234	1.99	1089.55	916.67	0.13
Doubloon	to Pearl	2980	Max WS	1772.39	-8.12	4.30		4.32	0.000136	1.52	1660.81	958.97	0.10
Doubloon	to Pearl	2500	Max WS	1796.38	-8.20	4.23		4.26	0.000142	1.56	1667.24	978.79	0.10
Doubloon	to Pearl	2020	Max WS	1820.40	-8.29	4.16		4.19	0.000151	1.62	1672.22	1016.41	0.11
Doubloon	to Pearl	1540	Max WS	1844.42	-8.37	4.09		4.11	0.000147	1.60	1739.01	1054.33	0.11
Doubloon	to Pearl	1060	Max WS	1868.51	-8.45	4.03		4.05	0.000129	1.50	1777.82	1092.79	0.10
Doubloon	to Pearl	580	Max WS	1892.77	-8.53	3.97		3.99	0.000125	1.48	1825.78	1121.42	0.10
Doubloon	to Pearl	100	Max WS	10.00	-8.61	3.91	-7.67	3.91	0.000000	0.01	1880.99	1140.95	0.00
Bayou Vincent	Upper	6072	Max WS	3644.94	5.31	18.88		19.17	0.001068	4.61	1112.38	190.00	0.25
Bayou Vincent	Upper	5509	Max WS	3642.88	3.64	18.45		18.66	0.000672	3.93	1349.06	190.00	0.20
Bayou Vincent	Upper	5227	Max WS	3688.92	2.81	18.30		18.47	0.000548	3.69	1477.40	190.00	0.18
Bayou Vincent	Upper	5174	Max WS	3697.92	3.00	18.32	10.42	18.42	0.000433	2.64	1458.17	170.00	0.15
Bayou Vincent	Upper	5166		Bridge									
Bayou Vincent	Upper	5158	Max WS	3696.91	3.00	18.10		18.21	0.000468	2.70	1421.22	170.00	0.16
Bayou Vincent	Upper	4963	Max WS	3705.16	3.00	18.08		18.19	0.000475	2.72	1416.94	170.00	0.16
Bayou Vincent	Upper	4083	Max WS	3848.81	3.52	17.40		17.56	0.000980	3.45	1682.79	723.33	0.23



HEC-RAS Plan: ABTb4 50Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Bayou Vincent	Upper	3643	Max WS	3920.56	3.78	16.08		16.54	0.003974	5.60	764.94	160.35	0.43
Bayou Vincent	Upper	3590	Max WS	3929.36	4.30	16.19	10.93	16.27	0.000534	2.55	2643.45	1000.00	0.17
Bayou Vincent	Upper	3582	Bridge										
Bayou Vincent	Upper	3574	Max WS	3929.26	4.30	16.15		16.24	0.000550	2.58	2602.95	1000.00	0.17
Bayou Vincent	Upper	3379	Max WS	3937.87	2.78	15.90		16.24	0.002564	4.82	901.14	171.03	0.35
Bayou Vincent	Upper	2851	Max WS	4023.18	1.84	14.49		14.88	0.002673	5.27	981.52	563.61	0.36
Bayou Vincent	Upper	1795	Max WS	4193.81	-0.05	12.16		12.40	0.002006	5.37	2412.64	1199.48	0.32
Bayou Vincent	Upper	1267	Max WS	4193.74	-0.99	11.46		11.52	0.000982	3.83	3888.95	1314.30	0.21
Bayou Vincent	Lower	1214	Max WS	4561.75	-0.99	11.46		11.52	0.001162	4.17	3888.95	1314.30	0.23
Bayou Vincent	Lower	1126	Max WS	4561.74	-1.07	11.36		11.42	0.001188	4.21	3858.56	1312.76	0.23
Bayou Vincent	Lower	686	Max WS	4565.37	-1.49	10.80		10.87	0.001371	4.48	3668.73	1303.08	0.25
Bayou Vincent	Lower	86	Max WS	4570.43	-3.07	10.24		10.27	0.000546	3.01	5036.41	1350.00	0.16
Bayou Vincent	Lower	0	Max WS	15.06	-3.30	10.20	-2.56	10.20	0.000000	0.01	5290.82	1350.00	0.00

HEC-RAS Plan: ABTb4 100Yr Profile: Max WS

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
West Diversion	Main	4743	Max WS	173.09	5.80	13.65		13.66	0.000066	0.74	234.35	112.03	0.05
West Diversion	Main	4742	Max WS	173.09	5.80	13.65		13.66	0.000066	0.74	234.34	112.02	0.05
West Diversion	Main	4716		Culvert									
West Diversion	Main	4688	Max WS	167.55	2.20	13.55		13.56	0.000019	0.54	311.47	116.00	0.03
West Diversion	Main	4687	Max WS	167.65	2.20	13.55		13.56	0.000010	0.62	295.30	754.89	0.04
West Diversion	Main	4060	Max WS	228.75	3.70	13.55		13.55	0.000000	0.05	5870.60	839.23	0.00
West Diversion	Main	3692	Max WS	264.76	2.90	13.54		13.55	0.000020	0.97	300.26	816.19	0.06
West Diversion	Main	3691	Max WS	264.85	2.90	13.53		13.59	0.000018	0.55	284.84	162.00	0.03
West Diversion	Main	3626		Culvert									
West Diversion	Main	3560	Max WS	258.85	3.50	11.95		12.00	0.000283	1.78	145.37	75.87	0.12
West Diversion	Main	2777	Max WS	316.94	2.50	11.83		11.87	0.000048	0.65	300.44	93.91	0.04
West Diversion	Main	2226	Max WS	350.77	2.60	11.79	6.93	11.86	0.000064	0.74	293.97	69.00	0.05
West Diversion	Main	2168		Bridge									
West Diversion	Main	2110	Max WS	351.38	2.40	11.81		11.83	0.000023	0.49	543.62	104.00	0.03
West Diversion	Main	1760	Max WS	375.71	1.40	11.80		11.83	0.000021	0.49	520.77	104.00	0.03
West Diversion	Main	1733		Culvert									
West Diversion	Main	1706	Max WS	372.61	0.30	11.73		11.76	0.000029	0.59	495.43	106.00	0.03
West Diversion	Main	1269	Max WS	402.14	1.10	11.71		11.75	0.000025	0.61	456.35	73.00	0.03
West Diversion	Main	1226		Culvert									
West Diversion	Main	1182	Max WS	402.14	0.00	11.71		11.72	0.000082	1.11	685.84	117.00	0.06
West Diversion	Main	0	Max WS	398.95	-0.90	11.64		11.64	0.000050	0.90	865.24	147.00	0.05
W14 Main	Upper	54648	Max WS	10.00	12.65	16.68		16.68	0.000002	0.11	184.34	224.17	0.01
W14 Main	Upper	54337	Max WS	9.95	12.60	16.68		16.68	0.000002	0.11	184.66	224.07	0.01
W14 Main	Upper	54284	Max WS	18.28	12.30	16.68		16.68	0.000017	0.37	49.48	266.60	0.03
W14 Main	Upper	54280		Culvert									
W14 Main	Upper	54178	Max WS	17.22	12.00	16.64		16.64	0.000015	0.35	48.55	219.22	0.03
W14 Main	Upper	54157	Max WS	20.62	12.40	16.64		16.64	0.000017	0.30	149.26	199.54	0.03
W14 Main	Upper	53993	Max WS	47.07	12.05	16.62		16.63	0.000073	0.63	155.80	211.59	0.06
W14 Main	Upper	53830	Max WS	73.43	11.70	16.60		16.61	0.000141	0.90	163.02	223.01	0.09
W14 Main	Upper	53666	Max WS	99.97	11.35	16.57		16.58	0.000207	1.11	169.78	234.88	0.11
W14 Main	Upper	53502	Max WS	126.61	11.00	16.52		16.54	0.000260	1.27	176.27	249.08	0.12
W14 Main	Upper	53222	Max WS	171.95	10.80	16.34		16.42	0.000705	2.16	107.77	147.56	0.19
W14 Main	Upper	53154	Max WS	183.24	10.50	16.34		16.37	0.000177	1.47	124.25	56.33	0.11
W14 Main	Upper	53150		Culvert									
W14 Main	Upper	53112	Max WS	182.28	10.40	16.14		16.19	0.000413	1.81	100.91	33.05	0.16
W14 Main	Upper	53064	Max WS	190.35	10.30	16.13		16.17	0.000353	1.50	126.51	34.63	0.14
W14 Main	Upper	52895	Max WS	218.71	9.76	16.05		16.09	0.000377	1.61	135.45	35.89	0.15
W14 Main	Upper	52726	Max WS	247.17	9.22	15.97		16.02	0.000393	1.70	145.10	37.14	0.15
W14 Main	Upper	52557	Max WS	275.63	8.68	15.89		15.94	0.000403	1.78	155.21	38.34	0.16
W14 Main	Upper	52388	Max WS	304.03	8.14	15.81		15.86	0.000407	1.83	166.02	39.51	0.16
W14 Main	Upper	52219	Max WS	332.29	7.60	15.73		15.78	0.000404	1.87	177.57	40.59	0.16
W14 Main	Upper	51937	Max WS	378.67	7.10	15.59		15.65	0.000411	1.97	192.09	41.17	0.16
W14 Main	Upper	51654	Max WS	423.93	6.60	15.46		15.52	0.000411	2.05	206.36	41.48	0.16
W14 Main	Upper	51372	Max WS	467.03	6.10	15.32		15.39	0.000405	2.12	220.63	50.09	0.16
W14 Main	Upper	51089	Max WS	507.29	5.60	15.20		15.27	0.000388	2.16	249.30	154.90	0.16

HEC-RAS Plan: ABTb4 100Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Upper	50807	Max WS	546.72	5.10	15.09		15.16	0.000361	2.17	322.16	226.13	0.15
W14 Main	Upper	50524	Max WS	586.09	4.60	14.99		15.05	0.000325	2.14	427.74	288.62	0.15
W14 Main	Upper	50235	Max WS	623.73	4.52	14.88		14.95	0.000368	2.27	494.92	454.60	0.16
W14 Main	Upper	49946	Max WS	659.41	4.44	14.75		14.84	0.000427	2.42	501.11	506.54	0.17
W14 Main	Upper	49656	Max WS	693.91	4.36	14.61		14.71	0.000496	2.58	492.10	497.93	0.18
W14 Main	Upper	49367	Max WS	723.84	4.28	14.44		14.55	0.000581	2.75	469.25	456.38	0.19
W14 Main	Upper	49078	Max WS	741.38	4.20	14.20		14.35	0.000759	3.06	261.16	375.58	0.22
W14 Main	Upper	49062	Max WS	748.64	4.10	14.24	7.76	14.34	0.000387	2.51	297.99	38.44	0.16
W14 Main	Upper	49060		Bridge									
W14 Main	Upper	48993	Max WS	732.58	4.10	14.16		14.25	0.000382	2.49	294.79	38.03	0.16
W14 Main	Upper	48951	Max WS	702.77	4.20	14.00		14.21	0.001102	3.66	192.34	39.90	0.26
W14 Main	Upper	48591	Max WS	713.35	3.40	13.86		13.92	0.000217	2.28	562.31	90.72	0.13
W14 Main	Upper	48412	Max WS	717.41	4.60	13.73		13.86	0.000686	3.05	346.19	96.18	0.20
W14 Main	Upper	48301	Max WS	688.69	4.60	13.65		13.78	0.000670	2.97	337.58	94.17	0.20
W14 Main	Mid	48154	Max WS	515.60	3.50	13.65		13.74	0.000367	2.40	303.74	111.00	0.17
W14 Main	Mid	47747	Max WS	427.39	4.60	13.54		13.60	0.000215	1.91	327.57	91.84	0.13
W14 Main	Mid	47604	Max WS	410.27	4.10	13.53		13.56	0.000142	1.54	1084.78	1409.34	0.11
W14 Main	Mid	47278	Max WS	397.07	4.10	13.51		13.51	0.000041	0.83	2362.69	1665.26	0.06
W14 Main	Mid	47072	Max WS	388.43	2.90	13.49		13.51	0.000109	1.38	1065.06	1618.76	0.09
W14 Main	Mid	46231	Max WS	382.66	3.10	13.41		13.42	0.000076	1.12	1018.09	1157.68	0.08
W14 Main	Mid	45970	Max WS	389.73	2.10	13.39		13.40	0.000073	1.09	1028.51	1140.68	0.07
W14 Main	Mid	45631	Max WS	391.88	2.90	13.33		13.37	0.000187	1.76	481.86	1847.04	0.12
W14 Main	Mid	45461	Max WS	394.36	1.10	13.29		13.34	0.000219	1.75	407.38	1645.22	0.12
W14 Main	Mid	45123	Max WS	401.16	1.20	13.20		13.25	0.000319	1.98	323.47	1448.43	0.15
W14 Main	Mid	44719	Max WS	408.18	1.30	13.03		13.10	0.000409	2.20	288.29	1487.93	0.17
W14 Main	Mid	44444	Max WS	418.87	1.60	13.00		13.02	0.000042	1.01	497.75	1287.82	0.06
W14 Main	Mid	44393	Max WS	420.95	1.60	13.00		13.02	0.000042	1.01	497.30	1287.43	0.06
W14 Main	Mid	44040	Max WS	432.67	1.60	12.99		13.00	0.000040	0.96	449.53	199.57	0.06
W14 Main	Mid	44008	Max WS	433.86	1.60	12.99		13.00	0.000015	0.78	558.89	343.93	0.04
W14 Main	Mid	44006		Culvert									
W14 Main	Mid	43938	Max WS	430.48	1.40	12.87		12.89	0.000021	0.93	464.20	177.61	0.05
W14 Main	Mid	43892	Max WS	432.27	1.60	12.86		12.89	0.000087	1.35	320.27	43.73	0.09
W14 Main	Mid	43729	Max WS	432.43	1.60	12.84		12.87	0.000087	1.35	344.27	162.58	0.09
W14 Main	Lower	43600	Max WS	659.04	1.60	12.84		12.91	0.000202	2.06	329.41	162.58	0.13
W14 Main	Lower	43256	Max WS	657.27	1.80	12.76		12.83	0.000265	2.13	308.87	248.73	0.15
W14 Main	Lower	43246	Max WS	658.06	-5.40	12.74	5.26	12.83	0.000363	2.38	276.64	183.29	0.15
W14 Main	Lower	43220		Bridge									
W14 Main	Lower	43216	Max WS	659.53	1.40	12.68		12.78	0.000361	2.59	254.97	167.55	0.17
W14 Main	Lower	43174	Max WS	660.78	0.70	12.68		12.77	0.000284	2.36	291.38	224.69	0.16
W14 Main	Lower	42773	Max WS	700.55	0.85	12.56		12.64	0.000269	2.32	302.10	482.73	0.15
W14 Main	Lower	42372	Max WS	731.36	1.00	12.44		12.51	0.000340	2.15	459.35	575.97	0.17
W14 Main	Lower	41911	Max WS	746.65	0.70	12.32		12.38	0.000207	2.14	929.86	768.08	0.14
W14 Main	Lower	41449	Max WS	781.20	0.40	12.18		12.27	0.000301	2.56	767.20	893.16	0.16
W14 Main	Lower	40987	Max WS	862.73	0.10	11.94		12.11	0.000543	3.35	367.39	675.99	0.21
W14 Main	Lower	40967	Max WS	864.46	-3.60	12.00		12.02	0.000024	1.20	717.63	882.15	0.06

HEC-RAS Plan: ABTb4 100Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Lower	40900		Culvert									
W14 Main	Lower	40862	Max WS	864.46	-5.10	11.95		11.97	0.000020	1.15	752.80	684.41	0.05
W14 Main	Lower	40798	Max WS	877.60	-1.20	11.89		11.99	0.000474	2.53	347.52	599.05	0.20
W14 Main	Lower	40311	Max WS	931.15	-0.80	11.65		11.79	0.000431	3.00	328.76	485.99	0.19
W14 Main	Lower	40149	Max WS	972.40	-0.40	11.54		11.72	0.000653	3.44	304.27	355.60	0.24
W14 Main	Lower	40114	Max WS	974.48	1.35	11.48	5.82	11.69	0.000667	3.69	264.39	286.36	0.22
W14 Main	Lower	40100		Bridge									
W14 Main	Lower	40082	Max WS	942.15	1.35	11.35		11.55	0.000657	3.62	260.14	210.37	0.22
W14 Main	Lower	40080	Max WS	942.31	-0.70	11.46		11.54	0.000211	2.31	408.31	275.62	0.14
W14 Main	Lower	40038	Max WS	945.65	-0.50	11.34		11.52	0.000998	3.43	275.72	222.28	0.28
W14 Main	Lower	39282	Max WS	1015.53	-0.65	10.73		10.89	0.000723	3.23	314.29	785.73	0.25
W14 Main	Lower	39029	Max WS	1034.31	-0.80	10.67		10.75	0.000383	2.40	689.35	2136.31	0.18
W14 Main	Lower	38269	Max WS	1066.89	-1.10	10.07		10.16	0.001165	2.42	554.70	2022.03	0.29
W14 Main	Lower	38016	Max WS	1086.92	-1.40	9.77		9.95	0.000686	3.52	449.28	1951.92	0.24
W14 Main	Lower	38000	Max WS	1088.00	-0.30	9.78	4.48	9.92	0.000417	3.03	413.69	1955.71	0.19
W14 Main	Lower	37950		Bridge									
W14 Main	Lower	37931	Max WS	1088.00	-0.90	9.55		9.68	0.000331	2.85	423.61	1867.70	0.18
W14 Main	Lower	37889	Max WS	1090.60	-1.40	9.46		9.66	0.000896	3.60	338.16	1743.72	0.28
W14 Main	Lower	37118	Max WS	1143.34	-1.37	9.01		9.08	0.000425	2.58	1479.32	1416.59	0.19
W14 Main	Lower	36925	Max WS	1157.44	-1.33	8.93		8.98	0.000507	2.25	1497.48	1401.43	0.20
W14 Main	Lower	36733	Max WS	1171.14	-1.30	8.80		9.08	0.001123	4.31	279.87	1336.16	0.31
W14 Main	Lower	36713	Max WS	1172.43	-1.00	8.75	3.54	9.00	0.000631	3.98	294.60	1306.14	0.25
W14 Main	Lower	36710		Bridge									
W14 Main	Lower	36698	Max WS	1171.92	-0.60	8.65		8.89	0.000527	3.95	297.03	1245.86	0.24
W14 Main	Lower	36680	Max WS	1173.56	-1.20	8.71		8.91	0.000644	3.60	326.79	1289.64	0.25
W14 Main	Lower	35677	Max WS	1246.70	-1.60	7.75		8.06	0.001110	4.47	279.11	674.71	0.31
W14 Main	Lower	35426	Max WS	1263.49	-2.00	7.43		7.76	0.001221	4.64	272.06	647.96	0.33
W14 Main	Lower	35169	Max WS	1281.60	-3.20	7.36	1.15	7.39	0.000167	1.83	2130.31	1555.90	0.13
W14 Main	Lower	35150		Bridge									
W14 Main	Lower	35131	Max WS	1281.53	-3.20	7.35		7.37	0.000067	1.28	2431.53	1575.02	0.08
W14 Main	Lower	34899	Max WS	1298.17	-3.10	7.33		7.36	0.000087	1.48	2040.95	1611.71	0.10
W14 Main	Lower	34046	Max WS	1359.55	-3.20	7.26		7.29	0.000074	1.40	2506.38	2379.96	0.09
W14 Main	Lower	33199	Max WS	1420.41	-4.00	7.18		7.22	0.000088	1.62	1253.79	478.08	0.10
W14 Main	Lower	32566	Max WS	1465.32	-3.60	7.10		7.15	0.000133	1.87	945.70	453.14	0.12
W14 Main	Lower	31941	Max WS	1511.38	-3.60	7.00		7.06	0.000158	1.98	860.98	487.62	0.13
W14 Main	Lower	31180	Max WS	1566.83	-3.20	6.84		6.92	0.000213	2.23	703.96	100.25	0.15
W14 Main	Lower	30479	Max WS	1617.77	-3.40	6.68		6.76	0.000224	2.29	707.66	100.46	0.15
W14 Main	Lower	29754	Max WS	1669.64	-3.90	6.52		6.60	0.000209	2.25	742.30	102.51	0.15
W14 Main	Lower	28922	Max WS	1729.95	-4.10	6.33		6.41	0.000224	2.33	743.14	102.55	0.15
W14 Main	Lower	28661	Max WS	1749.65	-5.00	6.17	0.27	6.31	0.000391	3.01	581.36	79.99	0.20
W14 Main	Lower	28567		Bridge									
W14 Main	Lower	28472	Max WS	1748.93	-4.60	5.69		5.84	0.000410	3.10	564.68	77.90	0.20
W14 Main	Lower	27798	Max WS	1797.18	-5.37	5.58		5.64	0.000154	1.97	914.22	2478.32	0.13
W14 Main	Lower	26970	Max WS	1856.28	-6.23	5.46		5.52	0.000135	1.92	968.31	123.09	0.12
W14 Main	Lower	26424	Max WS	1895.08	-6.80	5.31		5.41	0.000252	2.63	721.47	88.68	0.16

HEC-RAS Plan: ABTb4 100Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W14 Main	Lower	26220	Max WS	1909.72	-7.37	5.28		5.37	0.000174	2.33	817.97	90.06	0.14
W14 Main	Lower	26169	Max WS	1913.37	-7.37	5.27	-2.64	5.36	0.000175	2.34	817.10	90.03	0.14
W14 Main	Lower	26152	Bridge										
W14 Main	Lower	26131	Max WS	1912.58	-7.37	5.10		5.19	0.000185	2.39	801.77	89.57	0.14
W14 Main	Lower	26038	Max WS	1921.62	-7.37	5.08		5.17	0.000188	2.40	800.03	89.52	0.14
W14 Main	Lower	25159	Max WS	2007.48	-7.26	4.89		4.98	0.000228	2.48	810.87	100.66	0.15
W14 Main	Lower	25107	Max WS	2012.56	-4.20	4.83	-1.36	4.97	0.000359	3.01	667.88	74.00	0.18
W14 Main	Lower	25086	Bridge										
W14 Main	Lower	25080	Max WS	2012.61	-4.20	4.80		4.94	0.000362	3.02	665.93	74.00	0.18
W14 Main	Lower	24990	Max WS	2021.40	-5.19	4.79		4.91	0.000296	2.78	737.71	105.32	0.18
W14 Main	Lower	22266	Max WS	2287.03	-6.89	3.81		3.96	0.000379	3.15	728.34	99.04	0.20
W14 Main	Lower	21014	Max WS	2408.80	-6.89	3.15		3.36	0.000565	3.63	664.60	95.72	0.24
W14 Main	Lower	19620	Max WS	14.94	-6.89	2.00	-6.40	2.00	0.000000	0.03	556.82	91.71	0.00
W-15 Main	Upper	41958	Max WS	10.00	23.20	26.44		26.45	0.000013	0.16	61.41	34.43	0.02
W-15 Main	Upper	41911	Max WS	10.00	23.10	26.44		26.44	0.000012	0.16	61.14	29.63	0.02
W-15 Main	Upper	41876	Culvert										
W-15 Main	Upper	41841	Max WS	10.00	21.40	26.44		26.44	0.000002	0.10	103.70	39.70	0.01
W-15 Main	Upper	40226	Max WS	86.96	20.70	26.37		26.38	0.000077	0.63	293.62	573.08	0.05
W-15 Main	Upper	39062	Max WS	142.07	21.10	26.28		26.29	0.000081	0.64	458.91	585.41	0.06
W-15 Main	Upper	38866	Max WS	151.32	20.60	26.25		26.26	0.000162	0.89	171.35	437.52	0.08
W-15 Main	Upper	38831	Culvert										
W-15 Main	Upper	38796	Max WS	151.30	19.90	26.00		26.02	0.000235	1.12	135.43	354.12	0.10
W-15 Main	Upper	36942	Max WS	238.63	19.70	25.54		25.55	0.000266	1.14	529.78	780.74	0.10
W-15 Main	Upper	36875	Culvert										
W-15 Main	Upper	36808	Max WS	238.50	19.60	25.34		25.38	0.000756	1.89	252.81	326.70	0.17
W-15 Main	Upper	36792	Max WS	243.34	19.60	25.25	22.64	25.30	0.000966	2.10	223.41	305.41	0.19
W-15 Main	Upper	36741	Bridge										
W-15 Main	Upper	36690	Max WS	243.27	19.90	25.22		25.23	0.000431	1.39	401.09	592.61	0.13
W-15 Main	Upper	36328	Max WS	260.55	19.50	25.10		25.11	0.000221	1.07	690.98	873.49	0.09
W-15 Main	Upper	35441	Max WS	302.90	18.60	24.97		24.97	0.000085	0.71	1278.04	1492.96	0.06
W-15 Main	Upper	34175	Max WS	361.81	18.40	24.08		24.15	0.001510	2.86	402.98	1168.04	0.24
W-15 Main	Upper	34100	Lat Struct										
W-15 Main	Upper	33708	Max WS	378.33	17.90	23.61		23.64	0.000768	2.04	506.93	635.69	0.16
W-15 Main	Upper	33500	Lat Struct										
W-15 Main	Upper	33031	Max WS	167.03	17.40	23.27		23.29	0.000315	1.28	345.89	536.12	0.10
W-15 Main	Upper	33000	Lat Struct										
W-15 Main	Upper	32178	Max WS	119.93	16.80	23.10		23.11	0.000120	0.83	366.63	522.82	0.07
W-15 Main	Upper	32158	Max WS	120.72	16.80	23.09		23.10	0.000185	1.03	148.22	518.27	0.09
W-15 Main	Upper	32123	Culvert										
W-15 Main	Upper	32088	Max WS	120.68	17.00	22.84		22.86	0.000219	1.00	121.18	186.75	0.09
W-15 Main	Upper	31779	Max WS	132.90	16.80	22.79		22.80	0.000132	0.87	380.75	583.48	0.07
W-15 Main	Upper	30955	Max WS	165.40	16.20	22.60		22.63	0.000315	1.36	219.16	184.90	0.11
W-15 Main	Upper	29994	Max WS	203.87	15.60	22.07		22.13	0.000744	2.02	123.88	391.99	0.17
W-15 Main	Upper	28993	Max WS	245.34	15.40	21.62		21.70	0.000087	2.27	135.26	211.70	0.19
W-15 Main	Upper	28463	Max WS	269.44	15.20	21.59		21.65	0.000065	1.93	213.58	369.32	0.17

HEC-RAS Plan: ABTb4 100Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
W-15 Main	Upper	27930	Max WS	293.22	14.40	21.51	17.63	21.60	0.000104	2.41	121.86	29.21	0.21
W-15 Main	Upper	27864	Bridge										
W-15 Main	Upper	27797	Max WS	293.20	14.30	21.49		21.58	0.000097	2.30	127.29	32.60	0.20
W-15 Main	Upper	27008	Max WS	324.10	13.60	21.21		21.26	0.000671	2.10	441.78	508.05	0.16
W-15 Main	Upper	26388	Max WS	347.02	12.60	20.94		20.96	0.000254	1.35	881.72	986.88	0.10
W-15 Main	Upper	25748	Max WS	371.49	12.20	20.74		20.77	0.000360	1.70	451.55	347.13	0.12
W-15 Main	Upper	25098	Max WS	396.39	9.40	20.61		20.62	0.000082	0.82	1951.43	1893.46	0.06
W-15 Main	Upper	24312	Max WS	425.36	11.10	20.50		20.52	0.000185	1.26	922.44	775.85	0.09
W-15 Main	Upper	23662	Max WS	445.16	9.20	20.31	13.23	20.36	0.000345	1.94	254.83	703.56	0.12
W-15 Main	Upper	23634	Bridge										
W-15 Main	Upper	23606	Max WS	438.79	9.60	20.18		20.23	0.000262	1.72	255.65	453.40	0.11
W-15 Main	Upper	23462	Max WS	434.63	10.80	20.12		20.18	0.000463	2.06	283.58	165.83	0.14
W-15 Main	Mid	22961	Max WS	332.66	10.60	20.12		20.14	0.000210	1.39	434.50	410.25	0.09
W-15 Main	Mid	22285	Max WS	331.25	10.40	19.99	13.72	20.01	0.000186	1.37	485.58	1411.10	0.09
W-15 Main	Mid	22250	Bridge										
W-15 Main	Mid	22227	Max WS	330.38	10.50	19.95		19.98	0.000189	1.40	379.78	1272.30	0.09
W-15 Main	Mid	21477	Max WS	376.01	11.21	19.85		19.86	0.000105	0.94	421.66	118.23	0.07
W-15 Main	Mid	21400	Culvert										
W-15 Main	Mid	21329	Max WS	370.49	11.10	19.69		19.71	0.000107	0.96	387.03	113.05	0.07
W-15 Main	Mid	21028	Max WS	389.44	10.00	19.60		19.64	0.000290	1.65	236.92	107.05	0.12
W-15 Main	Mid	21000	Culvert										
W-15 Main	Mid	20870	Max WS	382.80	10.65	19.43		19.48	0.000315	1.83	209.67	104.82	0.12
W-15 Main	Mid	20827	Max WS	385.89	10.54	19.42		19.47	0.000361	2.20	337.10	228.86	0.14
W-15 Main	Mid	20700	Culvert										
W-15 Main	Mid	20648	Max WS	378.07	10.48	19.28		19.35	0.000415	2.34	265.72	215.84	0.15
W-15 Main	Mid	19997	Max WS	423.11	8.70	18.92		18.99	0.000622	2.10	212.74	325.95	0.16
W-15 Main	Mid	19018	Max WS	509.63	8.40	18.04		18.16	0.001021	2.69	189.43	33.73	0.20
W-15 Main	Mid	18298	Max WS	580.65	7.50	16.78		16.99	0.002122	3.64	159.57	40.10	0.27
W-15 Main	Mid	17456	Max WS	668.75	6.40	15.61		15.69	0.000861	2.73	390.59	170.76	0.19
W-15 Main	Mid	17221	Max WS	693.50	6.53	15.39		15.47	0.000904	2.27	305.89	72.40	0.19
W-15 Main	Mid	17201	Max WS	695.60	6.53	15.37	10.95	15.45	0.000922	2.28	304.45	72.28	0.20
W-15 Main	Mid	17091	Bridge										
W-15 Main	Mid	16981	Max WS	695.61	6.53	14.84		14.94	0.001301	2.60	267.15	67.43	0.23
W-15 Main	Mid	16926	Max WS	701.39	5.70	14.85	9.49	14.90	0.000357	1.78	395.00	65.68	0.13
W-15 Main	Mid	16901	Bridge										
W-15 Main	Mid	16876	Max WS	574.14	6.60	14.31		14.48	0.001713	3.32	172.89	34.54	0.26
W-15 Main	Mid	16482	Max WS	552.90	4.39	13.93		13.99	0.000620	2.12	604.44	522.22	0.16
W-15 Main	Upper1	16088	Max WS	458.06	4.39	13.93		13.97	0.000414	1.73	557.16	404.48	0.13
W-15 Main	Upper1	15793	Max WS	457.39	4.39	13.80		13.84	0.000500	1.88	535.96	478.98	0.14
W-15 Main	Upper1	15693	Max WS	457.20	4.39	13.74		13.79	0.000532	1.92	511.50	462.56	0.15
W-15 Main	Upper1	15299	Max WS	456.83	4.31	13.61	8.34	13.63	0.000240	1.62	783.35	470.90	0.11
W-15 Main	Upper1	15280	Bridge										
W-15 Main	Upper1	15262	Max WS	456.65	4.15	13.51		13.56	0.000518	1.98	343.98	411.01	0.15
W-15 Main	Upper1	15261	Max WS	456.65	3.81	13.50		13.57	0.000634	2.23	392.03	408.28	0.16
W-15 Main	New	800	Max WS	64.55	6.00	13.89	7.60	13.91	0.000975	1.27	51.03	1.95	0.08









HEC-RAS Plan: ABTb4 100Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Gum Bayou	Upper	10682	Max WS	961.95	2.40	10.18		10.36	0.000957	3.39	283.93	4812.08	0.22
Gum Bayou	Upper	10555	Max WS	962.44	4.10	10.16		10.18	0.000165	1.19	883.17	4797.95	0.09
Gum Bayou	Upper	10046	Max WS	959.96	3.70	10.12		10.12	0.000010	0.32	8228.30	4774.52	0.02
Gum Bayou	Lower	9910	Max WS	1197.63	3.90	10.12		10.12	0.000015	0.34	8111.79	4774.52	0.03
Gum Bayou	Lower	9149	Max WS	1196.28	1.64	10.11		10.11	0.000007	0.28	9651.23	3702.98	0.02
Gum Bayou	Lower	8649	Max WS	1345.95	0.76	10.11		10.11	0.000012	0.36	8400.53	3325.14	0.02
Gum Bayou	Lower	8532	Max WS	1381.10	0.76	10.10		10.10	0.000012	0.37	8395.81	3325.12	0.02
Gum Bayou	Lower	7891	Max WS	1573.08	0.70	10.10		10.10	0.000007	0.33	9310.82	2899.09	0.02
Gum Bayou	Lower	7813	Max WS	1596.28	0.50	10.10		10.10	0.000007	0.28	8770.71	2962.75	0.02
Gum Bayou	Lower	7775		Culvert									
Gum Bayou	Lower	7737	Max WS	1575.18	1.30	9.60		10.11	0.003647	5.75	273.75	2432.27	0.42
Gum Bayou	Lower	7656	Max WS	1598.44	0.60	9.60		9.60	0.000008	0.32	8727.60	2702.63	0.02
Gum Bayou	Lower	2746	Max WS	15.35	-3.37	5.80	-2.80	5.80	0.000000	0.03	461.89	91.46	0.00
Doubloon	to Marsh	19396	Max WS	651.36	-2.36	7.56		7.56	0.000031	0.65	1757.68	533.49	0.04
Doubloon	to Marsh	18926	Max WS	651.32	-1.55	7.36		7.49	0.000628	2.93	222.67	530.00	0.18
Doubloon	to Marsh	18916		Culvert									
Doubloon	to Marsh	18906	Max WS	651.26	-1.55	5.76		5.97	0.001348	3.68	177.07	418.04	0.26
Doubloon	to Marsh	18661	Max WS	651.26	-1.72	5.66		5.67	0.000036	0.60	1638.91	1287.55	0.04
Doubloon	to Marsh	18361	Max WS	945.12	-1.93	5.65		5.65	0.000051	0.72	2225.63	1283.67	0.05
Doubloon	to Marsh	18061	Max WS	949.22	-2.14	5.64		5.64	0.000037	0.63	2660.99	1278.96	0.04
Doubloon	to Marsh	17782	Max WS	952.58	-2.51	5.63		5.63	0.000026	0.53	3981.14	1866.15	0.04
Doubloon	to Marsh	17504	Max WS	952.01	-2.88	5.62		5.62	0.000043	0.70	2489.16	2106.55	0.05
Doubloon	to Marsh	17225	Max WS	1136.78	-3.25	5.46	0.64	5.57	0.000673	2.80	426.61	2379.98	0.19
Doubloon	to Marsh	17207		Bridge									
Doubloon	to Marsh	17188	Max WS	1071.15	-3.25	5.26		5.38	0.000700	2.80	392.52	2350.27	0.19
Doubloon	to Marsh	16717	Max WS	1047.03	-2.92	5.14		5.15	0.000132	1.19	1493.17	2335.56	0.08
Doubloon	to Marsh	16246	Max WS	1052.64	-2.59	5.09		5.10	0.000075	0.88	2523.16	2337.43	0.06
Doubloon	to Marsh	15776	Max WS	1063.76	-2.25	5.06		5.07	0.000065	0.80	2856.24	2345.60	0.06
Doubloon	to Marsh	15305	Max WS	1076.20	-1.92	5.03		5.04	0.000063	0.77	3055.83	2366.87	0.06
Doubloon	to Marsh	14834	Max WS	1089.32	-1.59	5.00		5.01	0.000073	0.80	2704.93	2322.15	0.06
Doubloon	to Marsh	14363	Max WS	1102.47	-1.26	4.96		4.97	0.000077	0.79	2643.64	2343.75	0.06
Doubloon	to Marsh	13893	Max WS	1115.99	-0.93	4.93		4.93	0.000082	0.80	2570.69	2308.00	0.06
Doubloon	to Marsh	13422	Max WS	1129.90	-0.59	4.89		4.89	0.000092	0.81	2490.31	2394.30	0.07
Doubloon	to Marsh	12951	Max WS	1144.10	-0.26	4.84		4.85	0.000105	0.83	2401.38	2459.29	0.07
Doubloon	to Marsh	12480	Max WS	1158.51	0.07	4.79		4.79	0.000122	0.85	2302.98	2458.74	0.07
Doubloon	to Marsh	12009	Max WS	1173.07	0.40	4.72		4.73	0.000151	0.90	2199.57	2526.66	0.08
Doubloon	to Marsh	11539	Max WS	1187.67	0.74	4.64		4.65	0.000197	0.96	2107.86	2720.54	0.09
Doubloon	to Marsh	11068	Max WS	1202.73	1.07	4.53		4.54	0.000248	1.00	2002.03	2705.13	0.10
Doubloon	to Marsh	10597	Max WS	1218.03	1.40	4.39		4.40	0.000339	1.07	1831.09	2603.19	0.11
Doubloon	to Marsh	10500	Max WS	1221.33	1.37	4.37		4.38	0.000155	0.73	2440.25	1379.63	0.08
Doubloon	to Marsh	10108	Max WS	1234.86	1.27	4.31		4.31	0.000172	0.77	2361.02	1362.66	0.08
Doubloon	to Marsh	9619	Max WS	1251.77	1.14	4.21		4.22	0.000215	0.89	2158.66	1361.51	0.09
Doubloon	to Marsh	9130	Max WS	1268.64	1.02	4.10		4.11	0.000238	0.98	1981.89	1205.32	0.10
Doubloon	to Marsh	8641	Max WS	1285.55	0.89	3.99		4.00	0.000207	1.05	1928.59	1083.56	0.11
Doubloon	to Marsh	8152	Max WS	1302.45	0.77	3.89		3.90	0.000201	1.03	1956.43	1067.24	0.11

HEC-RAS Plan: ABTb4 100Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Doubloon	to Marsh	7663	Max WS	1319.38	0.64	3.80		3.81	0.000198	1.03	2008.12	1097.51	0.11
Doubloon	to Marsh	7231	Max WS	1334.33	0.54	3.70		3.71	0.000225	1.09	1872.03	1006.78	0.12
Doubloon	to Marsh	6800	Max WS	1349.23	0.44	3.60		3.61	0.000265	1.18	1768.78	999.85	0.13
Doubloon	to Marsh	6368	Max WS	1364.14	0.34	3.47		3.49	0.000296	1.23	1719.17	1013.92	0.13
Doubloon	to Marsh	5937	Max WS	1379.01	0.24	3.34		3.36	0.000317	1.25	1637.99	903.81	0.14
Doubloon	to Marsh	5505	Max WS	1393.85	0.14	3.18		3.20	0.000402	1.38	1421.27	752.29	0.15
Doubloon	to Marsh	5083	Max WS	1413.59	0.01	2.99		3.01	0.000307	1.18	1863.04	1102.28	0.13
Doubloon	to Marsh	4661	Max WS	1433.24	-0.11	2.85		2.86	0.000266	1.08	2191.98	1409.96	0.12
Doubloon	to Marsh	4239	Max WS	1452.84	-0.24	2.71		2.72	0.000248	1.03	2430.12	1683.81	0.12
Doubloon	to Marsh	3745	Max WS	1469.25	-0.34	2.59		2.59	0.000260	1.04	2482.76	1825.93	0.12
Doubloon	to Marsh	3250	Max WS	1486.04	-0.44	2.46		2.47	0.000258	1.02	2527.27	1844.05	0.12
Doubloon	to Marsh	2756	Max WS	1502.80	-0.54	2.33		2.34	0.000246	0.99	2613.91	1885.95	0.12
Doubloon	to Marsh	2262	Max WS	1519.56	-0.64	2.22		2.22	0.000233	0.96	2710.83	1941.93	0.11
Doubloon	to Marsh	1767	Max WS	1536.34	-0.74	2.11		2.11	0.000223	0.93	2799.85	1994.67	0.11
Doubloon	to Marsh	1273	Max WS	5.00	-0.84	2.00	-0.54	2.00	0.000000	0.00	2886.29	2040.32	0.00
Doubloon	to Pearl	15291	Max WS	1301.83	-3.39	7.56		7.58	0.000116	1.29	1782.17	533.49	0.08
Doubloon	to Pearl	14393	Max WS	1289.26	-3.39	7.43		7.46	0.000159	1.50	1745.74	782.07	0.09
Doubloon	to Pearl	13496	Max WS	1374.34	-3.39	7.27		7.28	0.000104	1.20	2038.97	603.10	0.07
Doubloon	to Pearl	12598	Max WS	1392.45	-3.39	7.08		7.12	0.000300	1.99	1029.39	339.69	0.12
Doubloon	to Pearl	11636	Max WS	1416.40	-3.94	6.92		6.93	0.000071	0.97	2990.21	1121.41	0.06
Doubloon	to Pearl	10674	Max WS	1415.13	-4.49	6.88		6.88	0.000036	0.70	4026.76	2190.44	0.04
Doubloon	to Pearl	9711	Max WS	1603.00	-5.04	6.83		6.83	0.000061	0.92	2970.47	1100.28	0.06
Doubloon	to Pearl	8749	Max WS	1654.79	-5.60	6.58		6.65	0.000384	2.28	932.81	273.42	0.14
Doubloon	to Pearl	7787	Max WS	1703.52	-6.15	6.14		6.24	0.000478	2.48	754.99	194.42	0.16
Doubloon	to Pearl	6824	Max WS	1757.61	-6.70	5.64		5.74	0.000542	2.56	719.62	796.12	0.17
Doubloon	to Pearl	5862	Max WS	1809.20	-7.25	5.06		5.17	0.000630	2.65	690.95	133.35	0.18
Doubloon	to Pearl	4900	Max WS	1857.31	-7.80	4.73		4.78	0.000202	1.84	1268.30	910.99	0.12
Doubloon	to Pearl	4420	Max WS	1883.23	-7.88	4.63		4.67	0.000227	1.96	1221.58	984.86	0.13
Doubloon	to Pearl	3940	Max WS	1909.15	-7.96	4.54		4.59	0.000248	2.05	1166.20	959.04	0.14
Doubloon	to Pearl	3460	Max WS	1935.07	-8.04	4.45		4.50	0.000271	2.16	1134.03	968.70	0.14
Doubloon	to Pearl	2980	Max WS	1961.01	-8.12	4.37		4.40	0.000157	1.65	1732.95	1004.31	0.11
Doubloon	to Pearl	2500	Max WS	1986.99	-8.20	4.29		4.32	0.000165	1.69	1729.15	1013.54	0.11
Doubloon	to Pearl	2020	Max WS	2013.00	-8.29	4.21		4.24	0.000178	1.77	1723.89	1043.10	0.12
Doubloon	to Pearl	1540	Max WS	2039.07	-8.37	4.13		4.16	0.000174	1.75	1778.42	1075.72	0.11
Doubloon	to Pearl	1060	Max WS	2065.23	-8.45	4.05		4.08	0.000154	1.65	1805.08	1102.40	0.11
Doubloon	to Pearl	580	Max WS	2091.54	-8.53	3.98		4.00	0.000151	1.63	1839.82	1125.64	0.11
Doubloon	to Pearl	100	Max WS	10.00	-8.61	3.91	-7.67	3.91	0.000000	0.01	1880.99	1140.95	0.00
Bayou Vincent	Upper	6072	Max WS	4100.45	5.31	19.33		19.66	0.001133	4.88	1199.27	190.00	0.26
Bayou Vincent	Upper	5509	Max WS	4098.30	3.64	18.88		19.11	0.000736	4.21	1429.38	190.00	0.21
Bayou Vincent	Upper	5227	Max WS	4150.17	2.81	18.70		18.91	0.000609	3.97	1554.48	190.00	0.19
Bayou Vincent	Upper	5174	Max WS	4160.04	3.00	18.73	10.82	18.85	0.000474	2.84	1527.58	170.00	0.16
Bayou Vincent	Upper	5166		Bridge									
Bayou Vincent	Upper	5158	Max WS	4158.74	3.00	18.50		18.63	0.000513	2.91	1489.46	170.00	0.17
Bayou Vincent	Upper	4963	Max WS	4168.04	3.00	18.47		18.60	0.000520	2.92	1484.76	170.00	0.17
Bayou Vincent	Upper	4083	Max WS	4330.26	3.52	17.80		17.97	0.000947	3.51	1978.61	723.33	0.22

HEC-RAS Plan: ABTb4 100Yr Profile: Max WS (Continued)

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Bayou Vincent	Upper	3643	Max WS	4411.16	3.78	16.45		16.96	0.004092	5.87	824.98	165.14	0.44
Bayou Vincent	Upper	3590	Max WS	4421.10	4.30	16.57	11.17	16.66	0.000516	2.60	3028.20	1000.00	0.17
Bayou Vincent	Upper	3582	Bridge										
Bayou Vincent	Upper	3574	Max WS	4420.98	4.30	16.53		16.62	0.000532	2.63	2984.87	1000.00	0.17
Bayou Vincent	Upper	3379	Max WS	4430.68	2.78	16.26		16.64	0.002686	5.08	990.12	375.45	0.36
Bayou Vincent	Upper	2851	Max WS	4526.89	1.84	14.79		15.23	0.002844	5.61	1213.48	851.86	0.38
Bayou Vincent	Upper	1795	Max WS	4719.47	-0.05	12.37		12.62	0.002069	5.54	2667.14	1216.10	0.33
Bayou Vincent	Upper	1267	Max WS	4719.37	-0.99	11.64		11.69	0.001059	4.02	4116.24	1325.78	0.22
Bayou Vincent	Lower	1214	Max WS	5118.31	-0.99	11.64		11.70	0.001246	4.36	4116.24	1325.78	0.24
Bayou Vincent	Lower	1126	Max WS	5118.22	-1.07	11.53		11.59	0.001281	4.42	4075.33	1323.72	0.24
Bayou Vincent	Lower	686	Max WS	5121.68	-1.49	10.90		10.98	0.001560	4.81	3803.56	1309.96	0.26
Bayou Vincent	Lower	86	Max WS	5126.51	-3.07	10.25		10.29	0.000681	3.36	5050.75	1350.00	0.18
Bayou Vincent	Lower	0	Max WS	15.06	-3.30	10.20	-2.56	10.20	0.000000	0.01	5290.82	1350.00	0.00

# Appendix E



**ENGINEER'S OPINION OF PROBABLE COST**

**Recommended Improvements**

**A. Widen W-15 Main from Military Road Bridge through Lower French Branch Area**

ITEM	UNIT	QUANTITY	UNIT COST	TOTAL COST
Mobilization	LS	1	\$46,595.70	\$46,595.70
Grading and Excavation/Disposal	CY	11,100	\$20.70	\$229,770.00
Land Clearing	AC	3	\$13,800.00	\$41,400.00
Stabilization	SY	2,250	\$4.03	\$9,056.25
Erosion Control	LS	1	\$57,500.00	\$57,500.00
Modifications to Culvert Outfalls	LS	1	\$17,250.00	\$17,250.00
Temporary Haul Road, 20' Wide x 8" Thick	LF	4,000	\$109.25	\$437,000.00
Fence Replacement, 6' wood	LF	100	\$23.00	\$2,300.00
Specialty Fence Replacement	LF	400	\$40.25	\$16,100.00
			<b>Subtotal</b>	<b>\$856,971.95</b>

**B. Widen W-15 Main From Doubloon Bayou to Military Road Bridge**

ITEM	UNIT	QUANTITY	UNIT COST	TOTAL COST
Mobilization	LS	1	\$54,949.30	\$54,949.30
Grading and Excavation/Disposal	CY	35,000	\$20.70	\$724,500.00
Land Clearing	AC	6	\$13,800.00	\$82,800.00
Stabilization	SY	3,900	\$4.03	\$15,697.50
Erosion Control	LS	1	\$57,500.00	\$57,500.00
Temporary Haul Road, 20' Wide x 8" Thick	LF	2,000	\$109.25	\$218,500.00
			<b>Subtotal</b>	<b>\$1,153,946.80</b>

**D. Construction of a Diversion to connect the W-15 Main and Reine Canal**

ITEM	UNIT	QUANTITY	UNIT COST	TOTAL COST
Mobilization	LS	1	\$27,000.00	\$27,000.00
Grading and Excavation/Disposal	CY	17,820	\$18.00	\$320,760.00
Land Clearing	AC	3	\$12,000.00	\$36,000.00
Stabilization	SY	2,250	\$4.03	\$9,067.50
Erosion Control	LS	1	\$10,000.00	\$10,000.00
High Water overflow structure	LS	1	\$20,000.00	\$20,000.00
Temporary Haul Road, 20' Wide x 8" Thick	LF	900	\$109.25	\$98,325.00
			<b>Subtotal</b>	<b>\$521,152.50</b>

**T. Construction of the Tenet Pond**

ITEM	UNIT	QUANTITY	UNIT COST	TOTAL COST
Mobilization	LS	1	\$100,050.00	\$100,050.00
Clearing and Grubbing	AC	35	\$5,750.00	\$201,250.00
Rip Rap Weir	LS	1	\$86,250.00	\$86,250.00
6" Gravel Perimeter Access Road	LS	1	\$34,500.00	\$34,500.00
Excavation and Embankment	CY	470,861	\$5.75	\$2,707,450.75
Erosion Control	LS	1	\$28,750.00	\$28,750.00
Hydroseeding	AC	50	\$1,380.00	\$69,000.00
18" RCP Pipe	LF	72	\$63.25	\$4,554.00
			<b>Subtotal</b>	<b>\$3,231,804.75</b>

**Total Construction Cost For A, B, D, and T** **\$5,763,876.00**

**Local Funding Soft Costs**

ITEM	UNIT	QUANTITY	UNIT COST	TOTAL COST
Engineering Design & Surveying/Reimbursement	LS	1	\$581,700.00	\$711,700.00
Temporary Construction Easements	LS	1	\$157,770.00	\$157,770.00
Drainage Study Phase I	LS	1	\$393,500.00	\$393,500.00
Project Management Costs	LS	1	\$861,697.00	\$537,038.00
Construction Inspection	LS	1	\$157,281.71	\$157,281.71
CMT Testing	LS	1	\$50,000.00	\$50,000.00
Land Acquisition	AC	9.94	\$108,900.00	\$1,082,466.00
Mitigation (wetlands)	AC	24.00	\$45,300.00	\$1,087,200.00
Mitigation (other waters)	AC	5.82	\$22,050.00	\$128,331.00
			<b>Total</b>	<b>\$4,305,286.71</b>

**Grand Total (Construction Cost and Local Funding Soft Cost)** **\$10,069,162.71**