SYMMETRIC WITH RIGHTSIDE

III.--UNFACTORED FORCES AT ENDS OF MEMBERS
(MEMBER FORCES ARE GIVEN AT ENDS OF FLEXIBLE LENGTH.)

III.A.--RIGHTSIDE MEMBERS - TYPE 1 MONOLITH
(POSITIVE AXIAL FORCE IS COMPRESSION.)
(POSITIVE SHEAR FORCE TENDS TO MOVE MEMBER UPWARD OR TOWARD STRUCTURE CENTERLINE.)
(POSITIVE MOMENT PRODUCES COMPRESSION ON TOP OF MEMBER OR ON SIDE OF MEMBER TOWARD STRUCTURE CENTERLINE.)

MEM NO	DISTANCE FROM CTR-LINE (FT)	ELEVATION (FT)	<--------FORCES (LBS OR LB-FT)-------> AXIAL	SHEAR	MOMENT
		***** BASE MEMBERS *****			
1	.00	-18.00	2.736E+05	3.635E+04	-3.665E+05
	8.50	-18.00	2.736E+05	1.720E+04	-2.852E+05
2	8.50	-18.00	2.736E+05	6.052E+04	-2.853E+05
	17.00	-18.00	2.736E+05	-6.969E+03	1.518E+03
3	17.00	-18.00	2.737E+05	9.718E+04	1.339E+03
	25.50	-18.00	2.737E+05	-4.363E+04	5.998E+05
4	25.50	-18.00	2.738E+05	1.446E+05	5.996E+05
	34.00	-18.00	2.738E+05	-9.107E+04	1.601E+06
5	34.00	-18.00	2.738E+05	1.823E+05	1.601E+06
	38.25	-18.00	2.738E+05	-1.602E+05	2.321E+06
6	42.75	-18.00	8.379E+04	3.150E+03	-1.084E+04
	44.00	-18.00	8.379E+04	0.000E+00	-7.686E+03
		***** STEM MEMBERS *****			
7	40.55	-15.75	1.429E+05	-2.003E+05	2.206E+06
	38.50	13.70	3.578E+04	3.150E+03	-2.492E+04
8	38.50	13.70	3.591E+04	-6.552E+02	-2.492E+04
	38.50	25.05	1.260E+04	0.000E+00	-2.520E+04

III.B.-- LEFTSIDE MEMBERS - TYPE 1 MONOLITH
SYMMETRIC WITH RIGHTSIDE

PROGRAM CWFRAM - ANALYSIS OF TWO-DIMENSIONAL U-FRAME OR W-FRAME STRUCTURES
DATE 30-MAY-2002 TIME 17.04.02

I.--HEADING
'BAYOU SORREL LOCK
'CONSTRUCTION CASE WITH 14" CONCRETE PILES

```
*******************************
*  RESULTS OF FRAME ANALYSIS  *
*******************************
```

II.--STRUCTURE DISPLACEMENTS

II.A.--RIGHTSIDE DISPLACEMENTS - TYPE 1 MONOLITH
(POSITIVE HORIZONTAL DISPLACEMENT IS TOWARD STRUCTURE CENTERLINE.)
(POSITIVE VERTICAL DISPLACEMENT IS DOWN.)
(POSITIVE ROTATION IS COUNTERCLOCKWISE.)

JT NO	DISTANCE FROM CTR-LINE (FT)	ELEVATION (FT)	<----DISPLACEMENT (FT OR RADIANS)----> HORIZONTAL	VERTICAL	ROTATION
		***** BASE JOINTS *****			
1	.00	-18.00	0.000E+00	2.959E-03	0.000E+00

2	8.50	-18.00	1.232E-04	3.163E-03	-4.324E-05
3	17.00	-18.00	2.465E-04	3.672E-03	-5.885E-05
4	25.50	-18.00	3.698E-04	4.111E-03	-8.022E-06
5	34.00	-18.00	4.931E-04	3.712E-03	1.629E-04
6	40.50	-18.00	5.548E-04	2.135E-03	3.108E-04
7	44.00	-18.00	5.603E-04	1.048E-03	3.106E-04
		***** STEM JOINTS *****			
8	38.50	13.70	2.306E-02	3.717E-03	5.384E-04
9	40.50	25.80	2.870E-02	2.957E-03	4.020E-04

II.B.-- LEFTSIDE DISPLACEMENTS - TYPE 1 MONOLITH
SYMMETRIC WITH RIGHTSIDE

III.--UNFACTORED FORCES AT ENDS OF MEMBERS
(MEMBER FORCES ARE GIVEN AT ENDS OF FLEXIBLE LENGTH.)

III.A.--RIGHTSIDE MEMBERS - TYPE 1 MONOLITH
(POSITIVE AXIAL FORCE IS COMPRESSION.)
(POSITIVE SHEAR FORCE TENDS TO MOVE MEMBER UPWARD OR TOWARD STRUCTURE CENTERLINE.)
(POSITIVE MOMENT PRODUCES COMPRESSION ON TOP OF MEMBER OR ON SIDE OF MEMBER TOWARD STRUCTURE CENTERLINE.)

MEM NO	DISTANCE FROM CTR-LINE (FT)	ELEVATION (FT)	<--------FORCES (LBS OR LB-FT)-------> AXIAL	SHEAR	MOMENT
		***** BASE MEMBERS *****			
1	.00	-18.00	2.736E+05	3.635E+04	-3.665E+05
	8.50	-18.00	2.736E+05	1.720E+04	-2.852E+05
2	8.50	-18.00	2.736E+05	6.052E+04	-2.853E+05
	17.00	-18.00	2.736E+05	-6.969E+03	1.518E+03
3	17.00	-18.00	2.737E+05	9.718E+04	1.339E+03
	25.50	-18.00	2.737E+05	-4.363E+04	5.998E+05
4	25.50	-18.00	2.738E+05	1.446E+05	5.996E+05
	34.00	-18.00	2.738E+05	-9.107E+04	1.601E+06
5	34.00	-18.00	2.738E+05	1.823E+05	1.601E+06
	38.25	-18.00	2.738E+05	-1.602E+05	2.321E+06
6	42.75	-18.00	8.379E+04	3.150E+03	-1.084E+04
	44.00	-18.00	8.379E+04	0.000E+00	-7.686E+03
		***** STEM MEMBERS *****			
7	40.55	-15.75	1.429E+05	-2.003E+05	2.206E+06
	38.50	13.70	3.578E+04	3.150E+03	-2.492E+04
8	38.50	13.70	3.591E+04	-6.552E+02	-2.492E+04
	38.50	25.05	1.260E+04	0.000E+00	-2.520E+04

III.B.-- LEFTSIDE MEMBERS - TYPE 1 MONOLITH
SYMMETRIC WITH RIGHTSIDE

PROGRAM CWFRAM - ANALYSIS OF TWO-DIMENSIONAL U-FRAME OR W-FRAME STRUCTURES
DATE 30-MAY-2002 TIME 17.04.02

I.--HEADING
'BAYOU SORREL LOCK
'CONSTRUCTION CASE WITH 14" CONCRETE PILES

II.--RESULTS FOR RIGHTSIDE PILES

II.A.--PILE HEAD FORCES AND DISPLACEMENTS
(UNITS ARE POUNDS, FEET, AND RADIANS.)

(POSITIVE AXIAL FORCE IS COMPRESSION.)
(POSITIVE SHEAR TENDS TO MOVE PILE HEAD AWAY FROM CENTERLINE.)
(POSITIVE MOMENT PRODUCES COMPRESSION ON SIDE OF PILE TOWARD CENTERLINE.)
(POSITIVE AXIAL DISPLACEMENT IS DOWN.)
(POSITIVE LATERAL DISPLACEMENT IS AWAY FROM CENTERLINE.)
(POSITIVE ROTATION TENDS TO ROTATE PILE HEAD TOWARD CENTERLINE.)

PILE NO.	DIST. TO CTR-LINE	<-------PILE HEAD FORCES-------> AXIAL	SHEAR	MOMENT	<---PILE HEAD DISPLACEMENTS---> AXIAL	LATERAL	ROTATION
1	.00	7.269E+04	0.000E+00	0.000E+00	2.959E-03	0.000E+00	0.000E+00
2	8.50	7.772E+04	-3.564E+01	0.000E+00	3.163E-03	-2.530E-04	-4.324E-05
3	17.00	9.021E+04	-5.961E+01	0.000E+00	3.672E-03	-4.230E-04	-5.885E-05
4	25.50	1.010E+05	-5.550E+01	0.000E+00	4.111E-03	-3.939E-04	-8.022E-06
5	34.00	9.120E+04	-6.182E-01	0.000E+00	3.712E-03	-4.387E-06	1.629E-04
6	42.50	3.718E+04	5.321E+01	0.000E+00	1.513E-03	3.776E-04	3.108E-04

II.B.--PILE ALLOWABLES COMPARISONS
ALLOWABLES DATA NOT PROVIDED FOR THIS SIDE.

III.--RESULTS FOR LEFTSIDE PILES
SYMMETRIC WITH RIGHTSIDE.

IV.--RESULTANTS OF PILE FORCES ON STRUCTURE
(POSITIVE HORIZONTAL IS TO THE RIGHT)
(POSITIVE VERTICAL IS UP)
(POSITIVE MOMENT IS COUNTERCLOCKWISE ABOUT CENTERLINE
(UNITS ARE POUNDS AND FEET)

	HORIZONTAL	VERTICAL	MOMENT
RIGHTSIDE PILES	9.8162E+01	4.3365E+05	9.4510E+06
LEFTSIDE PILES	-9.8162E+01	4.3365E+05	-9.4510E+06
TOTAL	0.0000E+00	8.6730E+05	0.0000E+00

NOTE RIGHTSIDE AND LEFTSIDE RESULTANTS INCLUDE ONE HALF OF FORCES FOR VERTICAL PILES ON CENTERLINE.

PROGRAM CWFRAM - ANALYSIS OF TWO-DIMENSIONAL U-FRAME OR W-FRAME STRUCTURES
DATE 30-MAY-2002 TIME 15.57.07

I.--HEADING
'BAYOU SORREL LOCK
'NORMAL OPERATING CASE WITH 14" CONCRETE PILES

```
****************
*  INPUT DATA  *
****************
```

II.--PLANE FRAME ANALYSIS
RIGID LINK FACTOR = .75
MEMBER FORCE FACTOR = 1.00

III.--STRUCTURE DATA

III.A.--MATERIAL PROPERTIES
MODULUS OF ELASTICITY OF CONCRETE = 3.120E+06 (PSI)
POISSON'S RATIO FOR CONCRETE = .20
UNIT WEIGHT OF CONCRETE = 150.0 (PCF)
THICKNESS OF TWO-DIMENSIONAL SLICE = 7.00 (FT)

III.B.--FLOOR DATA
FLOOR WIDTH = 37.50 (FT)
FLOOR ELEVATION = -15.00 (FT)
FLOOR FILLET SIZE = .00 (FT)

III.C.--BASE DATA

III.C.1.--RIGHTSIDE

DISTANCE FROM CENTERLINE (FT)	ELEVATION (FT)
44.00	-21.00

III.C.2.--LEFTSIDE
SYMMETRIC WITH RIGHTSIDE.

III.D.--STEM DATA

III.D.1.--RIGHTSIDE

DISTANCE FROM STEM FACE (FT)	ELEVATION (FT)
6.00	26.80
6.00	24.80
2.00	24.80
2.00	13.70
6.00	-15.00
6.50	-15.00

III.D.2.--LEFTSIDE
SYMMETRIC WITH RIGHTSIDE.

III.E.--CULVERT DATA
NONE

III.F.--VOID DATA
NONE

IV.--BACKFILL DATA

IV.A.--RIGHTSIDE BACKFILL PRESSURE DATA

ELEVATION (FT)	VERTICAL PRESSURE (PSF)	HORIZONTAL PRESSURE (PSF)	SHEAR STRESS (PSF)
15.00	.00	.00	.00
13.70	.00	144.00	.00
12.00	.00	264.00	.00
12.00	.00	165.00	.00
.00	.00	897.00	.00
-15.00	.00	1343.00	.00
-21.00	.00	1522.00	.00

IV.B.--LEFTSIDE BACKFILL PRESSURE DATA
SYMMETRIC WITH RIGHTSIDE

V.--BASE REACTION DATA

V.A.--RIGHTSIDE PILE DATA

V.A.1.--PILE LAYOUT DATA

<------START-----> PILE NO.	DIST. FROM CENTERLINE (FT)	STOP PILE NO.	PILE NO. STEP	STEP IN CL DIST. (FT)
1	.00	6	1	8.50

V.A.2.--PILE PROPERTIES

<----------START----------> PILE NO.	MODULUS OF ELASTICITY (PSI)	SECT AREA (SQIN)	MOMENT OF INERTIA (IN**4)	LENGTH (FT)	AXIAL COEFF	HEAD FIXITY	STOP PILE NO.	PILE NO. STEP
1	4.07E+06	196.00	3201.00	65.00	2.00	.00	6	1

V.A.3.--SOIL PROPERTIES

<----------START----------> PILE NO.	CONSTANT COEFFICIENT (PSI)	LINEAR COEFFICIENT (PCI)	STOP PILE NO.	PILE NO. STEP
1	180.000	.000	6	1

V.A.4.--PILE HEAD STIFFNESS MATRICES
NONE

V.A.4.--PILE BATTER DATA
NONE

V.A.5.--PILE LOAD COMPARISON DATA
NONE

V.B.-- LEFTSIDE PILE DATA
SYMMETRIC WITH RIGHTSIDE

VI.--WATER DATA
WATER UNIT WEIGHT = 62.5 (PCF)

VI.A.--EXTERNAL WATER DATA

VI.A.1.--RIGHTSIDE EXTERNAL WATER DATA

GROUND WATER ELEVATION = .00 (FT)
SURCHARGE WATER NONE

VI.A.2.-- LEFTSIDE EXTERNAL WATER DATA
SYMMETRIC WITH RIGHTSIDE

VI.B.--UPLIFT WATER DATA
RIGHTSIDE UPLIFT WATER ELEVATION = .00 (FT)
LEFTSIDE UPLIFT WATER ELEVATION = .00 (FT)

VI.C.--INTERNAL WATER DATA
WATER ELEVATION IN CHAMBER = 23.80 (FT)

VII.--ADDITIONAL LOAD DATA
NONE

PROGRAM CWFRAM - ANALYSIS OF TWO-DIMENSIONAL U-FRAME OR W-FRAME STRUCTURES
DATE 30-MAY-2002 TIME 15.57.13

I.--HEADING
'BAYOU SORREL LOCK
'NORMAL OPERATING CASE WITH 14" CONCRETE PILES

```
*************************************
*  RESULTS OF EQUILIBRIUM ANALYSIS  *
*************************************
```

II.--EFFECTS ON STRUCTURE RIGHTSIDE

II.A.--PRESSURES ON RIGHTSIDE SURFACE
(POSITIVE VERTICAL IS DOWN)
(POSITIVE HORIZONTAL IS TOWARD CENTERLINE)
(POSITIVE SHEAR IS DOWN)
(UNITS ARE POUNDS AND FEET)

	<---------BACKFILL PRESSURE--------->			GRND/SURCH
ELEVATION	VERTICAL	HORIZONTAL	SHEAR	WATER PRESSURE
26.800	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
24.800	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
24.800	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
23.800	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
15.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
13.700	0.0000E+00	1.4400E+02	0.0000E+00	0.0000E+00
12.000+	0.0000E+00	2.6400E+02	0.0000E+00	0.0000E+00
12.000-	0.0000E+00	1.6500E+02	0.0000E+00	0.0000E+00
.000	0.0000E+00	8.9700E+02	0.0000E+00	0.0000E+00
-15.000	0.0000E+00	1.3430E+03	0.0000E+00	9.3750E+02
-15.000	0.0000E+00	1.3430E+03	0.0000E+00	9.3750E+02
-21.000	0.0000E+00	1.5220E+03	0.0000E+00	1.3125E+03

II.B.--PRESSURE ON RIGHTSIDE BASE
(POSITIVE PRESSURE IS UP; UNITS ARE POUNDS AND FEET)

DIST FROM CENTERLINE	SOIL REACTION PRESSURE	UPLIFT WATER PRESSURE
.000	0.0000E+00	1.3125E+03
8.500	0.0000E+00	1.3125E+03
17.000	0.0000E+00	1.3125E+03
25.500	0.0000E+00	1.3125E+03

34.000	0.0000E+00	1.3125E+03
37.500	0.0000E+00	1.3125E+03
42.500	0.0000E+00	1.3125E+03
44.000	0.0000E+00	1.3125E+03

II.C.--RESULTANTS OF LOADS ON STRUCTURE RIGHTSIDE
(POSITIVE VERTICAL IS DOWN)
(POSITIVE HORIZONTAL IS TOWARD CENTERLINE)
(POSITIVE MOMENT IS COUNTERCLOCKWISE ABOUT CHAMBER FLOOR CENTERLINE)
(UNITS ARE POUNDS AND FEET)

ITEM	HORIZONTAL	VERTICAL	MOMENT
BACKFILL	2.2545E+05	0.0000E+00	1.6009E+06
GROUND/SURCH WATER	9.6469E+04	1.0141E+04	-3.4071E+05
INTERNAL WATER	-3.2931E+05	6.3656E+05	-1.6195E+07
UPLIFT WATER	0.0000E+00	-4.0425E+05	8.8935E+06
CONCRETE	0.0000E+00	4.3365E+05	-1.2288E+07
TOTAL THIS SIDE	-7.3944E+03	6.7610E+05	-1.8329E+07

III.--EFFECTS ON STRUCTURE LEFTSIDE
SYMMETRIC WITH RIGHTSIDE

IV.--NET RESULTANTS OF ALL LOADS
(POSITIVE HORIZONTAL IS TO THE RIGHT)
(POSITIVE VERTICAL IS DOWN)
(POSITIVE MOMENT IS COUNTERCLOCKWISE ABOUT CENTERLINE)
(UNITS ARE POUNDS AND FEET)

TOTAL HORIZONTAL = 0.0000E+00
TOTAL VERTICAL = 1.3522E+06
TOTAL MOMENT = 0.0000E+00

V.--CONCRETE AREAS
RIGHTSIDE AREA = 4.1300E+02 (SQFT)
LEFTSIDE AREA = 4.1300E+02 (SQFT)
TOTAL AREA = 8.2600E+02 (SQFT)

PROGRAM CWFRAM - ANALYSIS OF TWO-DIMENSIONAL U-FRAME OR W-FRAME STRUCTURES
DATE 30-MAY-2002 TIME 15.57.20

I.--HEADING
'BAYOU SORREL LOCK
'NORMAL OPERATING CASE WITH 14" CONCRETE PILES

```
**********************
*  FRAME MODEL DATA  *
**********************
```

II.--RIGHTSIDE FRAME MODEL DATA

II.A.--RIGID BLOCK DATA (FT) - TYPE 1 MONOLITH
(NOTE 'X-COORD.' IS DISTANCE FROM CENTERLINE.)

		<----------CORNER LOCATIONS---------->						
BLOCK	CORNER NO.	1	2	3	4	5	6	CENTROID
1	X-COORD.	37.50	37.50	43.50	43.50	43.50	37.50	40.50
	ELEVATION	-21.00	-15.00	-15.00	-15.00	-21.00	-21.00	-18.00

6	X-COORD.	37.50	37.50	43.50	43.50	39.50	39.50	40.50
	ELEVATION	24.80	26.80	26.80	24.80	24.80	24.80	25.80

II.B.--JOINT COORDINATES (FT)
(NOTE 'X-COORD.' IS DISTANCE FROM CENTERLINE.)

JOINT NO.	X-COORD.	ELEVATION
1	.00000	-18.00000
2	8.50000	-18.00000
3	17.00000	-18.00000
4	25.50000	-18.00000
5	34.00000	-18.00000
6	40.50000	-18.00000
7	44.00000	-18.00000
8	38.50000	13.70000
9	40.50000	25.80000

II.C.--MEMBER DATA (FT)
(NOTE 'X-COORD.' IS DISTANCE FROM CENTERLINE.)

MEM NO	FROM JT	TO JT	<COORDS AT ENDS OF FLEX LENGTH> <--FROM END--> X	ELEV	<---TO END---> X	ELEV	<-MEMBER DEPTH--> FROM END	TO END
1	1	2	.00	-18.00	8.50	-18.00	6.00	6.00
2	2	3	8.50	-18.00	17.00	-18.00	6.00	6.00
3	3	4	17.00	-18.00	25.50	-18.00	6.00	6.00
4	4	5	25.50	-18.00	34.00	-18.00	6.00	6.00
5	5	6	34.00	-18.00	38.25	-18.00	6.00	6.00
6	6	7	42.75	-18.00	44.00	-18.00	6.00	6.00
7	6	8	40.55	-15.75	38.50	13.70	6.00	2.00
8	8	9	38.50	13.70	38.50	25.05	2.00	2.00

II.D.--PILE HEAD STIFFNESS COEFFICIENTS

PILE NO.	X-COORD. (FT)	BATTER (FT/FT)	<----------STIFFNESS COEFFICIENTS----------> B11 (LB/FT)	B22 (LB/FT)	B33 (LB-FT)	B13 (LB)
1	.00	.00	1.4091E+05	2.4569E+07	0.0000E+00	0.0000E+00
2	8.50	.00	1.4091E+05	2.4569E+07	0.0000E+00	0.0000E+00
3	17.00	.00	1.4091E+05	2.4569E+07	0.0000E+00	0.0000E+00
4	25.50	.00	1.4091E+05	2.4569E+07	0.0000E+00	0.0000E+00
5	34.00	.00	1.4091E+05	2.4569E+07	0.0000E+00	0.0000E+00
6	42.50	.00	1.4091E+05	2.4569E+07	0.0000E+00	0.0000E+00

III.-- LEFTSIDE FRAME MODEL DATA
SYMMETRIC WITH RIGHTSIDE

PROGRAM CWFRAM - ANALYSIS OF TWO-DIMENSIONAL U-FRAME OR W-FRAME STRUCTURES
DATE 30-MAY-2002 TIME 15.57.25

I.--HEADING
'BAYOU SORREL LOCK
'NORMAL OPERATING CASE WITH 14" CONCRETE PILES

```
*******************************
*  RESULTS OF FRAME ANALYSIS  *
*******************************
```

II.--STRUCTURE DISPLACEMENTS

II.A.--RIGHTSIDE DISPLACEMENTS - TYPE 1 MONOLITH
(POSITIVE HORIZONTAL DISPLACEMENT IS TOWARD STRUCTURE CENTERLINE.)
(POSITIVE VERTICAL DISPLACEMENT IS DOWN.)
(POSITIVE ROTATION IS COUNTERCLOCKWISE.)

JT NO	DISTANCE FROM CTR-LINE (FT)	ELEVATION (FT)	<----DISPLACEMENT (FT OR RADIANS)----> HORIZONTAL	VERTICAL	ROTATION
		***** BASE JOINTS *****			
1	.00	-18.00	0.000E+00	3.886E-03	0.000E+00
2	8.50	-18.00	-3.478E-06	3.809E-03	1.189E-05
3	17.00	-18.00	-6.959E-06	3.709E-03	-8.405E-06
4	25.50	-18.00	-1.044E-05	4.005E-03	-9.585E-05
5	34.00	-18.00	-1.390E-05	5.418E-03	-2.823E-04
6	40.50	-18.00	-1.560E-05	7.803E-03	-4.157E-04
7	44.00	-18.00	-8.489E-06	9.258E-03	-4.159E-04
		***** STEM JOINTS *****			
8	38.50	13.70	-3.325E-02	5.663E-03	-1.592E-03
9	40.50	25.80	-5.433E-02	9.345E-03	-1.819E-03

II.B.-- LEFTSIDE DISPLACEMENTS - TYPE 1 MONOLITH
SYMMETRIC WITH RIGHTSIDE

III.--UNFACTORED FORCES AT ENDS OF MEMBERS
(MEMBER FORCES ARE GIVEN AT ENDS OF FLEXIBLE LENGTH.)

III.A.--RIGHTSIDE MEMBERS - TYPE 1 MONOLITH
(POSITIVE AXIAL FORCE IS COMPRESSION.)
(POSITIVE SHEAR FORCE TENDS TO MOVE MEMBER UPWARD OR TOWARD STRUCTURE CENTERLINE.)
(POSITIVE MOMENT PRODUCES COMPRESSION ON TOP OF MEMBER OR ON SIDE OF MEMBER TOWARD STRUCTURE CENTERLINE.)

MEM NO	DISTANCE FROM CTR-LINE (FT)	ELEVATION (FT)	<--------FORCES (LBS OR LB-FT)-------> AXIAL	SHEAR	MOMENT
		***** BASE MEMBERS *****			
1	.00	-18.00	-7.721E+03	4.774E+04	4.595E+04
	8.50	-18.00	-7.721E+03	7.201E+04	-5.720E+04
2	8.50	-18.00	-7.727E+03	2.157E+04	-5.719E+04
	17.00	-18.00	-7.727E+03	9.818E+04	-3.828E+05
3	17.00	-18.00	-7.724E+03	-7.040E+03	-3.828E+05
	25.50	-18.00	-7.724E+03	1.268E+05	-9.515E+05
4	25.50	-18.00	-7.685E+03	-2.838E+04	-9.517E+05
	34.00	-18.00	-7.685E+03	1.481E+05	-1.702E+06
5	34.00	-18.00	-7.568E+03	-1.500E+04	-1.702E+06
	38.25	-18.00	-7.568E+03	6.431E+04	-1.889E+06
6	42.75	-18.00	1.074E+05	1.837E+03	-1.347E+04
	44.00	-18.00	1.074E+05	0.000E+00	-1.163E+04
		***** STEM MEMBERS *****			
7	40.55	-15.75	1.709E+05	1.032E+05	-2.174E+06
	38.50	13.70	3.733E+04	-1.911E+04	-1.000E+05
8	38.50	13.70	3.591E+04	2.166E+04	-1.000E+05
	38.50	25.05	1.260E+04	0.000E+00	-2.520E+04

III.B.-- LEFTSIDE MEMBERS - TYPE 1 MONOLITH
SYMMETRIC WITH RIGHTSIDE

I.--HEADING
'BAYOU SORREL LOCK
'NORMAL OPERATING CASE WITH 14" CONCRETE PILES

II.--RESULTS FOR RIGHTSIDE PILES

II.A.--PILE HEAD FORCES AND DISPLACEMENTS
(UNITS ARE POUNDS, FEET, AND RADIANS.)
(POSITIVE AXIAL FORCE IS COMPRESSION.)
(POSITIVE SHEAR TENDS TO MOVE PILE HEAD AWAY FROM CENTERLINE.)
(POSITIVE MOMENT PRODUCES COMPRESSION ON SIDE OF PILE TOWARD CENTERLINE.)
(POSITIVE AXIAL DISPLACEMENT IS DOWN.)
(POSITIVE LATERAL DISPLACEMENT IS AWAY FROM CENTERLINE.)
(POSITIVE ROTATION TENDS TO ROTATE PILE HEAD TOWARD CENTERLINE.)

PILE NO.	DIST. TO CTR-LINE	<-------PILE HEAD FORCES-------> AXIAL	SHEAR	MOMENT	<---PILE HEAD DISPLACEMENTS---> AXIAL	LATERAL	ROTATION
1	.00	9.547E+04	0.000E+00	0.000E+00	3.886E-03	0.000E+00	0.000E+00
2	8.50	9.357E+04	5.517E+00	0.000E+00	3.809E-03	3.915E-05	1.189E-05
3	17.00	9.114E+04	-2.572E+00	0.000E+00	3.709E-03	-1.826E-05	-8.405E-06
4	25.50	9.840E+04	-3.905E+01	0.000E+00	4.005E-03	-2.771E-04	-9.585E-05
5	34.00	1.331E+05	-1.174E+02	0.000E+00	5.418E-03	-8.331E-04	-2.823E-04
6	42.50	2.121E+05	-1.735E+02	0.000E+00	8.634E-03	-1.231E-03	-4.157E-04

II.B.--PILE ALLOWABLES COMPARISONS
ALLOWABLES DATA NOT PROVIDED FOR THIS SIDE.

III.--RESULTS FOR LEFTSIDE PILES
SYMMETRIC WITH RIGHTSIDE.

IV.--RESULTANTS OF PILE FORCES ON STRUCTURE
(POSITIVE HORIZONTAL IS TO THE RIGHT)
(POSITIVE VERTICAL IS UP)
(POSITIVE MOMENT IS COUNTERCLOCKWISE ABOUT CENTERLINE
(UNITS ARE POUNDS AND FEET)

	HORIZONTAL	VERTICAL	MOMENT
RIGHTSIDE PILES	3.2700E+02	6.7610E+05	1.8398E+07
LEFTSIDE PILES	-3.2700E+02	6.7610E+05	-1.8398E+07
TOTAL	0.0000E+00	1.3522E+06	0.0000E+00

NOTE RIGHTSIDE AND LEFTSIDE RESULTANTS INCLUDE ONE HALF OF FORCES FOR VERTICAL PILES ON CENTERLINE.

PROGRAM CWFRAM - ANALYSIS OF TWO-DIMENSIONAL U-FRAME OR W-FRAME STRUCTURES
DATE 30-MAY-2002 TIME 16.00.24

```
I.--HEADING
  'BAYOU SORREL LOCK
  'DEWATERED CASE WITH 14" CONCRETE PILES


                 ****************
                 *  INPUT DATA  *
                 ****************



II.--PLANE FRAME ANALYSIS
     RIGID LINK FACTOR   =          .75
     MEMBER FORCE FACTOR =         1.00

III.--STRUCTURE DATA

  III.A.--MATERIAL PROPERTIES
     MODULUS OF ELASTICITY OF CONCRETE  =    3.120E+06 (PSI)
     POISSON'S RATIO FOR CONCRETE       =      .20
     UNIT WEIGHT OF CONCRETE            =  150.0    (PCF)
     THICKNESS OF TWO-DIMENSIONAL SLICE =    7.00   (FT)

  III.B.--FLOOR DATA
     FLOOR WIDTH       =      37.50 (FT)
     FLOOR ELEVATION   =     -15.00 (FT)
     FLOOR FILLET SIZE =        .00 (FT)

  III.C.--BASE DATA

    III.C.1.--RIGHTSIDE
     DISTANCE FROM
      CENTERLINE      ELEVATION
          (FT)           (FT)
          44.00         -21.00

    III.C.2.--LEFTSIDE
     SYMMETRIC WITH RIGHTSIDE.

  III.D.--STEM DATA

    III.D.1.--RIGHTSIDE
     DISTANCE FROM
       STEM FACE      ELEVATION
          (FT)           (FT)
           6.00          26.80
           6.00          24.80
           2.00          24.80
           2.00          13.70
           6.00         -15.00
           6.50         -15.00

    III.D.2.--LEFTSIDE
     SYMMETRIC WITH RIGHTSIDE.

  III.E.--CULVERT DATA
     NONE

  III.F.--VOID DATA
     NONE
```

IV.--BACKFILL DATA

IV.A.--RIGHTSIDE BACKFILL PRESSURE DATA

ELEVATION (FT)	VERTICAL PRESSURE (PSF)	HORIZONTAL PRESSURE (PSF)	SHEAR STRESS (PSF)
15.00	.00	.00	.00
13.70	.00	144.00	.00
12.00	.00	264.00	.00
12.00	.00	165.00	.00
5.70	.00	549.00	.00
-15.00	.00	1165.00	.00
-21.00	.00	1344.00	.00

IV.B.--LEFTSIDE BACKFILL PRESSURE DATA
SYMMETRIC WITH RIGHTSIDE

V.--BASE REACTION DATA

V.A.--RIGHTSIDE PILE DATA

V.A.1.--PILE LAYOUT DATA

<------START-----> PILE NO.	DIST. FROM CENTERLINE (FT)	STOP PILE NO.	PILE NO. STEP	STEP IN CL DIST. (FT)
1	.00	6	1	8.50

V.A.2.--PILE PROPERTIES

<----------START----------> PILE NO.	MODULUS OF ELASTICITY (PSI)	SECT AREA (SQIN)	MOMENT OF INERTIA (IN**4)	LENGTH (FT)	AXIAL COEFF	HEAD FIXITY	STOP PILE NO.	PILE NO. STEP
1	4.07E+06	196.00	3201.00	65.00	2.00	.00	6	1

V.A.3.--SOIL PROPERTIES

<----------START----------> PILE NO.	CONSTANT COEFFICIENT (PSI)	LINEAR COEFFICIENT (PCI)	STOP PILE NO.	PILE NO. STEP
1	180.000	.000	6	1

V.A.4.--PILE HEAD STIFFNESS MATRICES
NONE

V.A.4.--PILE BATTER DATA
NONE

V.A.5.--PILE LOAD COMPARISON DATA
NONE

V.B.-- LEFTSIDE PILE DATA
SYMMETRIC WITH RIGHTSIDE

VI.--WATER DATA
WATER UNIT WEIGHT = 62.5 (PCF)

VI.A.--EXTERNAL WATER DATA

VI.A.1.--RIGHTSIDE EXTERNAL WATER DATA

GROUND WATER ELEVATION = 5.70 (FT)
SURCHARGE WATER NONE

VI.A.2.-- LEFTSIDE EXTERNAL WATER DATA
SYMMETRIC WITH RIGHTSIDE

VI.B.--UPLIFT WATER DATA
RIGHTSIDE UPLIFT WATER ELEVATION = 5.70 (FT)
LEFTSIDE UPLIFT WATER ELEVATION = 5.70 (FT)

VI.C.--INTERNAL WATER DATA
NONE

VII.--ADDITIONAL LOAD DATA
NONE

PROGRAM CWFRAM - ANALYSIS OF TWO-DIMENSIONAL U-FRAME OR W-FRAME STRUCTURES
DATE 30-MAY-2002 TIME 16.00.31

I.--HEADING
'BAYOU SORREL LOCK
'DEWATERED CASE WITH 14" CONCRETE PILES

```
*************************************
*  RESULTS OF EQUILIBRIUM ANALYSIS  *
*************************************
```

II.--EFFECTS ON STRUCTURE RIGHTSIDE

II.A.--PRESSURES ON RIGHTSIDE SURFACE
(POSITIVE VERTICAL IS DOWN)
(POSITIVE HORIZONTAL IS TOWARD CENTERLINE)
(POSITIVE SHEAR IS DOWN)
(UNITS ARE POUNDS AND FEET)

	<---------BACKFILL PRESSURE--------->			GRND/SURCH
ELEVATION	VERTICAL	HORIZONTAL	SHEAR	WATER PRESSURE
26.800	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
24.800	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
24.800	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
15.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
13.700	0.0000E+00	1.4400E+02	0.0000E+00	0.0000E+00
12.000+	0.0000E+00	2.6400E+02	0.0000E+00	0.0000E+00
12.000-	0.0000E+00	1.6500E+02	0.0000E+00	0.0000E+00
5.700	0.0000E+00	5.4900E+02	0.0000E+00	0.0000E+00
-15.000	0.0000E+00	1.1650E+03	0.0000E+00	1.2937E+03
-15.000	0.0000E+00	1.1650E+03	0.0000E+00	1.2937E+03
-21.000	0.0000E+00	1.3440E+03	0.0000E+00	1.6687E+03

II.B.--PRESSURE ON RIGHTSIDE BASE
(POSITIVE PRESSURE IS UP; UNITS ARE POUNDS AND FEET)

DIST FROM CENTERLINE	SOIL REACTION PRESSURE	UPLIFT WATER PRESSURE
.000	0.0000E+00	1.6687E+03
8.500	0.0000E+00	1.6687E+03
17.000	0.0000E+00	1.6687E+03
25.500	0.0000E+00	1.6687E+03
34.000	0.0000E+00	1.6687E+03

37.500	0.0000E+00	1.6687E+03
42.500	0.0000E+00	1.6687E+03
44.000	0.0000E+00	1.6687E+03

II.C.--RESULTANTS OF LOADS ON STRUCTURE RIGHTSIDE
(POSITIVE VERTICAL IS DOWN)
(POSITIVE HORIZONTAL IS TOWARD CENTERLINE)
(POSITIVE MOMENT IS COUNTERCLOCKWISE ABOUT CHAMBER FLOOR CENTERLINE)
(UNITS ARE POUNDS AND FEET)

ITEM	HORIZONTAL	VERTICAL	MOMENT
BACKFILL	1.9569E+05	0.0000E+00	1.4226E+06
GROUND/SURCH WATER	1.5594E+05	1.7592E+04	-3.0157E+05
UPLIFT WATER	0.0000E+00	-5.1397E+05	1.1307E+07
CONCRETE	0.0000E+00	4.3365E+05	-1.2288E+07
TOTAL THIS SIDE	3.5164E+05	-6.2733E+04	1.4087E+05

III.--EFFECTS ON STRUCTURE LEFTSIDE
SYMMETRIC WITH RIGHTSIDE

IV.--NET RESULTANTS OF ALL LOADS
(POSITIVE HORIZONTAL IS TO THE RIGHT)
(POSITIVE VERTICAL IS DOWN)
(POSITIVE MOMENT IS COUNTERCLOCKWISE ABOUT CENTERLINE)
(UNITS ARE POUNDS AND FEET)

TOTAL HORIZONTAL = 0.0000E+00
TOTAL VERTICAL = -1.2547E+05
TOTAL MOMENT = 0.0000E+00

V.--CONCRETE AREAS
RIGHTSIDE AREA = 4.1300E+02 (SQFT)
LEFTSIDE AREA = 4.1300E+02 (SQFT)
TOTAL AREA = 8.2600E+02 (SQFT)

PROGRAM CWFRAM - ANALYSIS OF TWO-DIMENSIONAL U-FRAME OR W-FRAME STRUCTURES
DATE 30-MAY-2002 TIME 16.00.34

I.--HEADING
'BAYOU SORREL LOCK
'DEWATERED CASE WITH 14" CONCRETE PILES

```
**********************
*  FRAME MODEL DATA  *
**********************
```

II.--RIGHTSIDE FRAME MODEL DATA

II.A.--RIGID BLOCK DATA (FT) - TYPE 1 MONOLITH
(NOTE 'X-COORD.' IS DISTANCE FROM CENTERLINE.)

		<----------CORNER LOCATIONS---------->						
BLOCK	CORNER NO.	1	2	3	4	5	6	CENTROID
1	X-COORD.	37.50	37.50	43.50	43.50	43.50	37.50	40.50
	ELEVATION	-21.00	-15.00	-15.00	-15.00	-21.00	-21.00	-18.00
6	X-COORD.	37.50	37.50	43.50	43.50	39.50	39.50	40.50
	ELEVATION	24.80	26.80	26.80	24.80	24.80	24.80	25.80

II.B.--JOINT COORDINATES (FT)
(NOTE 'X-COORD.' IS DISTANCE FROM CENTERLINE.)

JOINT NO.	X-COORD.	ELEVATION
1	.00000	-18.00000
2	8.50000	-18.00000
3	17.00000	-18.00000
4	25.50000	-18.00000
5	34.00000	-18.00000
6	40.50000	-18.00000
7	44.00000	-18.00000
8	38.50000	13.70000
9	40.50000	25.80000

II.C.--MEMBER DATA (FT)
(NOTE 'X-COORD.' IS DISTANCE FROM CENTERLINE.)

MEM NO	FROM JT	TO JT	<COORDS AT ENDS OF FLEX LENGTH> <--FROM END--> X	ELEV	<---TO END---> X	ELEV	<-MEMBER DEPTH--> FROM END	TO END
1	1	2	.00	-18.00	8.50	-18.00	6.00	6.00
2	2	3	8.50	-18.00	17.00	-18.00	6.00	6.00
3	3	4	17.00	-18.00	25.50	-18.00	6.00	6.00
4	4	5	25.50	-18.00	34.00	-18.00	6.00	6.00
5	5	6	34.00	-18.00	38.25	-18.00	6.00	6.00
6	6	7	42.75	-18.00	44.00	-18.00	6.00	6.00
7	6	8	40.55	-15.75	38.50	13.70	6.00	2.00
8	8	9	38.50	13.70	38.50	25.05	2.00	2.00

II.D.--PILE HEAD STIFFNESS COEFFICIENTS

PILE NO.	X-COORD. (FT)	BATTER (FT/FT)	<----------STIFFNESS COEFFICIENTS----------> B11 (LB/FT)	B22 (LB/FT)	B33 (LB-FT)	B13 (LB)
1	.00	.00	1.4091E+05	2.4569E+07	0.0000E+00	0.0000E+00
2	8.50	.00	1.4091E+05	2.4569E+07	0.0000E+00	0.0000E+00
3	17.00	.00	1.4091E+05	2.4569E+07	0.0000E+00	0.0000E+00
4	25.50	.00	1.4091E+05	2.4569E+07	0.0000E+00	0.0000E+00
5	34.00	.00	1.4091E+05	2.4569E+07	0.0000E+00	0.0000E+00
6	42.50	.00	1.4091E+05	2.4569E+07	0.0000E+00	0.0000E+00

III.-- LEFTSIDE FRAME MODEL DATA
SYMMETRIC WITH RIGHTSIDE

PROGRAM CWFRAM - ANALYSIS OF TWO-DIMENSIONAL U-FRAME OR W-FRAME STRUCTURES
DATE 30-MAY-2002 TIME 16.00.39

I.--HEADING
'BAYOU SORREL LOCK
'DEWATERED CASE WITH 14" CONCRETE PILES

```
*******************************
*  RESULTS OF FRAME ANALYSIS  *
*******************************
```

II.--STRUCTURE DISPLACEMENTS

II.A.--RIGHTSIDE DISPLACEMENTS - TYPE 1 MONOLITH