

# JOINT PUBLIC NOTICE

April 4, 2016

United States Army Corps of Engineers  
New Orleans District  
Regulatory Branch  
Post Office Box 60267  
New Orleans, Louisiana 70160-0267

State of Louisiana  
Department of Environmental Quality  
Office of Environmental Services  
Post Office Box 4313  
Baton Rouge, Louisiana 70821-4313

(504) 862-1545  
Project Manager  
S. Gail Gainey  
[Sandra.G.Gainey@usace.army.mil](mailto:Sandra.G.Gainey@usace.army.mil)  
MVN 2010-02472-CG

(225) 219-3225  
Project Manager  
Elizabeth Hill  
WQC Application Number  
WQC # 101214-01

Interested parties are hereby notified that a permit application has been received by the New Orleans District of the US Army Corps of Engineers pursuant to: [X] Section 10 of the Rivers and Harbors Act of March 3, 1899 (30 Stat. 1151; 33 USC 403); and/or [X] Section 404 of the Clean Water Act (86 Stat. 816; 33 USC 1344).

Application has also been made to the Louisiana Department of Environmental Quality, Office of Environmental Services, for a Water Quality Certification (WQC) in accordance with statutory authority contained in LRS 30:2074 A(3) and provisions of Section 401 of the Clean Water Act.

## **FACILITY EXPANSION AND DREDGING OF DOCKS ON MISSISSIPPI RIVER IN ST. JAMES PARISH**

**NAME OF APPLICANT:** NuStar Energy, LP, c/o CK Associates, 17170 Perkins Road, Baton Rouge, Louisiana, 70810.

**LOCATION OF WORK:** In the Mississippi River, Right Descending Bank, River Mile 160, at 7167 Koch Road in Saint James, Louisiana, in St. James Parish, within the Mississippi River Basin in hydrologic unit (HUC 08070100), as shown on the attached drawings.

**CHARACTER OF WORK:** The applicant has requested Department of the Army authorization to improve and expand the existing NuStar Facility and dock terminals. The facility expansion will include the installation of rail spur enhancements including new tracks and rail loading stations, the expansion of existing borrow pits and the construction of a truck loading rack as well as installation of a new laydown yard, subsurface foam lines and fire water lines, new MDVU with pile supported foundation and air compressor skid, pumps and associated foundations, meter skid, prover, truck loading rack and additional rail car loading racks. The dock terminal expansion will include new pipelines, structural improvements, a temporary ramp and new loading arms as well as an expansion of the existing dock platforms for Docks 1 and 5 in addition to maintenance dredging at Docks 1, 2 and 5. Approximately 70 cubic yards of concrete, 1,022 cubic yards of stone and gravel and 1,022 cubic yards of hauled topsoil would be hauled in and deposited in a 3.32 acre

area to construct the facility improvements. Approximately 60 cubic yards of crushed limestone and 3,500 cubic yards of clay will be used to construct the temporary ramp and will be removed after construction. Additionally, approximately 3,401 cubic yards will be excavated and placed onsite within a six (6) acre area for pipeline placement, borrow pit expansion and the placement of a culvert. Proposed dredging around existing Docks 1, 2 and 5 will include the annual removal of approximately 600,000 cubic yards from a 27.81 acre area of open water and deposited in the lower Mississippi River Channel below the -55.0 contour. The proposed project is situated on an approximately 887-acre tract and would impact approximately 0.04 acres of waters of the US and 27.81 acres of traditionally navigable waters. A preliminary analysis has determined wetlands to be present at the project site; however, extent of coverage and impacts is undetermined at this time pending a wetland delineation.

It is presumed that the applicant has designed the project to avoid and minimize direct and secondary adverse impacts to the maximum extent practicable. It is anticipated that impacts to jurisdictional wetlands will be minimal. However, as compensation for unavoidable wetland impacts, the applicant proposes to use a Corps approved mitigation bank within the watershed of impact.

The comment period for the Department of Army will close in **30 days** from the date of this public notice. Written comments, including suggestions for modifications or objections to the proposed work, stating reasons thereof, are being solicited from anyone having interest in this permit and must be mailed so as to be received before or by the last day of the comment period. Letters concerning the Corps of Engineers permit application must reference the applicant's name and the Permit Application Number, and be mailed to the Corps of Engineers at the address above, **ATTENTION: REGULATORY BRANCH**. Similar letters concerning the Water Quality Certification must reference the applicant's name and the WQC Application number and be mailed to the Louisiana Department of Environmental Quality at the address above.

The application for this proposed project is on file with the Louisiana Department of Environmental Quality and may be examined during weekdays between 8:00 a.m. and 4:30 p.m. Copies may be obtained upon payment of costs of reproduction.

### **Corps of Engineers Permit Criteria**

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The US Army Corps of Engineers is soliciting comments from the public, federal, state, and local agencies and officials, Indian Tribes, and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the US Army Corps of Engineers to determine whether to make, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

The New Orleans District is unaware of properties listed on the National Register of Historic Places near the proposed work. The possibility exists that the proposed work may damage or destroy presently unknown archeological, scientific, prehistorical, historical sites, or data. Copies of this notice are being sent to the State Archeologist and the State Historic Preservation Officer.

The New Orleans District has determined that the proposed project is located in waters known to be utilized by the West Indian Manatee (*Trichechus manatus*). Utilizing Standard Local Operating Procedure for Endangered Species in Louisiana (SLOPES), dated October 22, 2014, between the U.S. Army Corps of Engineers, New Orleans and U.S. Fish and Wildlife Service, Ecological Services Office, the Corps has determined that with the inclusion of the Standard Manatee Conditions for In-Water Activities, proposed work is not likely to adversely affect the West Indian Manatee. Additionally, the proposed work has been determined not likely to adversely affect Pallid Sturgeon (*Scaphirhynchus albus*) as the cutterhead/suction dredge recommendations shall be included as permit conditions.

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The applicant's proposal would result in the destruction or alteration of up to 0 acres of EFH utilized by various life stages of red drum and penaeid shrimp. Our initial determination is that the proposed action would not have a substantial adverse impact on EFH or federally managed fisheries in the Gulf of Mexico. Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

If the proposed work involves deposits of dredged or fill material into navigable waters, the evaluation of the probable impacts will include the application of guidelines established by the Administrator of the Environmental Protection Agency. Also, a certification that the proposed activity will not violate water quality standards will be required from the Department of Environmental Quality, Office of Environmental Services before a permit is issued.

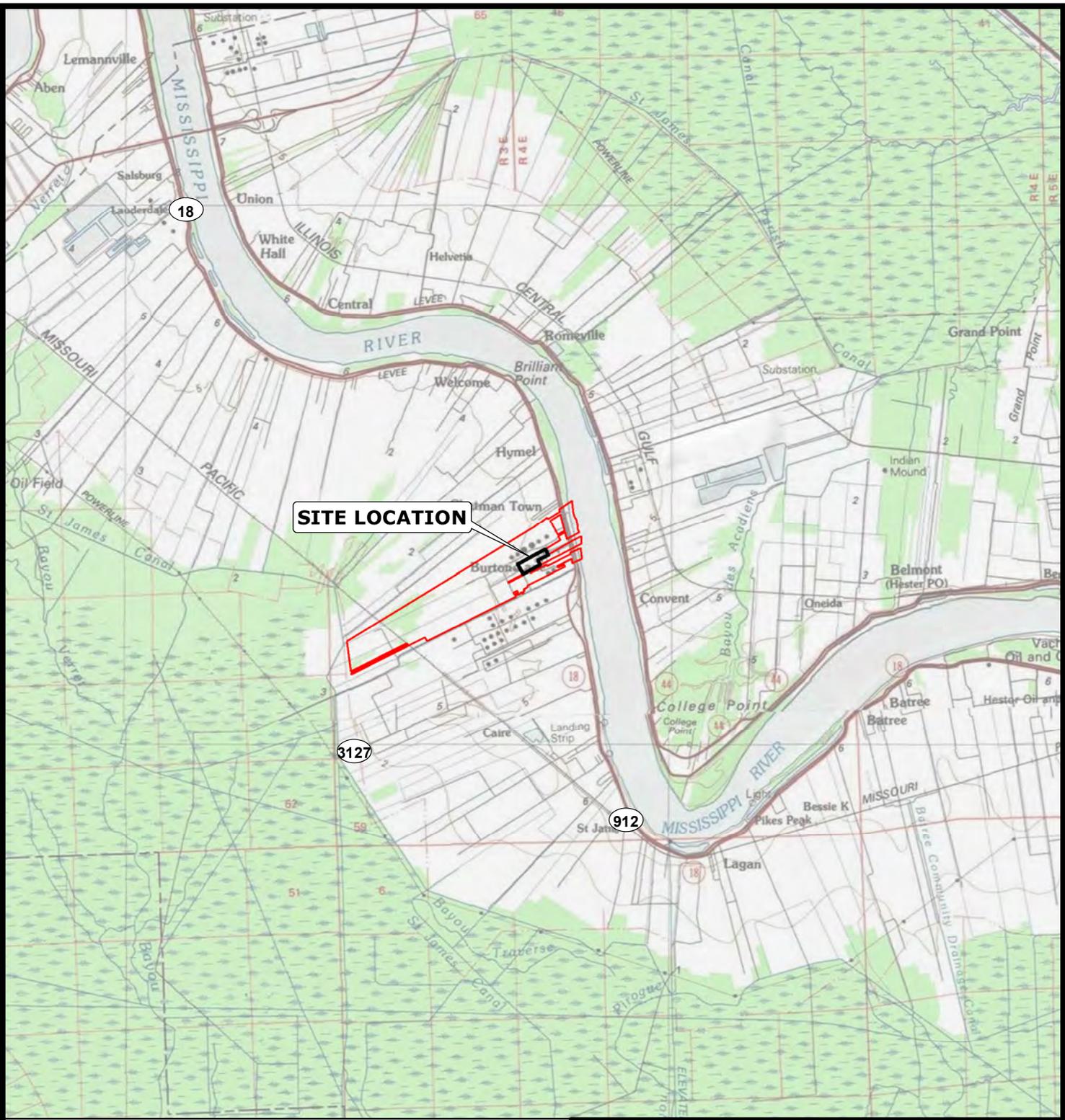
Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. You are requested to communicate the information contained in this notice to any other parties whom you

deem likely to have interest in the matter.

The applicant has certified that the proposed activity described in the application complies with and will be conducted in a manner that is consistent with the Louisiana Coastal Resources Program (Louisiana Coastal Zone Applications P20150900, P20151058 and P20151146). The Department of the Army permit will not be issued unless the applicant received approval or a waiver of the Coastal Use Permit by the Department of Natural Resources.

JOHN M. HERMAN  
Chief, Central Evaluation Section  
Regulatory Branch

Enclosures



**ST. JAMES PARISH**



**Reference**

U.S.G.S. 100K SERIES QUAD MAP, CONVENT, LA.

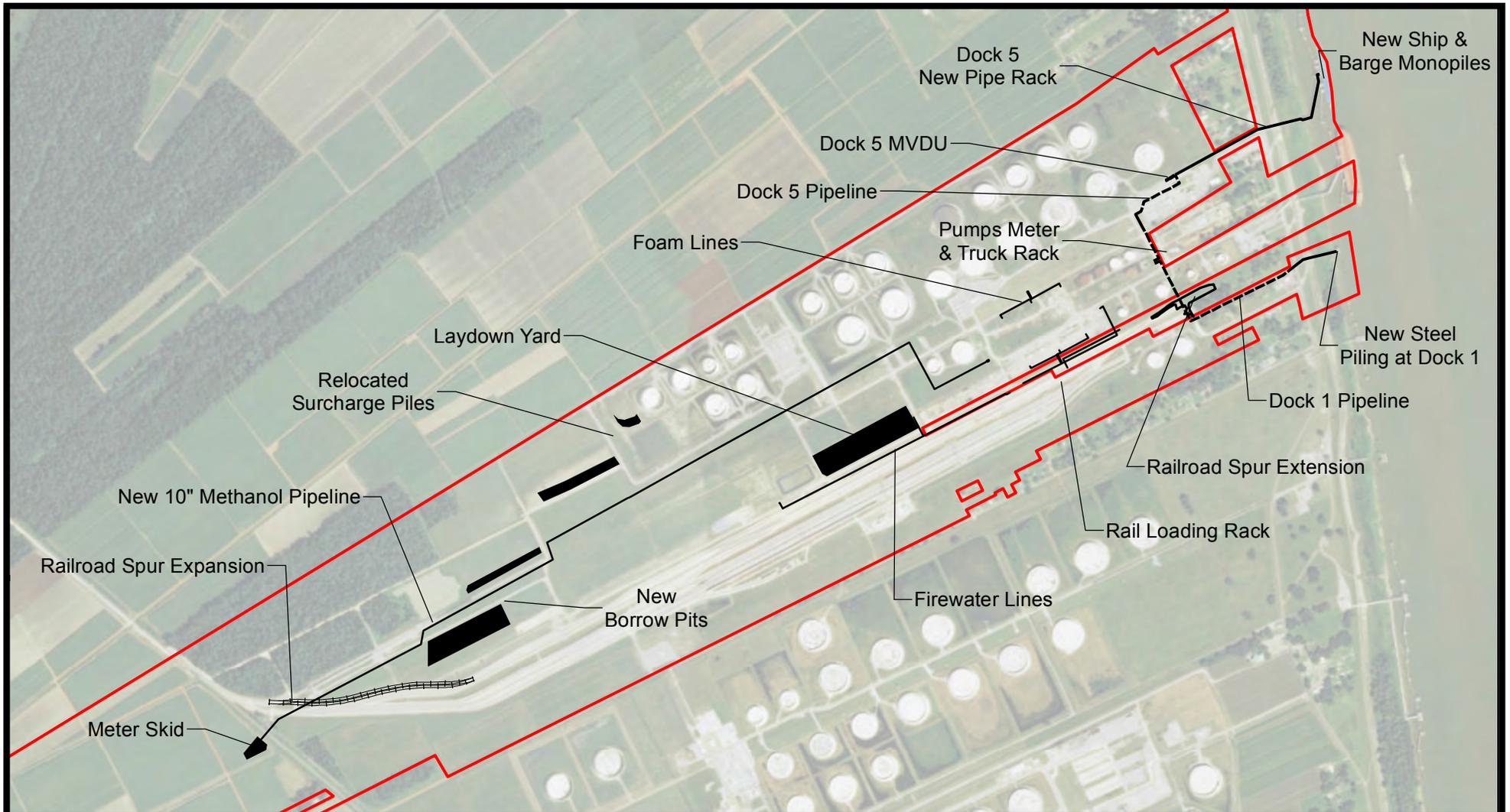


**NUSTAR ENERGY LP**  
 ST. JAMES, LOUISIANA  
 FACILITY INFRASTRUCTURE IMPROVEMENTS AND EXPANSION  
**VICINITY MAP**  
 ST. JAMES PARISH



Drawn:	CPL/AM10.2.2
Checked:	BN
Approved:	TEW
Date:	03/20/15
Dwg. No.:	A12128-01

**FIGURE 1**



 Facility Boundary



**NUSTAR ENERGY LP**  
ST. JAMES, LOUISIANA

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FACILITY INFRASTRUCTURE IMPROVEMENTS AND EXPANSION

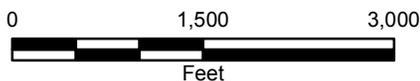
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**PROJECT OVERVIEW MAP**

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ST. JAMES PARISH

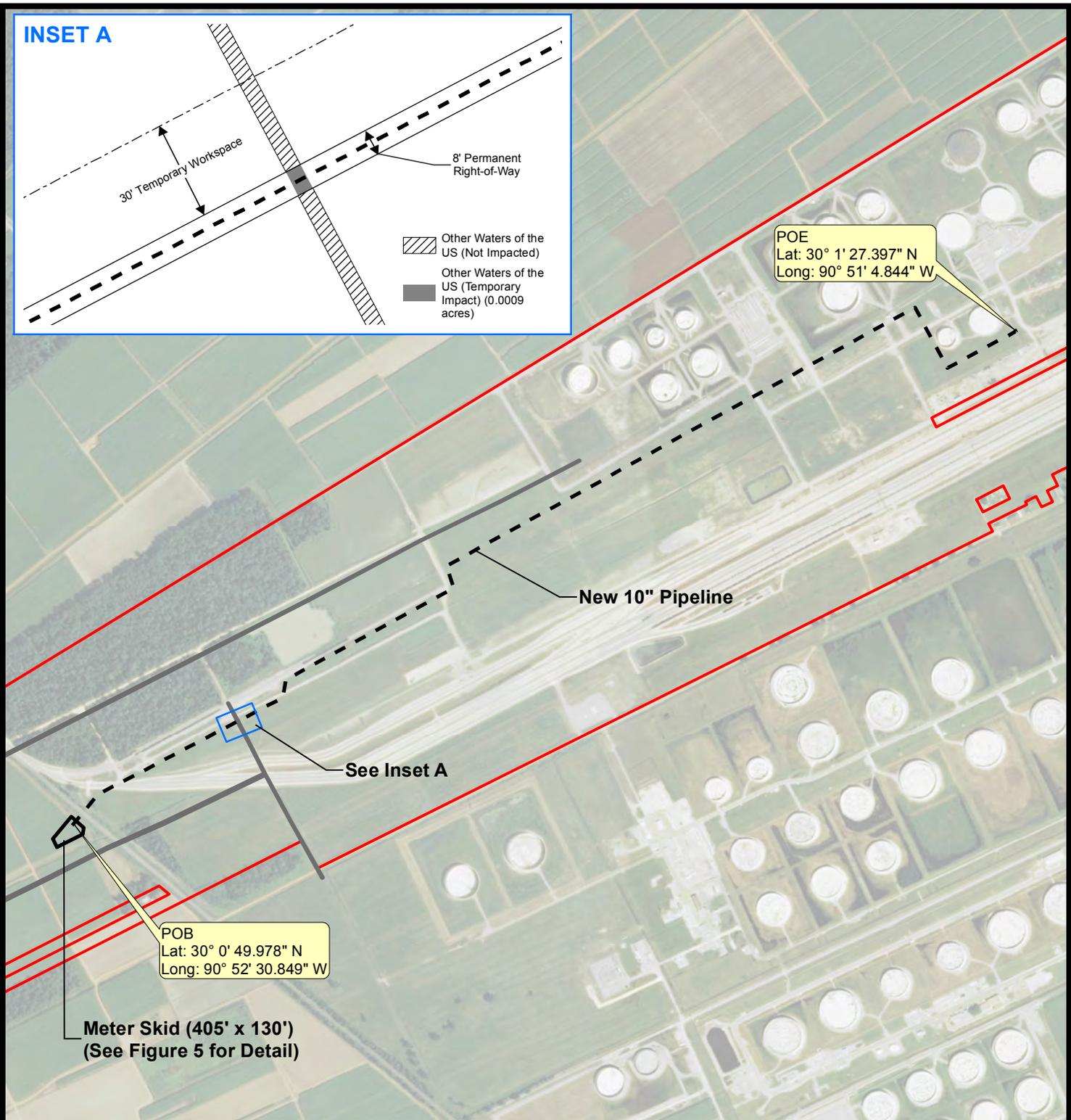
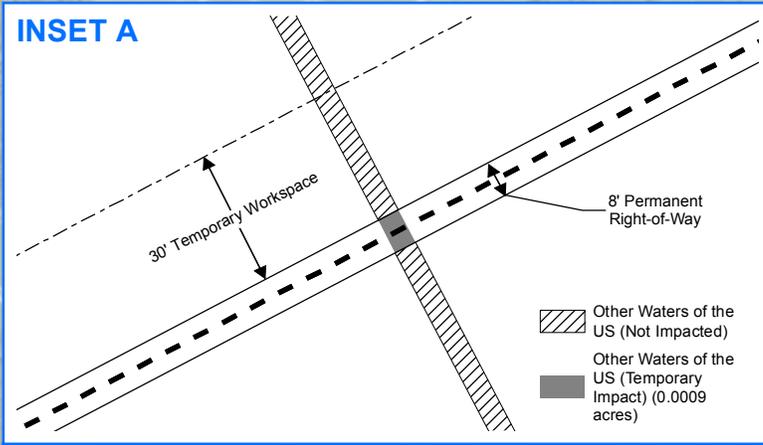
REFERENCE  
IMAGERY: ESRI WORLD IMAGERY, ARCGIS ONLINE.



Drawn:	CPL/AM10.3
Checked:	BLN
Approved:	TEW
Date:	08/19/2015
Dwg. No.:	A12128-31

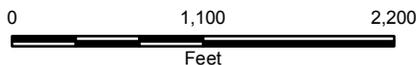
**FIGURE 2**

**INSET A**



- - - Pipeline Centerline (9,333 ft.)
- ▭ Meter Skid (0.68 acres)
- ▭ Facility Boundary

Note: See drawing No. S0010-PER-SK-14 for trench detail.



**Reference**

IMAGERY: ESRI WORLD IMAGERY, ARCGIS ONLINE.



**NUSTAR ENERGY LP**  
ST. JAMES, LOUISIANA

FACILITY INFRASTRUCTURE IMPROVEMENTS AND EXPANSION

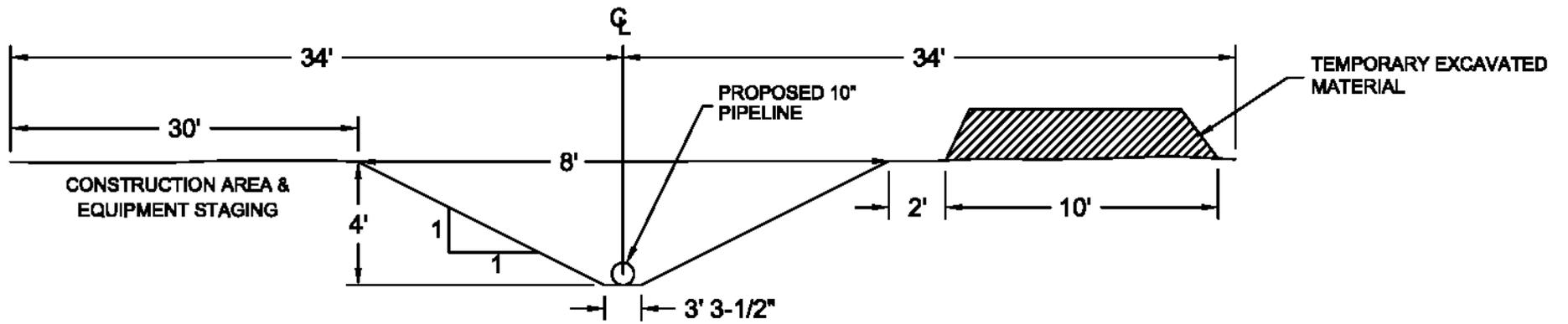
**NEW 10" PIPELINE PLAN VIEW**

ST. JAMES PARISH



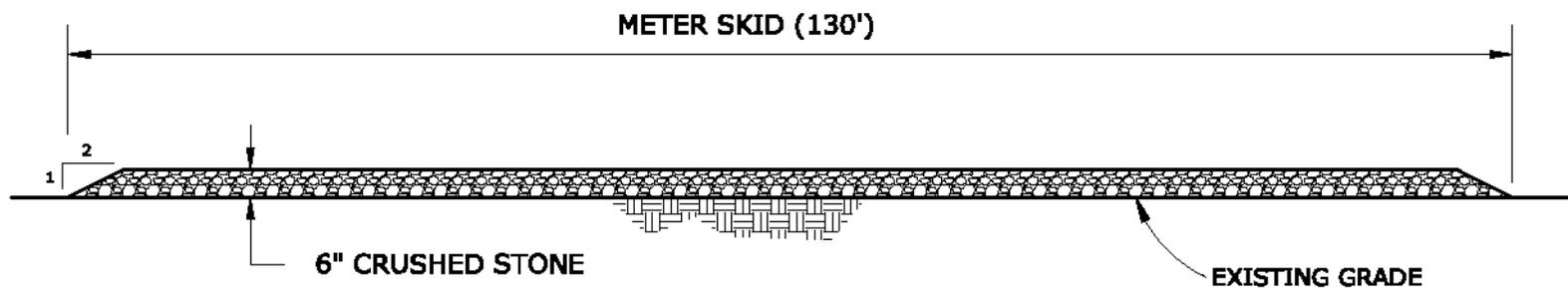
Drawn:	CPL/AM10.3
Checked:	BLN
Approved:	TEW
Date:	09/23/2015
Dwg. No.:	A12128-28

**FIGURE 3**



NOT TO SCALE

<b>NUSTAR ENERGY LP</b> ST. JAMES, LOUISIANA	
FACILITY INFRASTRUCTURE IMPROVEMENTS AND EXPANSION	
<b>TYPICAL PIPELINE TRENCH</b>	
ST. JAMES PARISH, LOUISIANA	
 <b>CK ASSOCIATES</b> Environmental Consultants	Drawn: GPL/ACAD
	Checked: BLN
	Approved: TEW
	Date: 08/23/2015
	Dwg. No.: A12128-33
<b>FIGURE 4</b>	



**NUSTAR ENERGY LP**  
ST. JAMES, LOUISIANA

FACILITY INFRASTRUCTURE IMPROVEMENTS AND EXPANSION

**TYPICAL  
METER SKID CROSS-SECTION**

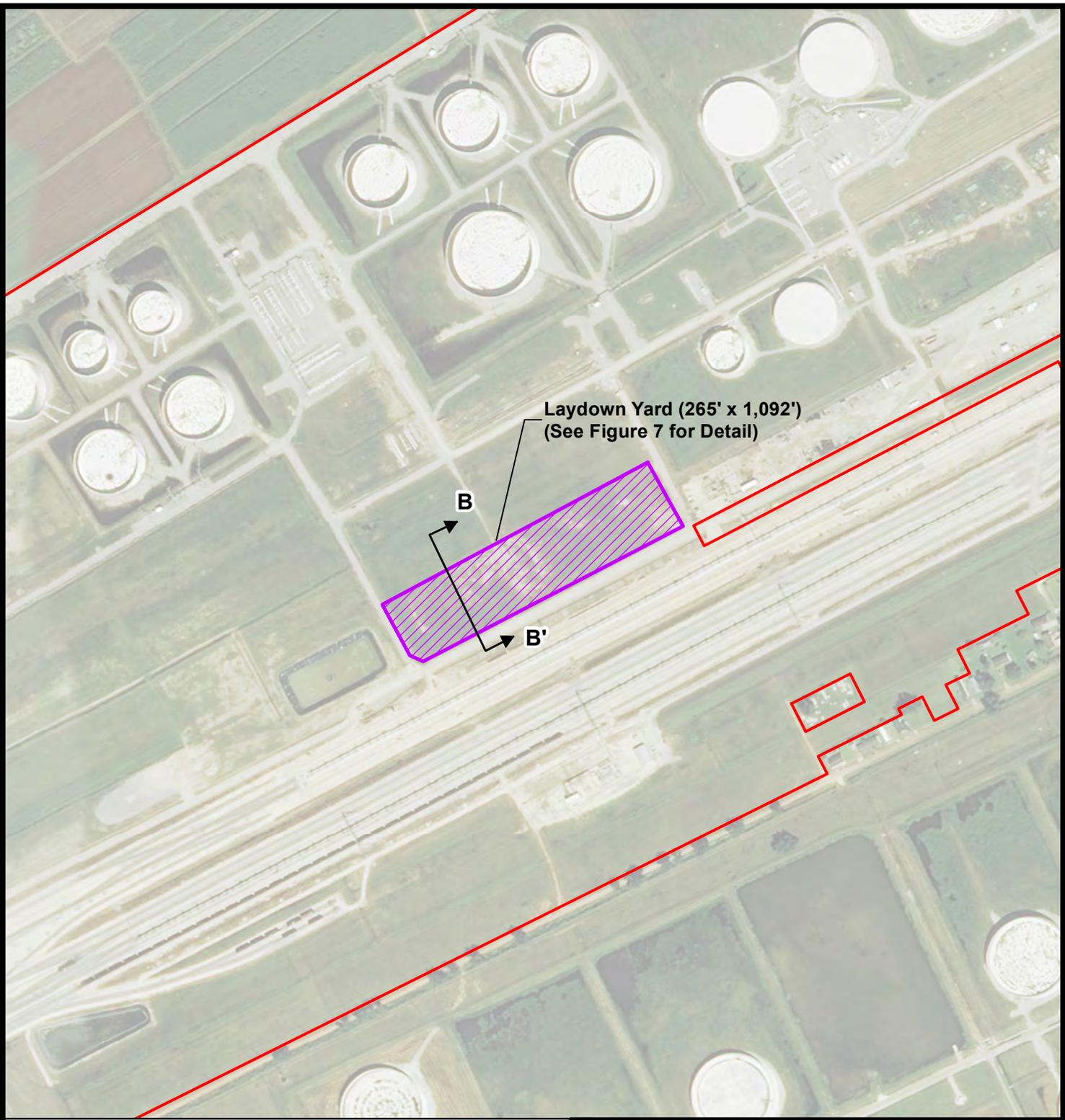
ST. JAMES PARISH



Drawn:	CPL/ACAD
Checked:	BLN
Approved:	TEW
Date:	08/28/2015
Dwg. No.:	A12128-36

NOT TO SCALE

**FIGURE 5**

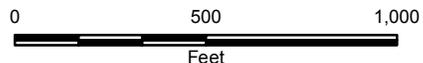


Laydown Yard (265' x 1,092')  
(See Figure 7 for Detail)

B

B'

-  Proposed Laydown Yard (6.48 acres)
-  Facility Boundary



**Reference**

IMAGERY: ESRI WORLD IMAGERY, ARCGIS ONLINE.



**NUSTAR ENERGY LP**  
ST. JAMES, LOUISIANA

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FACILITY INFRASTRUCTURE IMPROVEMENTS AND EXPANSION

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**LAYDOWN YARD PLAN VIEW**

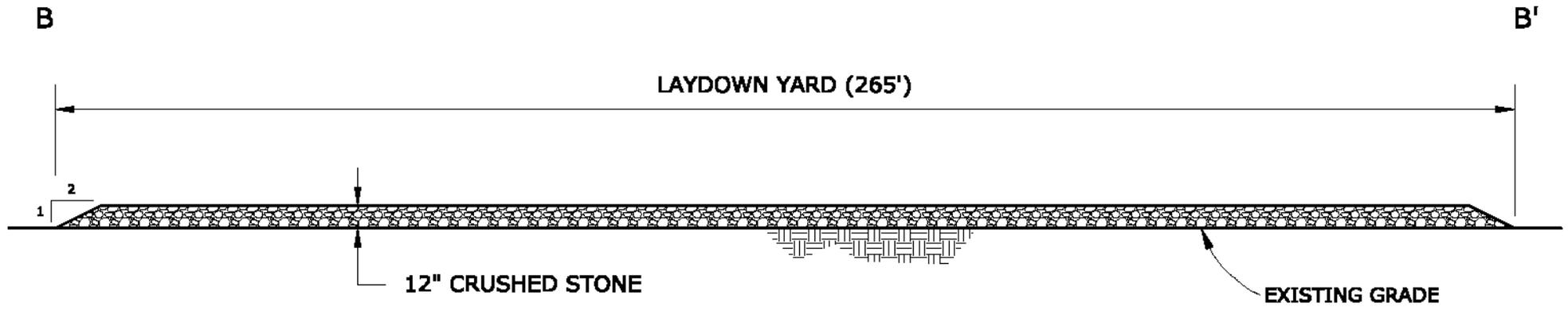
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ST. JAMES PARISH



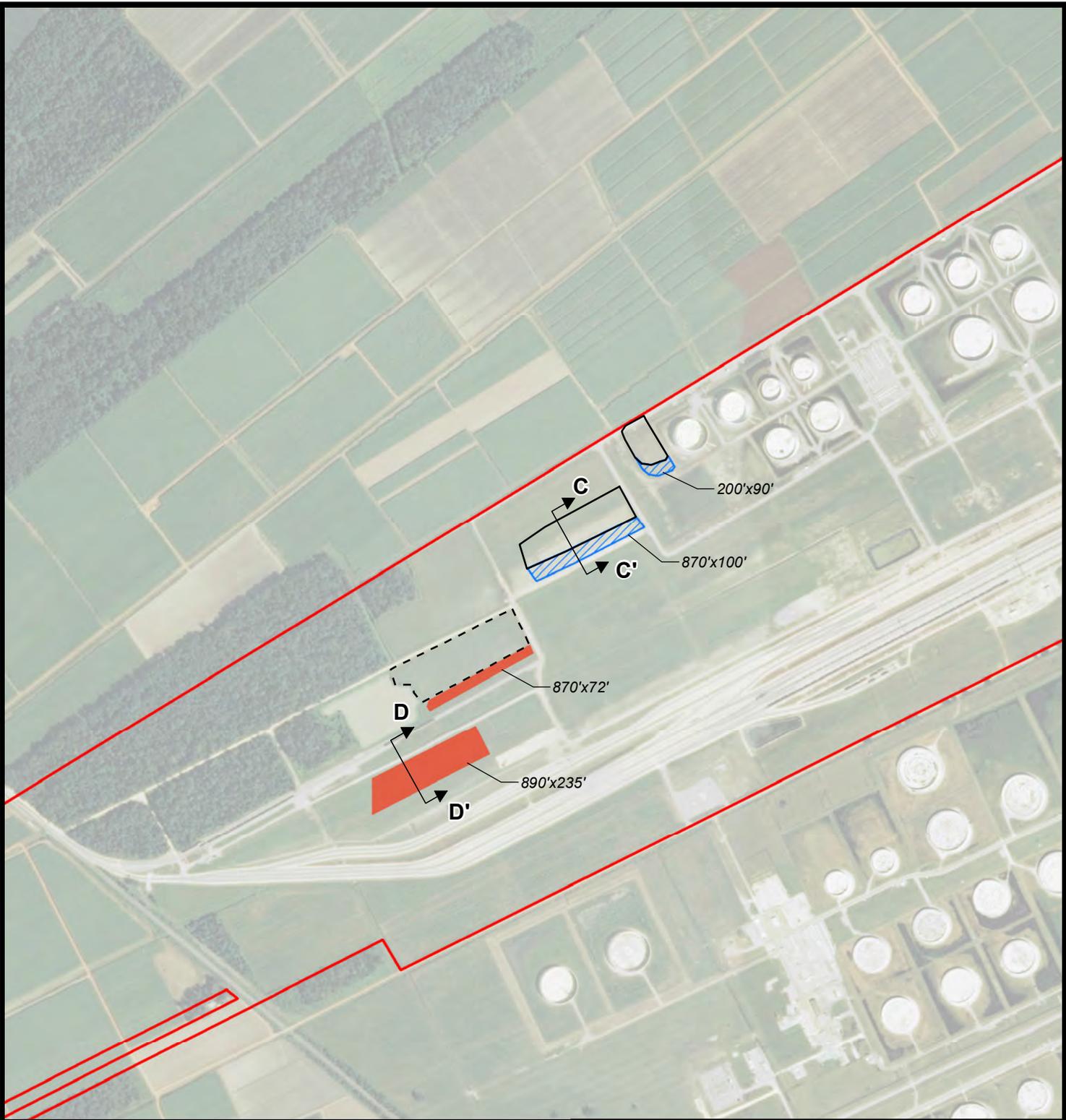
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Checked:	BLN
Approved:	TEW
Date:	07/31/2015
Dwg. No.:	A12128-29

**FIGURE 6**

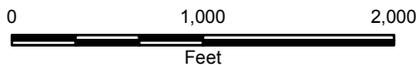


<b>NUSTAR ENERGY LP</b> ST. JAMES, LOUISIANA	
FACILITY INFRASTRUCTURE IMPROVEMENTS AND EXPANSION	
<b>LAYDOWN YARD CROSS-SECTION</b>	
ST. JAMES PARISH	
	Drawn: CPL/ACAD
	Checked: BLN
	Approved: TEW
	Date: 07/31/2016
	Dwg. No.: A12128-30
<b>FIGURE 7</b>	

NOT TO SCALE



-  Existing Surcharge Piles (P20150319) (6.04 acres)
-  Existing Borrow Pits (P20150319) (6.52 acres)
-  Proposed Borrow Pits (6.28 acres)
-  Proposed Surcharge Piles (2.46 acres)
-  Facility Boundary



**Reference**

IMAGERY: ESRI WORLD IMAGERY, ARCGIS ONLINE.



**NUSTAR ENERGY LP**  
ST. JAMES, LOUISIANA

FACILITY INFRASTRUCTURE IMPROVEMENTS AND EXPANSION

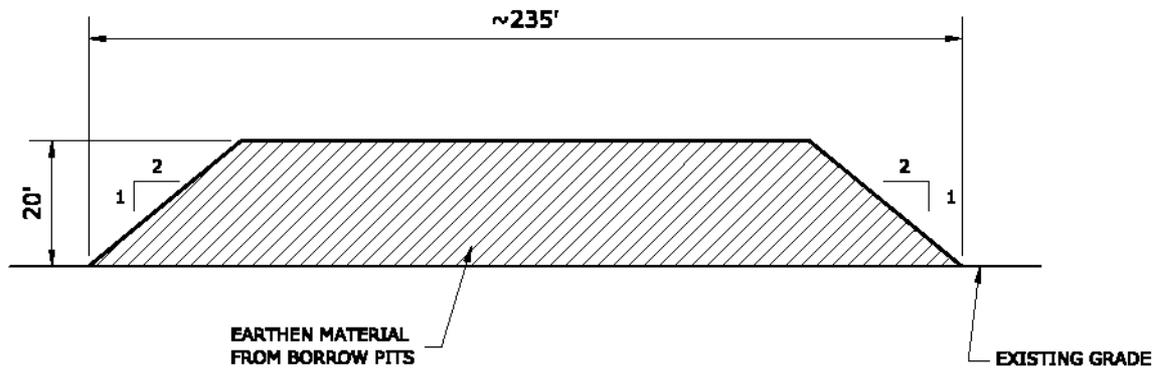
**BORROW PIT AND SURCHARGE PILE  
PLAN VIEW**

ST. JAMES PARISH

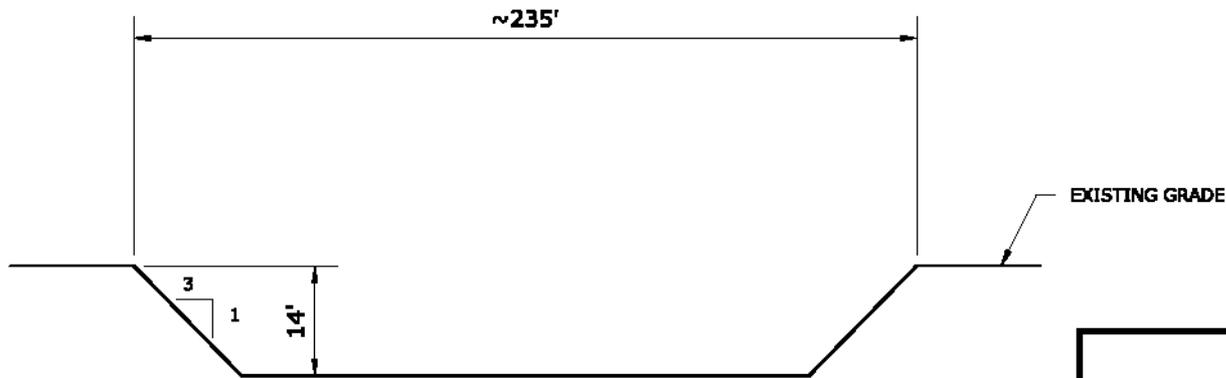


Drawn:	CPL/AM10.3
Checked:	BN
Approved:	TEW
Date:	09/23/15
Dwg. No.:	A12128-26

**FIGURE 8**



TYPICAL SURCHARGE PILE  
CROSS SECTION C - C'

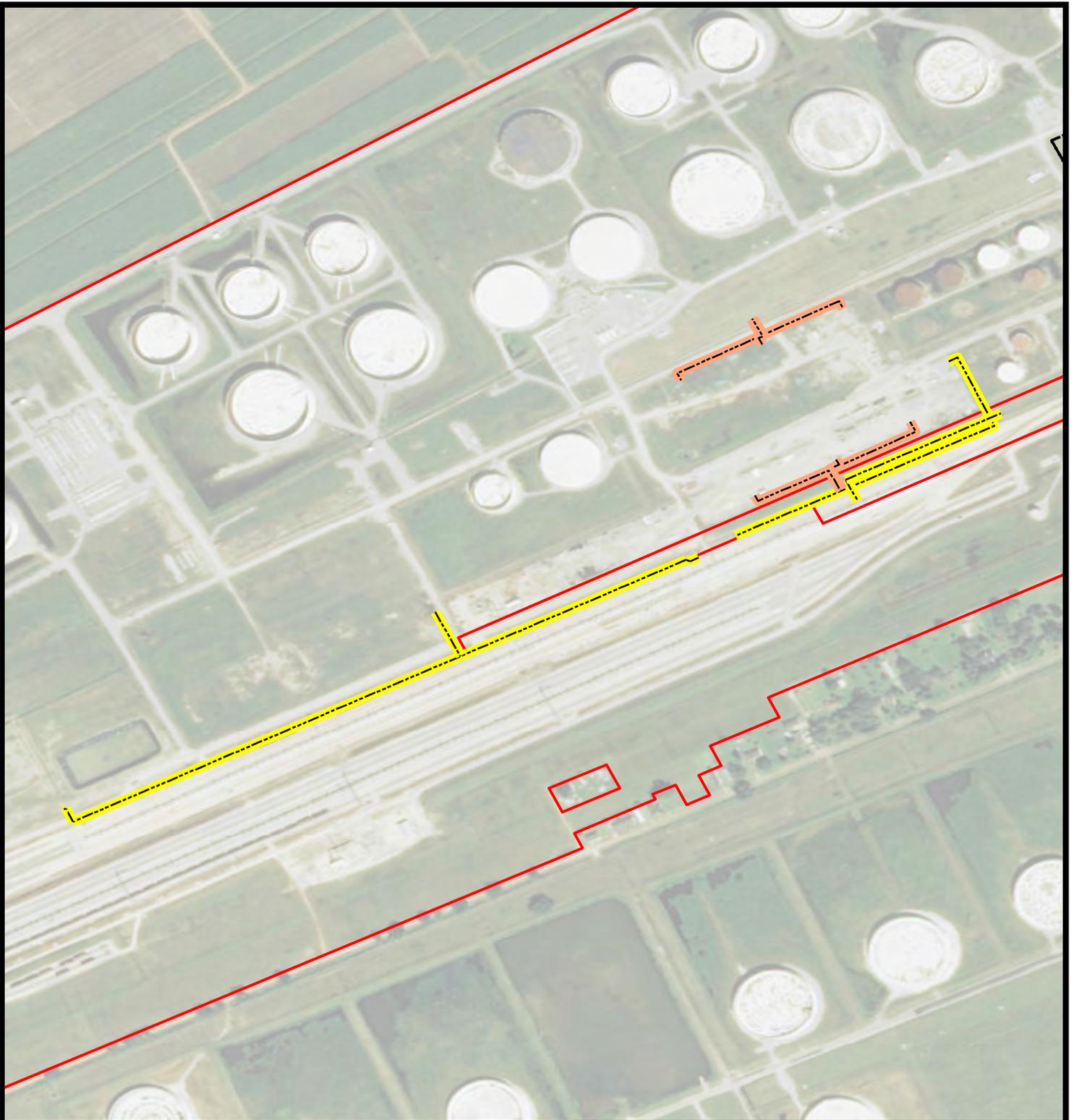


TYPICAL BORROW PIT  
CROSS SECTION D - D'

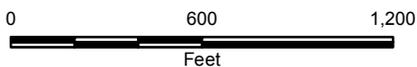
NOT TO SCALE

<b>NUSTAR ENERGY LP</b> ST. JAMES, LOUISIANA	
FACILITY INFRASTRUCTURE IMPROVEMENTS AND EXPANSION	
<b>TYPICAL SURCHARGE PILE &amp; TYPICAL BORROW PIT DETAIL</b>	
ST. JAMES PARISH	
Drawn:	CPL/ACAD
Checked:	BLN
Approved:	TEW
Date:	08/18/2015
Dwg. No.:	A12128-32
<b>FIGURE 9</b>	





- Proposed Firewater Line (5,114 ft.)
- Proposed Foam Line (2,131 ft.)
- Facility Boundary



**Reference**

IMAGERY: ESRI WORLD IMAGERY, ARCGIS ONLINE.



**NUSTAR ENERGY LP**  
ST. JAMES, LOUISIANA

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FACILITY INFRASTRUCTURE IMPROVEMENTS AND EXPANSION

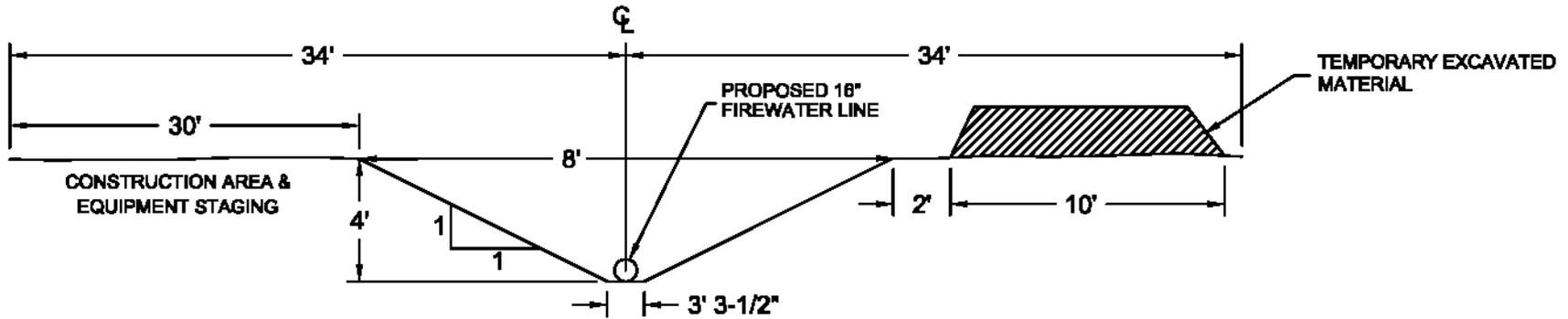
**FIREWATER AND FOAM LINES**  
**PLAN VIEW**

ST. JAMES PARISH

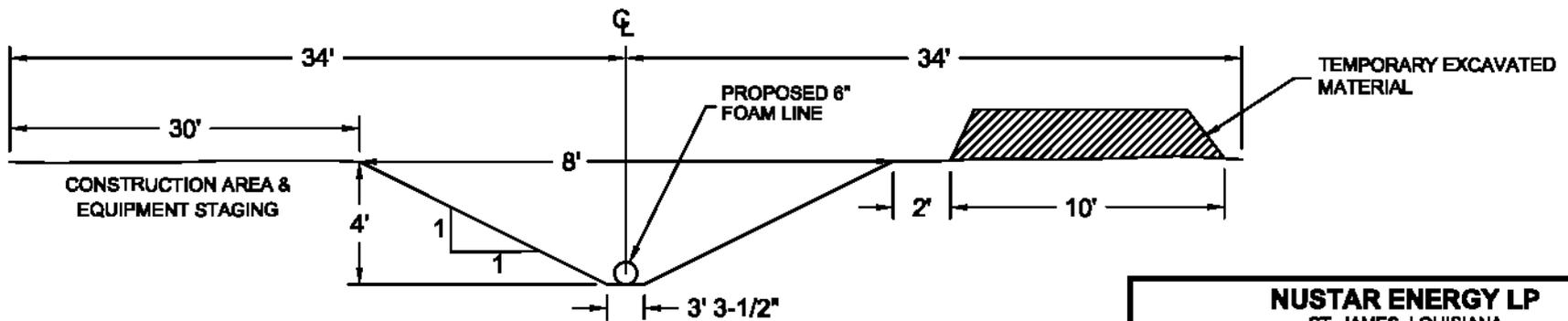


Drawn:	CPL/AM10.3
Checked:	BLN
Approved:	TEW
Date:	09/23/2015
Dwg. No.:	A12128-34

**FIGURE 10**



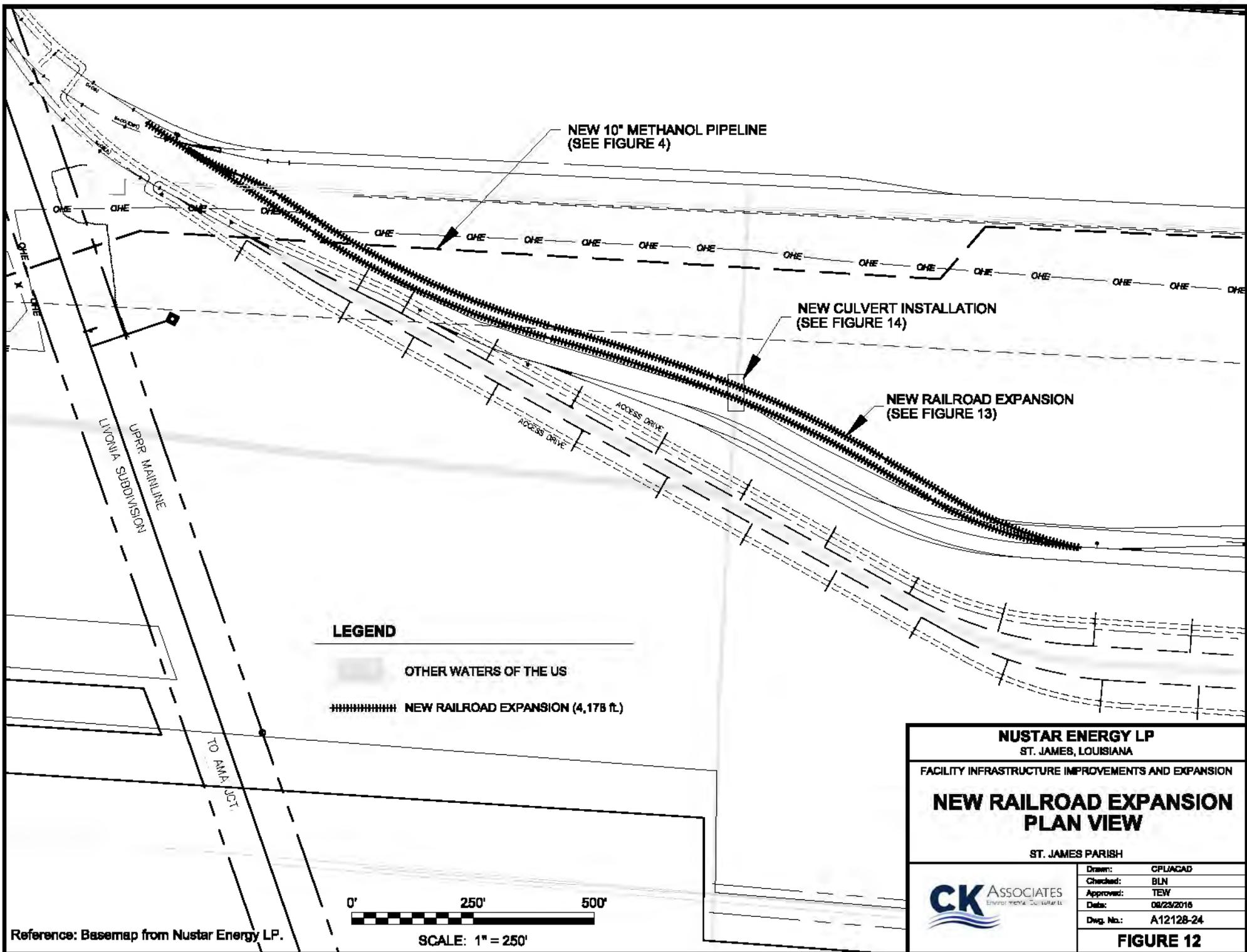
FIREWATER LINE



FOAM LINE

<b>NUSTAR ENERGY LP</b> ST. JAMES, LOUISIANA	
FACILITY INFRASTRUCTURE IMPROVEMENTS AND EXPANSION	
<b>FIREWATER AND FOAM LINES</b> <b>CROSS SECTION</b>	
ST. JAMES PARISH, LOUISIANA	
	Drawn: CPLACAD
	Checked: BLN
	Approved: TEW
	Date: 09/23/2015
	Dwg. No.: A12128-35
<b>FIGURE 11</b>	

NOT TO SCALE



NEW 10" METHANOL PIPELINE  
(SEE FIGURE 4)

NEW CULVERT INSTALLATION  
(SEE FIGURE 14)

NEW RAILROAD EXPANSION  
(SEE FIGURE 13)

**LEGEND**

- OTHER WATERS OF THE US
- NEW RAILROAD EXPANSION (4,178 ft.)

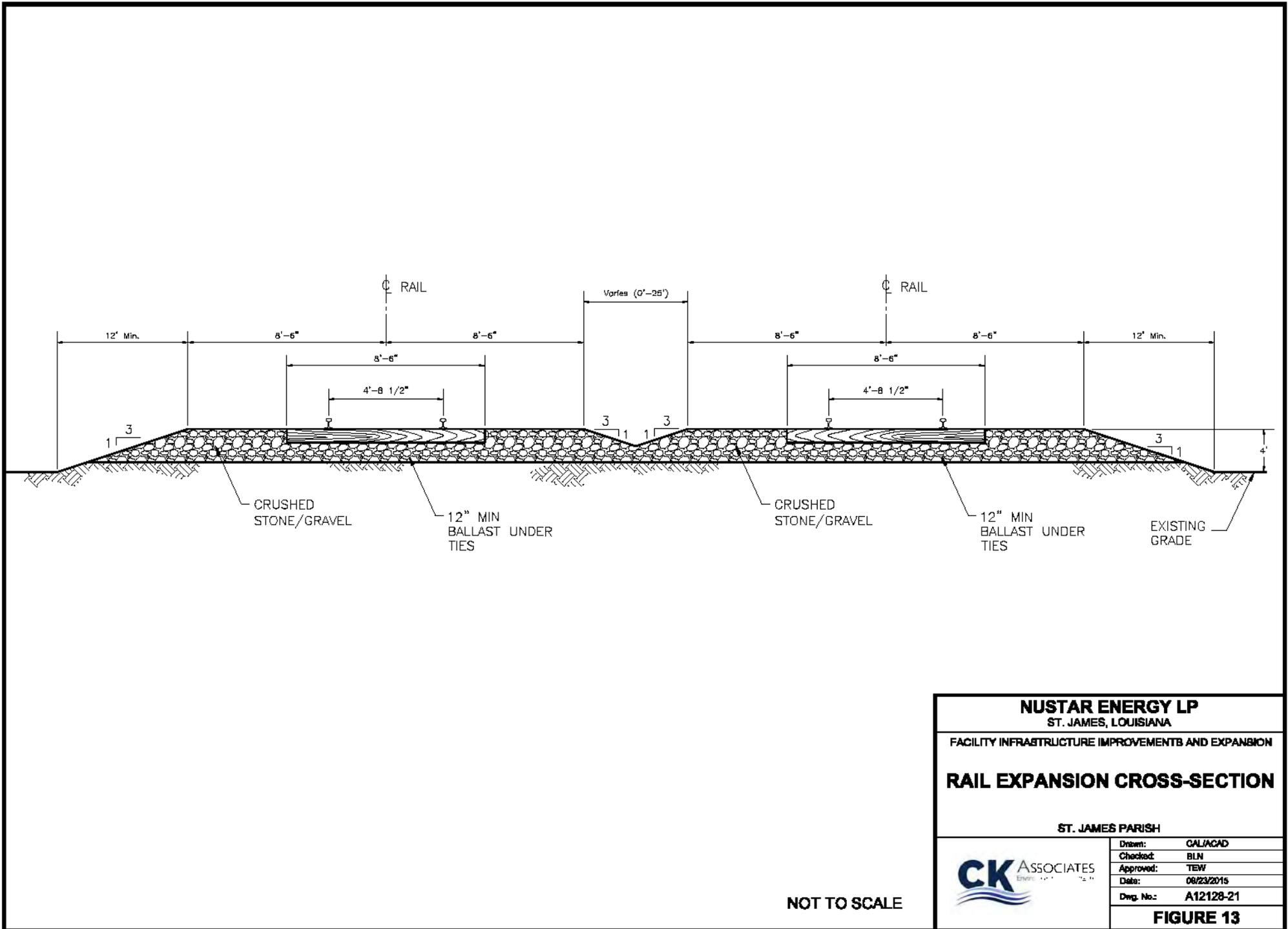


SCALE: 1" = 250'

Reference: Basemap from Nustar Energy LP.

<b>NUSTAR ENERGY LP</b> ST. JAMES, LOUISIANA	
FACILITY INFRASTRUCTURE IMPROVEMENTS AND EXPANSION	
<b>NEW RAILROAD EXPANSION</b> <b>PLAN VIEW</b>	
ST. JAMES PARISH	
Drawn:	CPLIACAD
Checked:	BLN
Approved:	TEW
Date:	08/23/2016
Dwg. No.:	A12128-24
<b>FIGURE 12</b>	

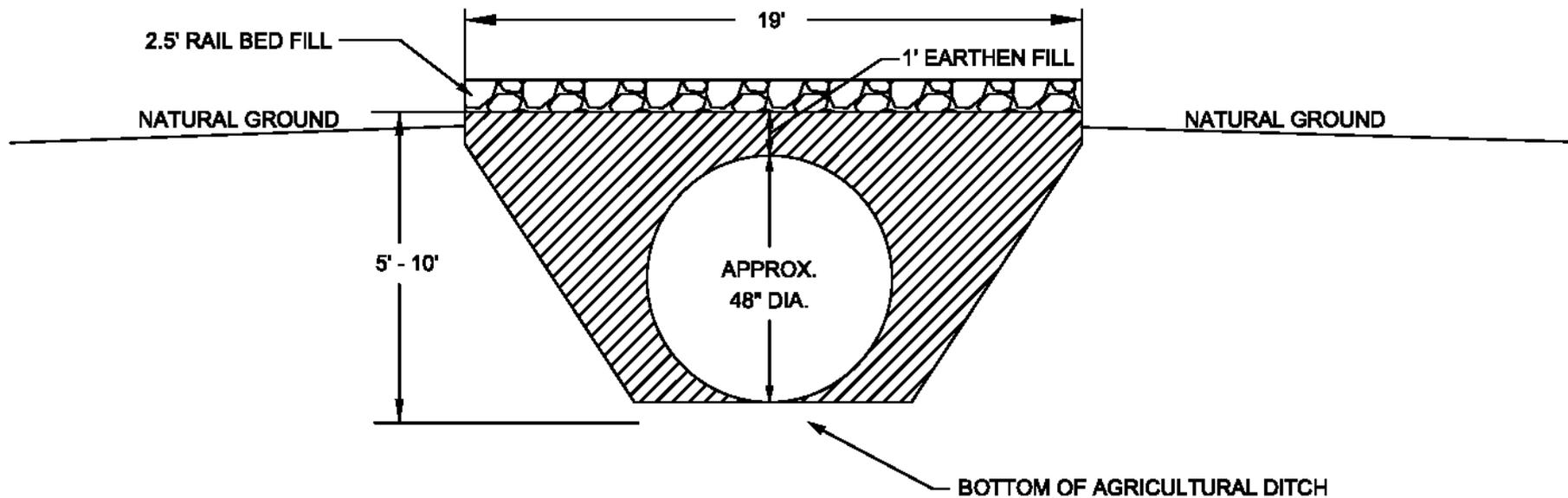




NOT TO SCALE

<b>NUSTAR ENERGY LP</b> ST. JAMES, LOUISIANA	
FACILITY INFRASTRUCTURE IMPROVEMENTS AND EXPANSION	
<b>RAIL EXPANSION CROSS-SECTION</b>	
ST. JAMES PARISH	
Drawn:	CAL/ACAD
Checked:	BLN
Approved:	TEW
Date:	08/23/2015
Dwg. No.:	A12128-21
<b>FIGURE 13</b>	



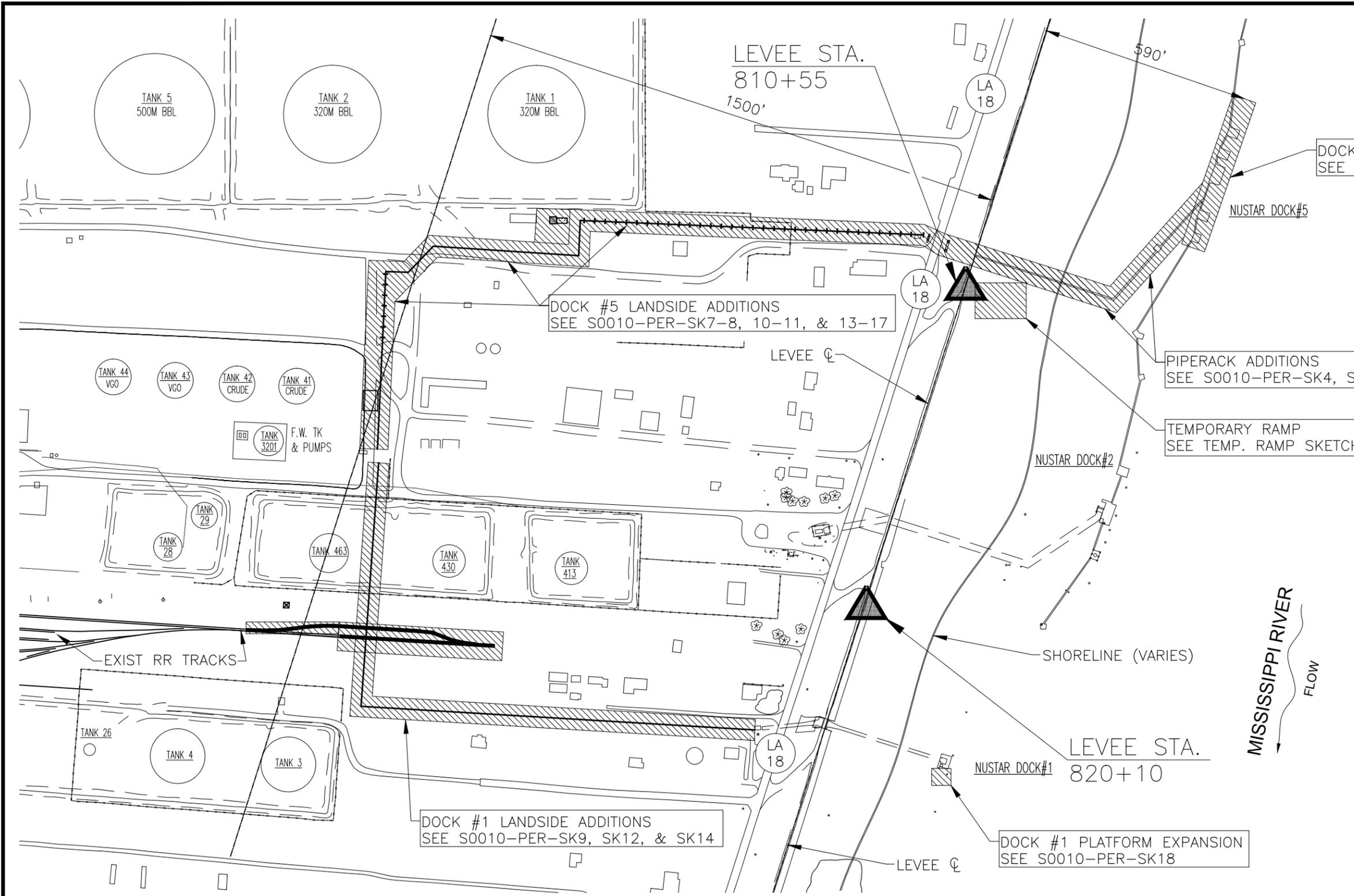


**NOTES:**

1. DIMENSIONS OF CULVERT AND FILL ESTIMATES MADE BASED ON FIELD OBSERVATIONS BY NUSTAR PERSONNEL.
2. SEE FIGURE 12 FOR LOCATION OF PROPOSED CULVERT CROSSING.

NOT TO SCALE

<b>NuSTAR LOGISTICS, L.P.</b> SAN ANTONIO, TEXAS	
FACILITY EXPANSION	
<b>PROPOSED CULVERT CROSSING</b>	
ST. JAMES PARISH, LOUISIANA	
	Drawn: CALACAD
	GT Checked:
	Checked: BLN
	Approved: TEW
	Date: 06/23/2016
Dwg. No.: A12128-30	
<b>FIGURE 14</b>	



DOCK #5 WORK  
SEE S0010-PER-SK3, SK5, & SK7

DOCK #5 LANDSIDE ADDITIONS  
SEE S0010-PER-SK7-8, 10-11, & 13-17

PIPERACK ADDITIONS  
SEE S0010-PER-SK4, SK6, & SK7

TEMPORARY RAMP  
SEE TEMP. RAMP SKETCHES

DOCK #1 LANDSIDE ADDITIONS  
SEE S0010-PER-SK9, SK12, & SK14

DOCK #1 PLATFORM EXPANSION  
SEE S0010-PER-SK18

July 17, 2015  
**FOR PERMIT  
PURPOSES  
ONLY**

**CDI Engineering Solutions**  
a division of CDI Corporation  
Louisiana License No. EF-0002967  
Project No. N27.S000010.BR00

JUSTIN ITTMANN 36771  
ENGINEER OF RECORD LICENSE NUMBER

**SITE & WORK PLAN**  
1" = 300'

SCALE IN FEET

0	ISSUE FOR PERMIT	7/15	JTI	JTI
REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D
PROJECT NUMBER N27.S000010.BR00 P.O. NUMBER				
<b>NUSTAR, ST. JAMES</b> DOCK #5 METHANOL STORAGE PROJECT LEVEE DISTRICT PERMITTING SITE & WORK PLAN				
SCALE: NOTED		DRAWN BY: JTI		
DATE: 7/2015		CHECKED BY: JTI		
DESIGNED BY:		APPROVED BY: JTI		
DRAWING NO.	S0010-PER-SK2			REV 0

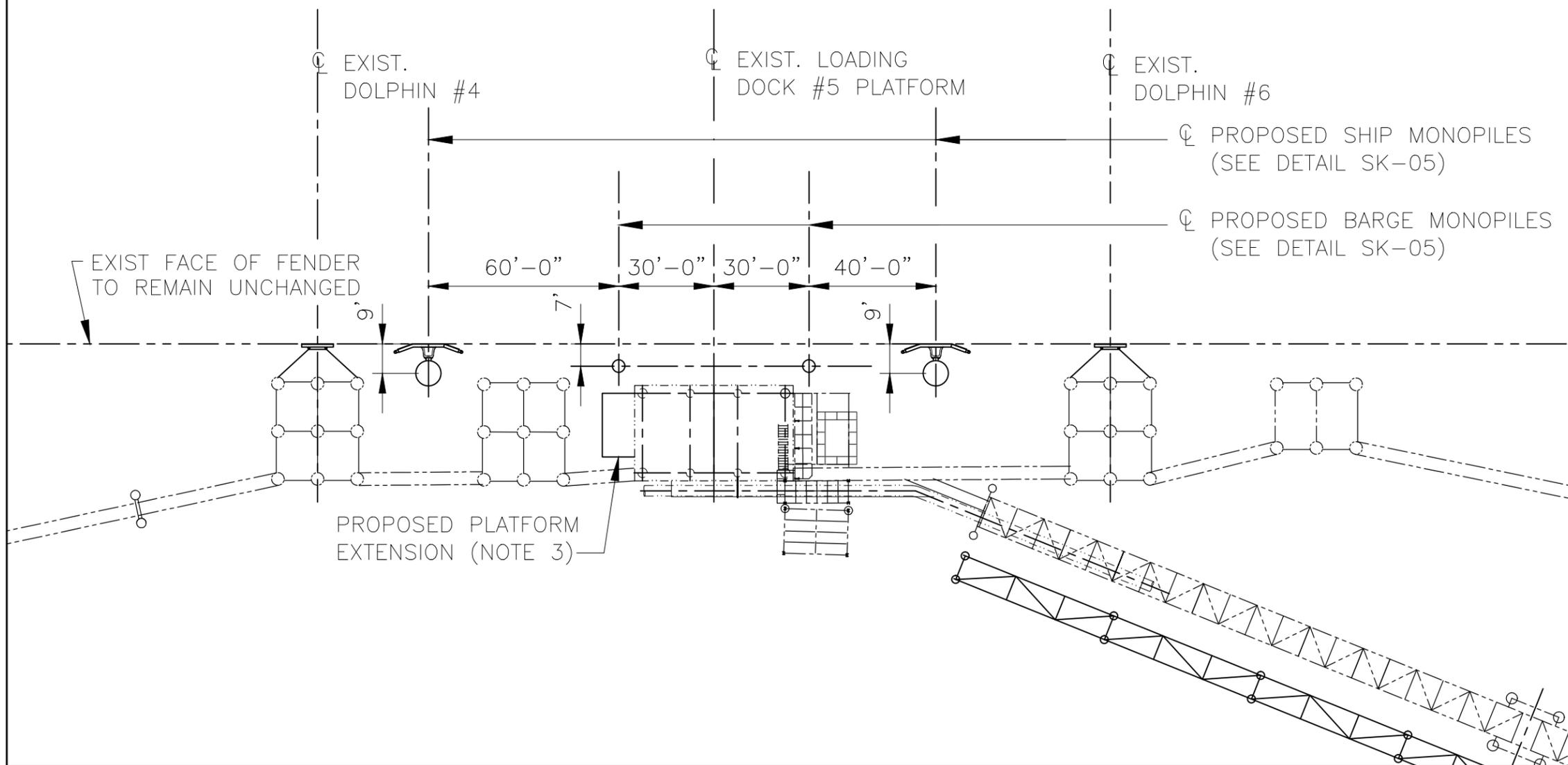


MISSISSIPPI RIVER

FLOW

July 17, 2015

FOR PERMIT  
PURPOSES  
ONLY



NOTES:

1. ALL SKETCHES IN THIS PERMIT PACKAGE ARE INTENDED TO BE PRINTED AT 11"x17" AND ARE SCALED ACCORDINGLY.
2. SHIP MONOPILES ARE PROPOSED FOR THE PURPOSE OF ALLOWING SMALLER VESSELS TO BERTH AT THE FACILITY. IF IT IS DETERMINES THAT THESE SMALLER VESSELS (APPROXIMATELY 600' TO 650' LOA) WILL NOT BE NEEDED FROM AN OPERATION PERSPECTIVE, BARGE MONOPILES WILL BE INSTALLED AT THE LOCATIONS OF THE PROPOSED SHIP MONOPILES.
3. THE PROPOSED NEW PLATFORM EXTENSION WILL NOT REQUIRE THE DRIVING OF PILES AND WILL BE SUPPORTED ENTIRELY BY THE EXISTING PLATFORM.

**CDI** Engineering Solutions

a division of CDI Corporation  
Louisiana License No. EF-0002967  
Project No. N27.S000010.BR00



JUSTIN ITTMANN 36771  
ENGINEER OF RECORD LICENSE NUMBER

REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D
0	ISSUE FOR PERMIT	7/15	JTI	JTI

PROJECT NUMBER N27.S000010.BR00 P.D. NUMBER

**NUSTAR ST. JAMES**  
DOCK #5 METHANOL STORAGE PROJECT  
ST. JAMES PARISH, LA  
DOCK #5 ADDITIONS PLAN

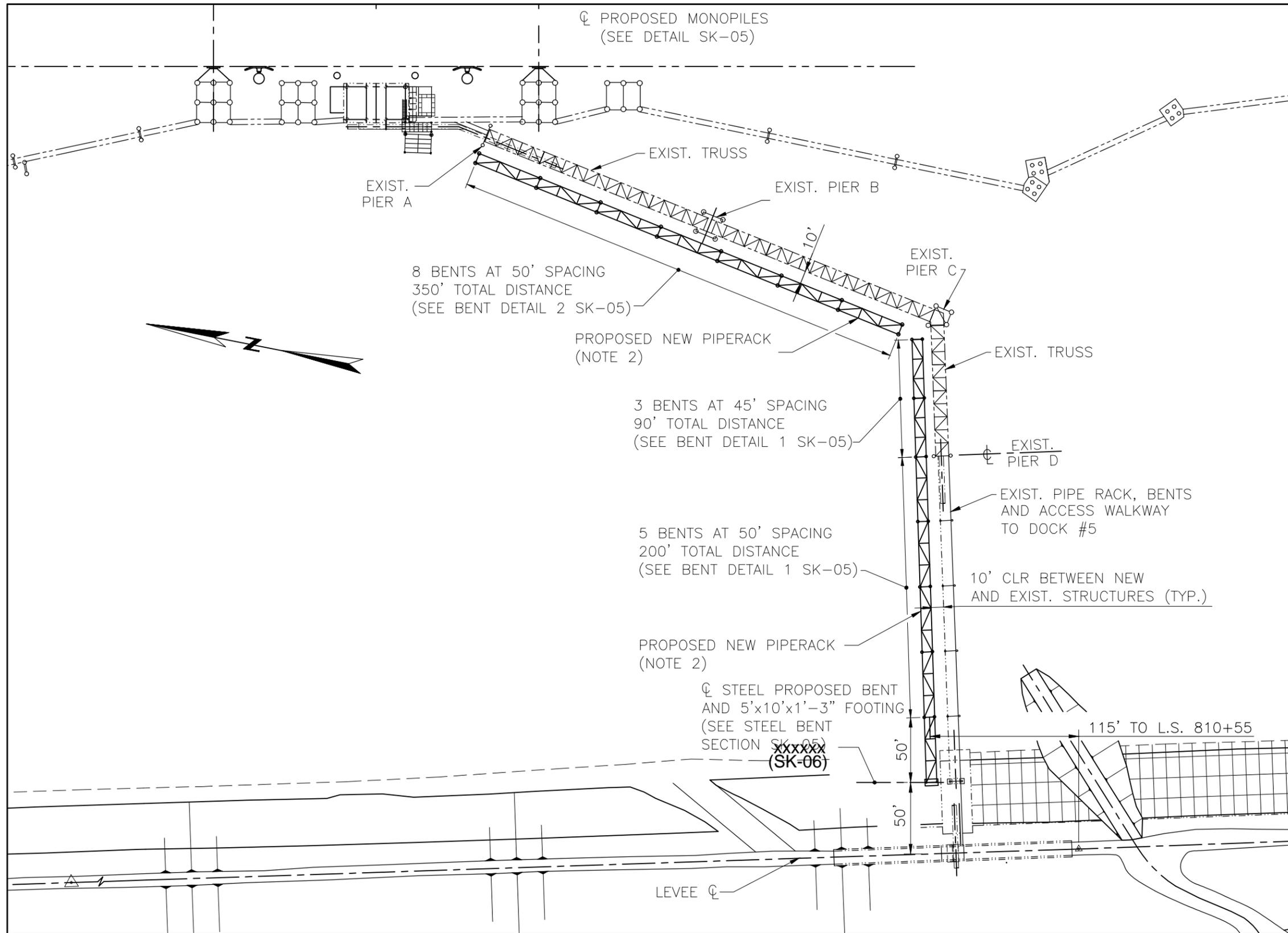
SCALE: NOTED	DRAWN BY: JTI
DATE: 6/2015	CHECKED BY: JTI
DESIGNED BY:	APPROVED BY: JTI

DRAWING NO.	S0010-PER-SK3	REV	0
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**DOCK #5 ADDITIONS PLAN**

1"=40'





**PIPERACK PLAN**

1"=80'



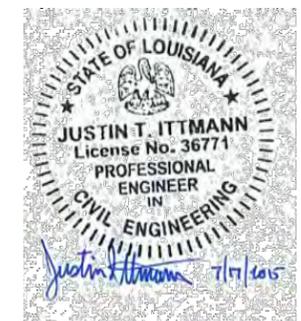
**NOTES:**

1. ALL SKETCHES IN THIS PERMIT PACKAGE ARE INTENDED TO BE PRINTED AT 11"x17" AND ARE SCALED ACCORDINGLY.
2. AS AN ALTERNATIVE OPTION, NUSTAR IS EVALUATING MODIFYING THE EXISTING PIPE SUPPORT RACKS TO CARRY THE NEW PIPES TO THE DOCK. IF THIS OPTION IS A MORE COST EFFECTIVE APPROACH, THE EXISTING SUPPORTS WILL BE MODIFIED TO CARRY THE PIPES. THE MODIFICATIONS WILL BE ENTIRELY WITHIN THE EXISTING SUPPORTS; NO NEW PILES WILL BE DRIVEN FOR THE TRUSS MODIFICATIONS.

July 17, 2015

FOR PERMIT PURPOSES ONLY

**CDI** Engineering Solutions  
a division of CDI Corporation  
 Louisiana License No. EF-0002967  
 Project No. N27.S000010.BR00



JUSTIN ITTMANN 36771  
 ENGINEER OF RECORD LICENSE NUMBER

0	ISSUE FOR PERMIT	7/15	JTI	JTI
REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D

PROJECT NUMBER N27.S000010.BR00 P.D. NUMBER

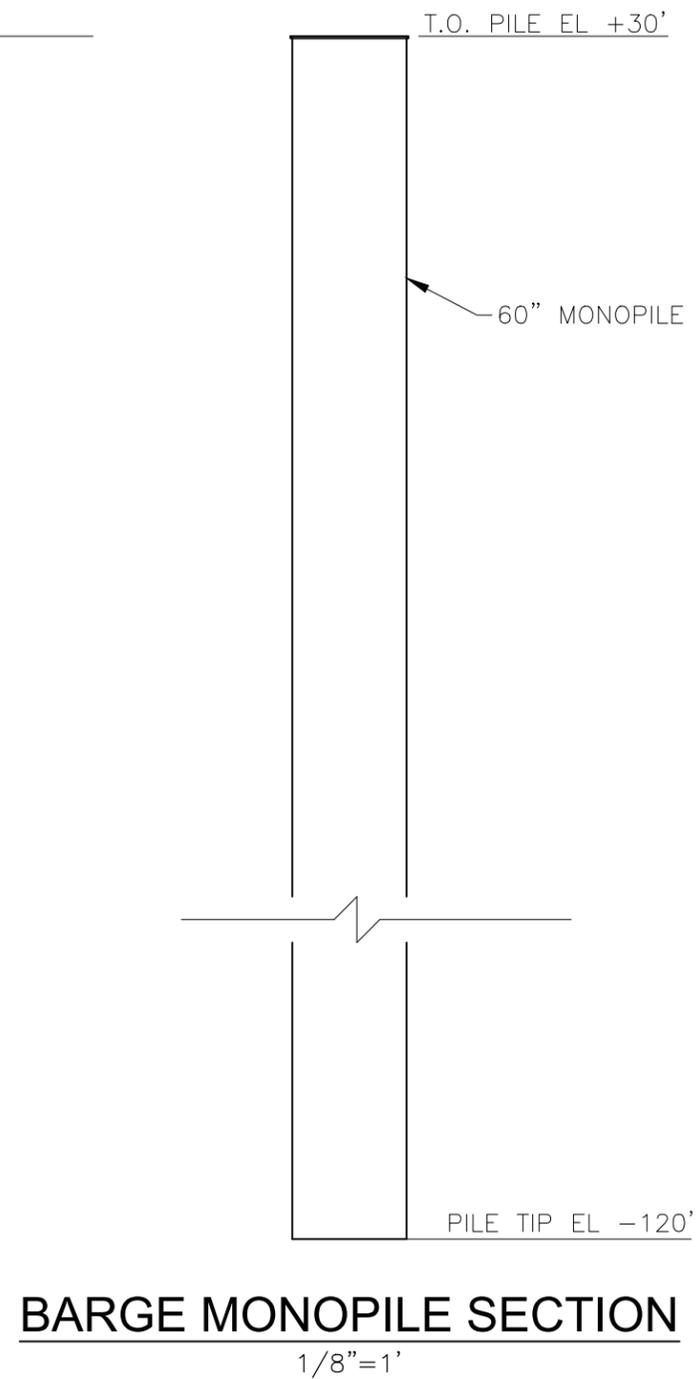
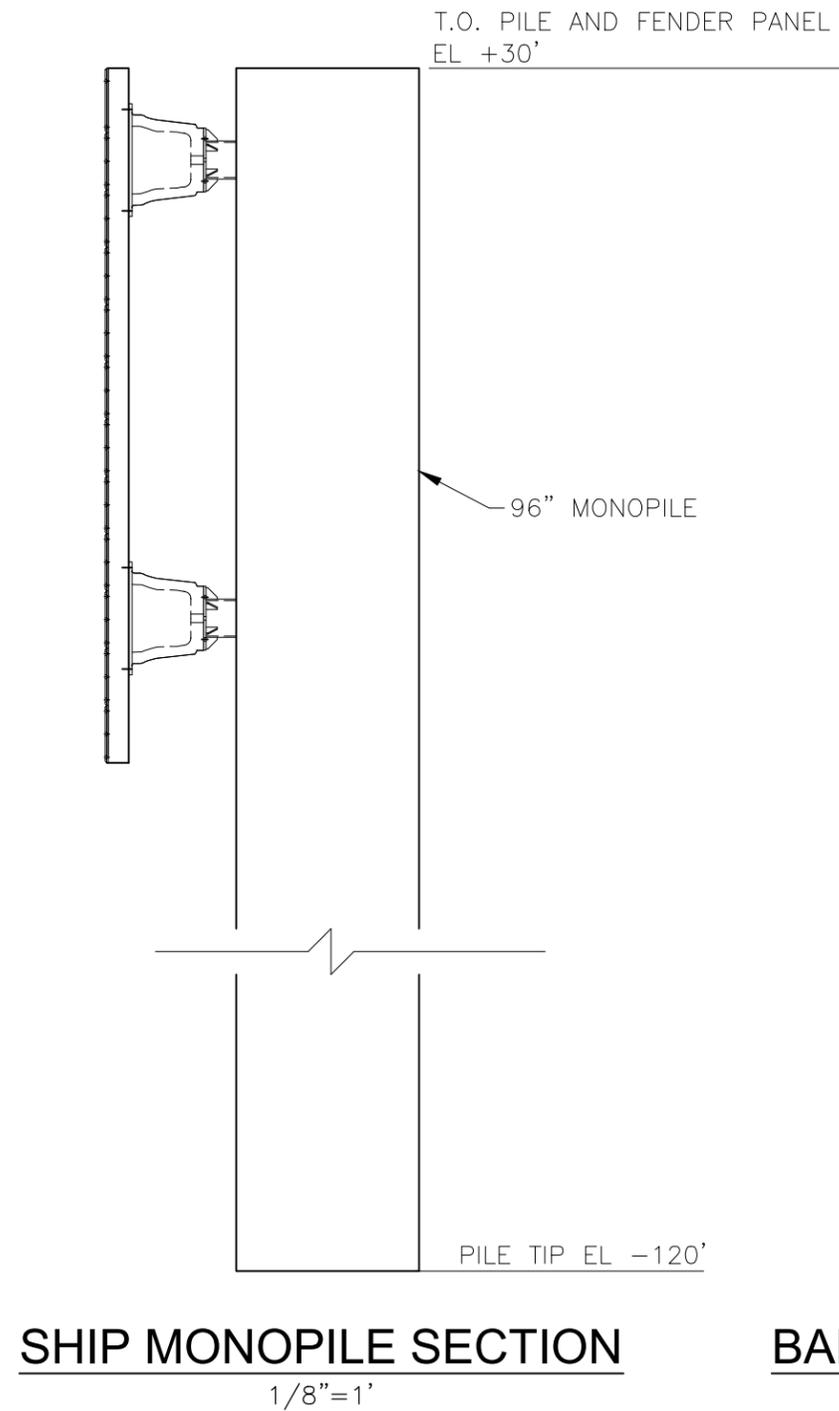
**NUSTAR ST. JAMES DOCK #5 METHANOL STORAGE PROJECT**  
 ST. JAMES PARISH, LA  
 PIPERACK PLAN

SCALE: NOTED	DRAWN BY: JTI
DATE: 6/2015	CHECKED BY: JTI
DESIGNED BY:	APPROVED BY: JTI

DRAWING NO.	<b>S0010-PER-SK4</b>	REV	<b>0</b>
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**NOTES:**

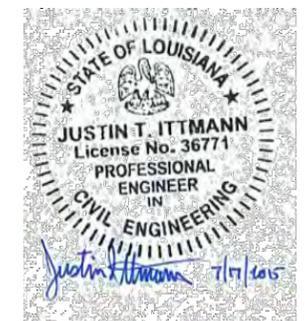
1. ALL SKETCHES IN THIS PERMIT PACKAGE ARE INTENDED TO BE PRINTED AT 11"x17" AND ARE SCALED ACCORDINGLY.



July 17, 2015

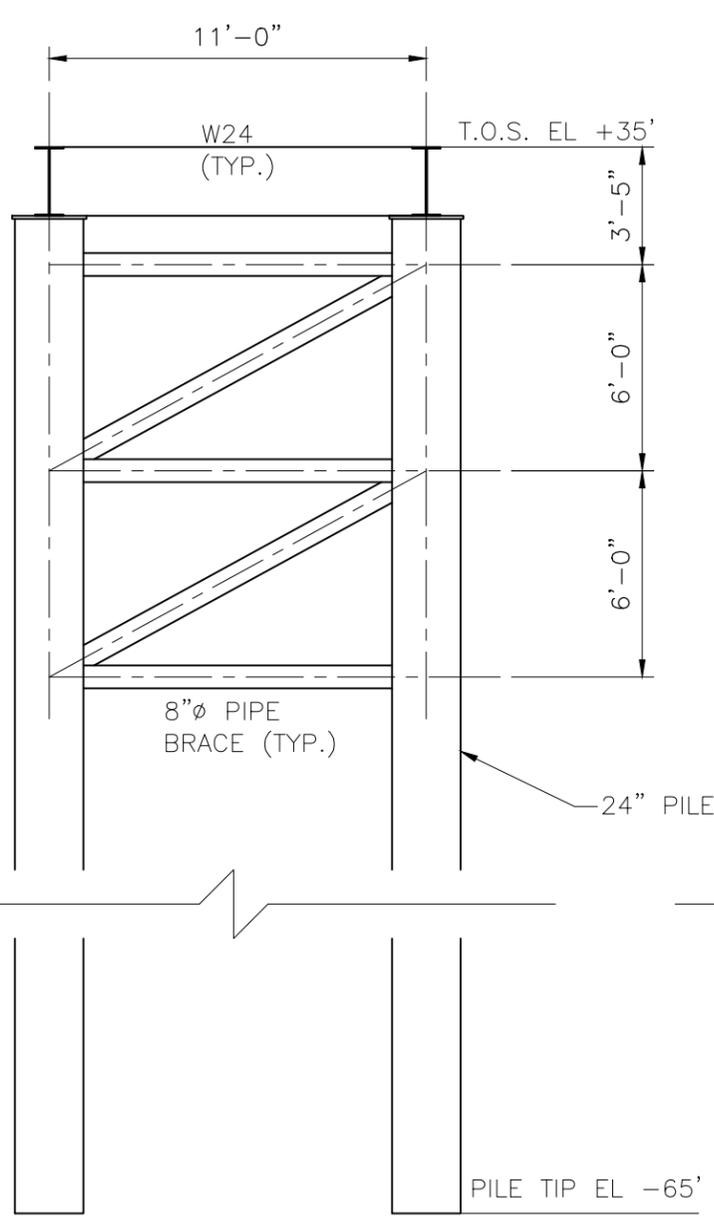
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Louisiana License No. EF-0002967  
Project No. N27.S000010.BR00

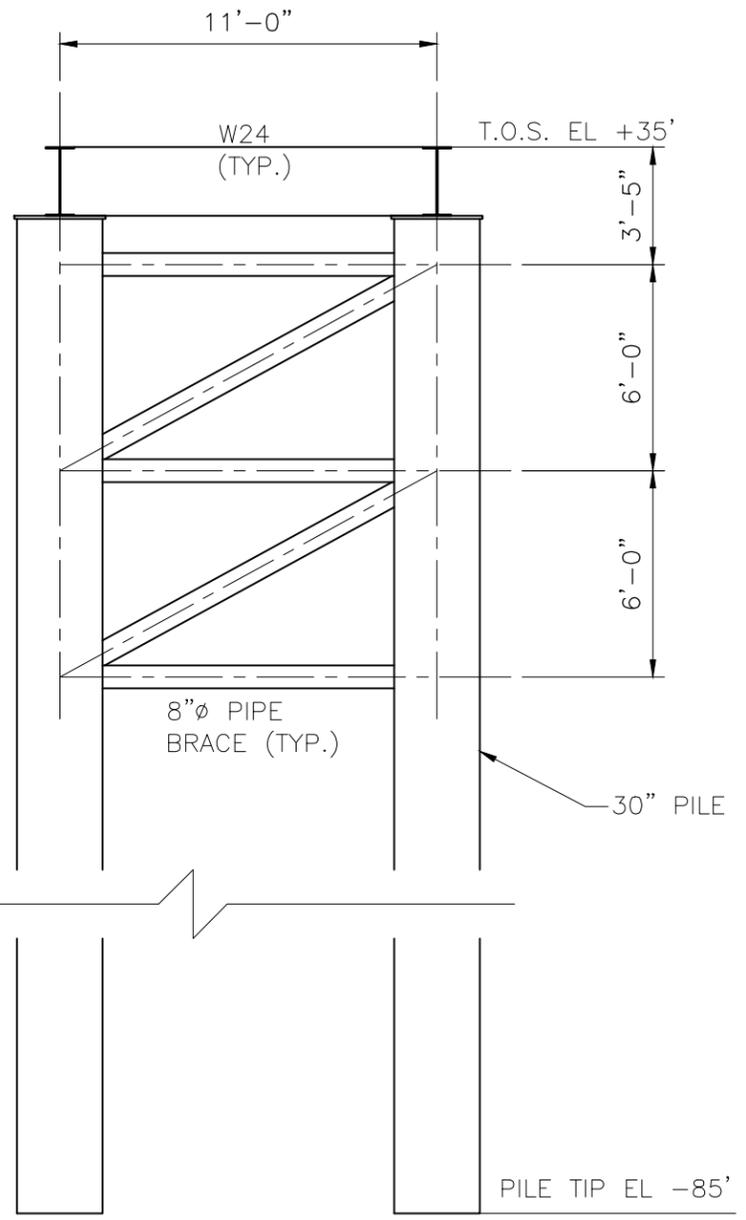


JUSTIN ITTMANN 36771  
ENGINEER OF RECORD LICENSE NUMBER

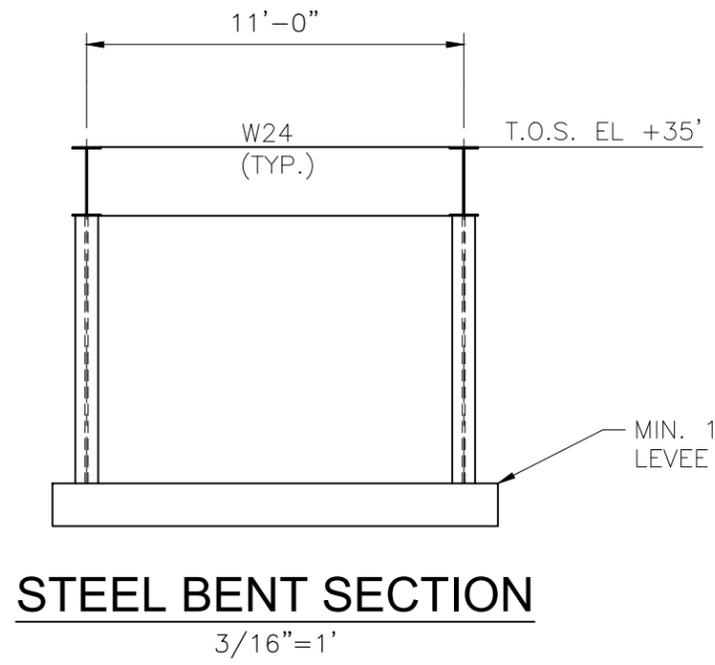
0	ISSUE FOR PERMIT	7/15	JTI	JTI
REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D
PROJECT NUMBER N27.S000010.BR00 P.D. NUMBER				
<b>NUSTAR ST. JAMES</b> DOCK #5 METHANOL STORAGE PROJECT ST. JAMES PARISH, LA MONOPILE SECTIONS				
SCALE: NOTED		DRAWN BY: JTI		
DATE: 6/2015		CHECKED BY: JTI		
DESIGNED BY:		APPROVED BY: JTI		
DRAWING NO.	S0010-PER-SK5			REV <b>0</b>



**BENT DETAIL 1**  
3/16"=1'



**BENT DETAIL 2**  
3/16"=1'



**STEEL BENT SECTION**  
3/16"=1'

July 17, 2015  
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PURPOSES  
ONLY**

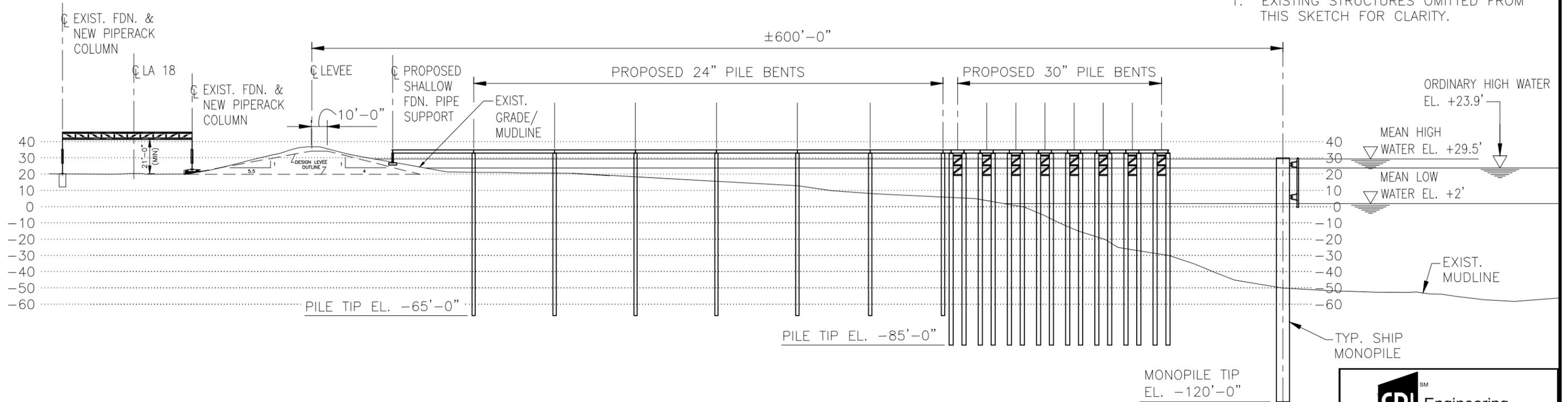
**CDI** Engineering Solutions  
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Project No. N27.S000010.BR00

JUSTIN ITTMANN 36771  
ENGINEER OF RECORD LICENSE NUMBER

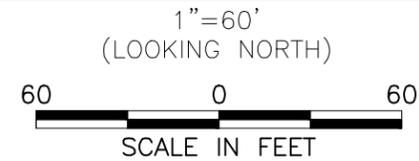
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<b>NUSTAR ST. JAMES DOCK #5 METHANOL STORAGE PROJECT ST. JAMES PARISH, LA BENT DETAILS</b>				
SCALE: NOTED		DRAWN BY: JTI		
DATE: 6/2015		CHECKED BY: JTI		
DESIGNED BY:		APPROVED BY: JTI		
DRAWING NO.	S0010-PER-SK6			REV 0

**NOTES:**

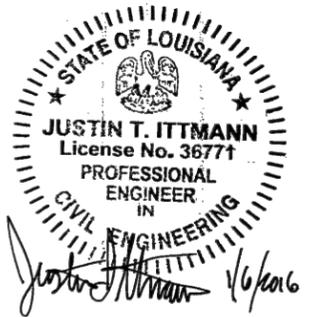
- EXISTING STRUCTURES OMITTED FROM THIS SKETCH FOR CLARITY.



**TYPICAL LEVEE CROSS SECTION**



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REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D
2	REVISED FOR PERMITTING	01/16	MEO	JTI
1	REVISED FOR PERMITTING	9/15	MEO	WJB
0	ISSUE FOR PERMIT	7/15	JTI	JTI

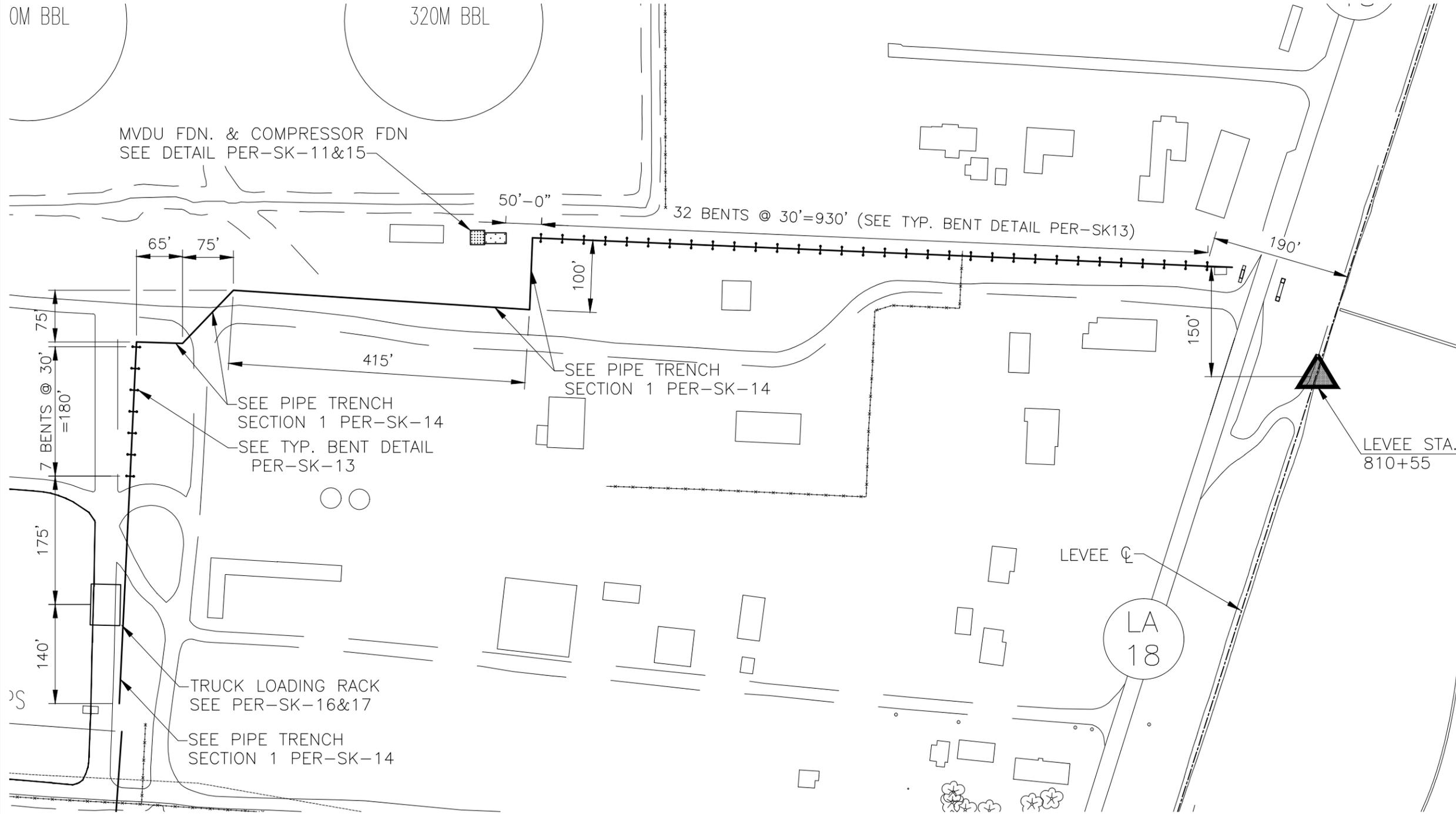
PROJECT NUMBER N27.S000010.BR00 P.D. NUMBER

**NUSTAR, ST. JAMES**  
 DOCK #5 METHANOL STORAGE PROJECT  
 ST. JAMES PARISH, LA  
 LEVEE CROSS SECTION

SCALE: NOTED	DRAWN BY: JTI
DATE: 6/2015	CHECKED BY: JTI
DESIGNED BY:	APPROVED BY: JTI

DRAWING NO.	<b>S0010-PER-SK7</b>	REV	<b>2</b>
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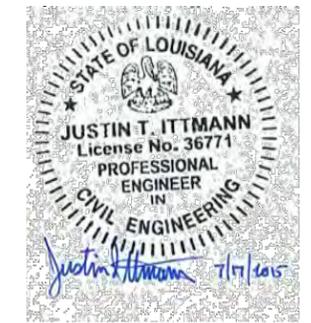
JANUARY 06, 2016  
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July 17, 2015

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Project No. N27.S000010.BR00

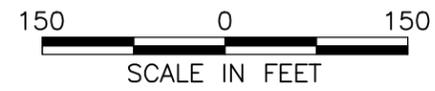


JUSTIN ITTMANN 36771  
ENGINEER OF RECORD LICENSE NUMBER

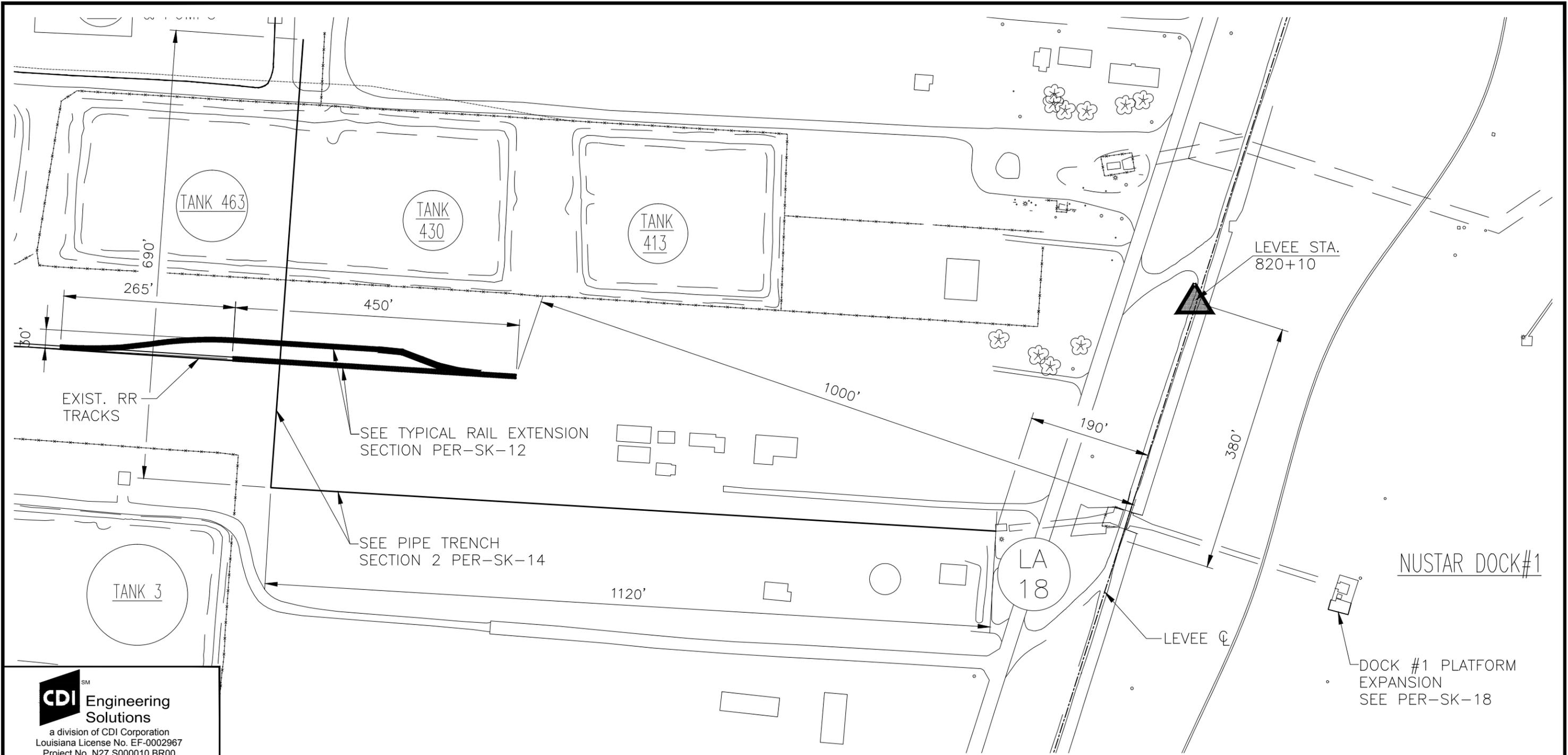


**DOCK 5 LANDSIDE WORK PLAN**

1"=150'



0	ISSUE FOR PERMIT	7/15	JTI	JTI
REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D
PROJECT NUMBER N27.S000010.BR00 P.O. NUMBER				
<b>NUSTAR, ST. JAMES</b> DOCK #5 METHANOL STORAGE PROJECT LEVEE DISTRICT PERMITTING DOCK #5 LANDSIDE WORK PLAN				
SCALE: NOTED		DRAWN BY: JTI		
DATE: 7/2015		CHECKED BY: JTI		
DESIGNED BY:		APPROVED BY: JTI		
DRAWING NO.	S0010-PER-SK8			REV <b>0</b>



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 Project No. N27.S000010.BR00

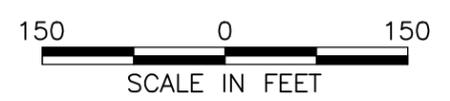
STATE OF LOUISIANA  
 JUSTIN T. ITTMANN  
 License No. 36771  
 PROFESSIONAL ENGINEER  
 IN  
 CIVIL ENGINEERING  
*Justin Ittmann 7/17/2015*

JUSTIN ITTMANN 36771  
 ENGINEER OF RECORD LICENSE NUMBER



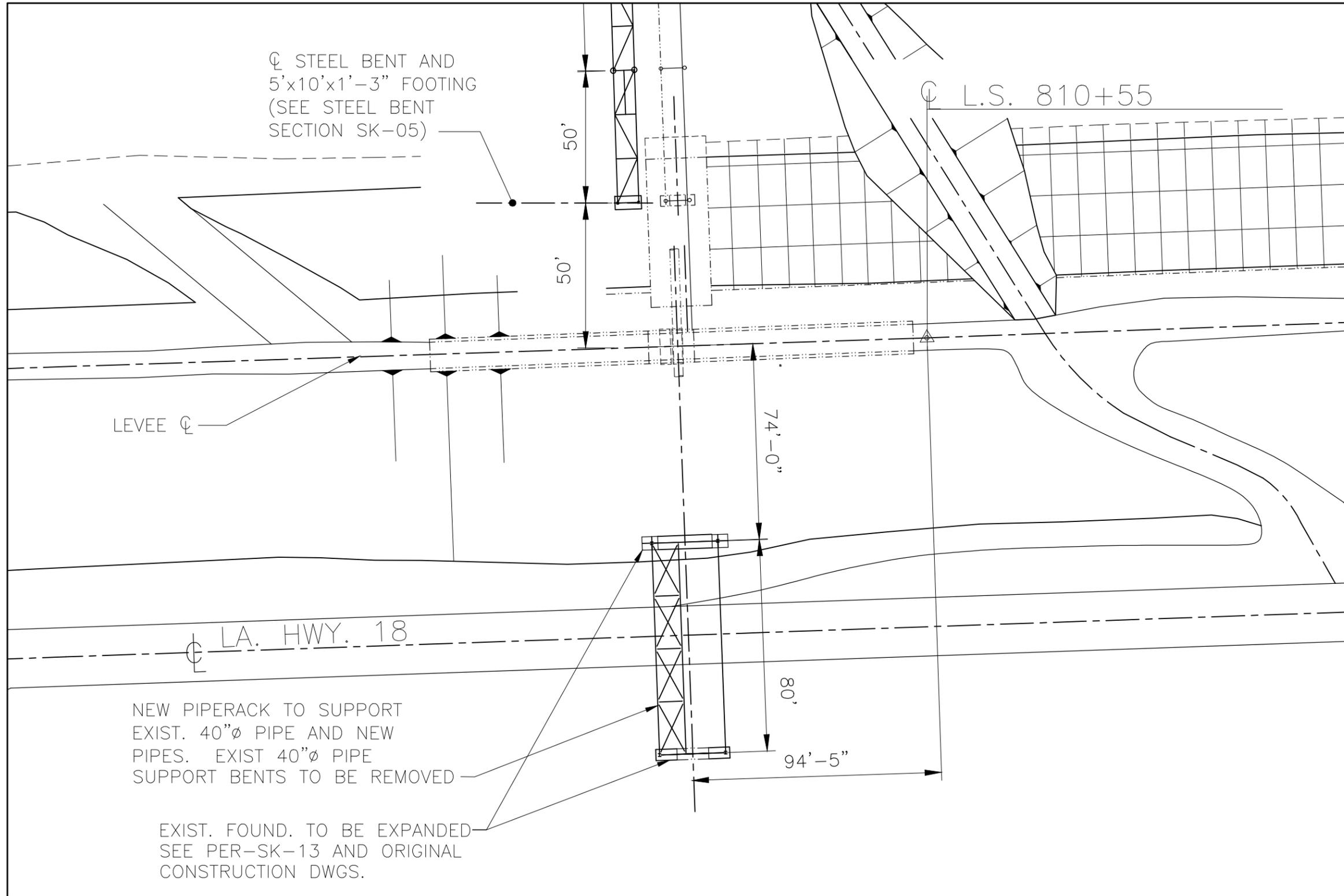
### DOCK 1 ADDITION WORK PLAN

1"=150'



July 17, 2015  
**FOR PERMIT PURPOSES ONLY**

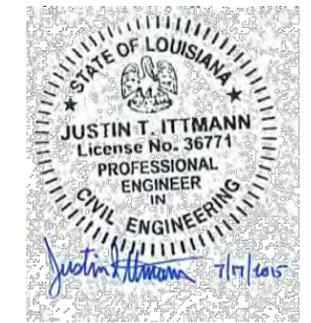
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PROJECT NUMBER N27.S000010.BR00 P.O. NUMBER				
<b>NUSTAR, ST. JAMES</b> DOCK #5 METHANOL STORAGE PROJECT LEVEE DISTRICT PERMITTING DOCK #1 ADDITION WORK PLAN				
SCALE: NOTED		DRAWN BY: JTI		
DATE: 6/2015		CHECKED BY: JTI		
DESIGNED BY:		APPROVED BY: JTI		
DRAWING NO.	S0010-PER-SK9			REV 0



July 17, 2015

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REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D
0	ISSUE FOR PERMIT	7/15	JTI	JTI

PROJECT NUMBER N27.S000010.BR00 P.D. NUMBER

**NUSTAR ST. JAMES**  
 DOCK #5 METHANOL STORAGE PROJECT  
 ST. JAMES PARISH, LA  
 RIVER MILE 160

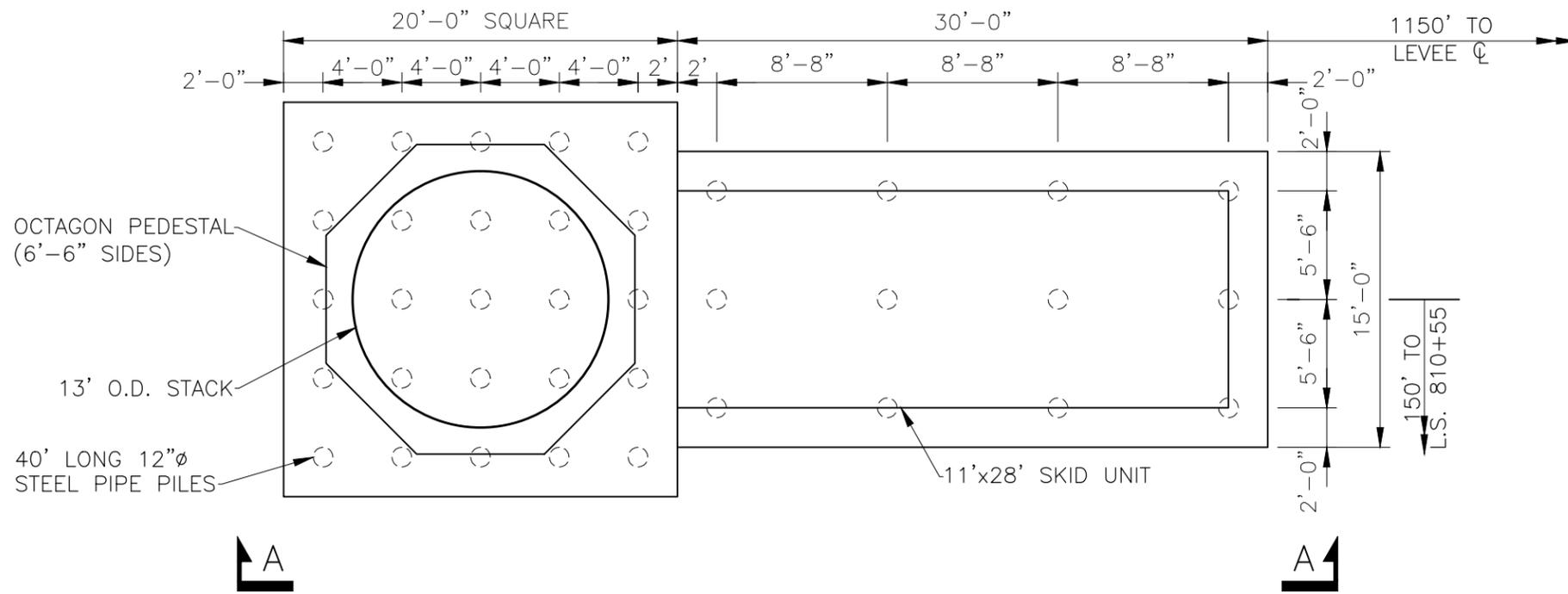
SCALE: NOTED	DRAWN BY: JTI
DATE: 6/2015	CHECKED BY: JTI
DESIGNED BY:	APPROVED BY: JTI

DRAWING NO.	S0010-PER-SK10	REV	0
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**ROAD CROSSING PIPERACK PLAN**

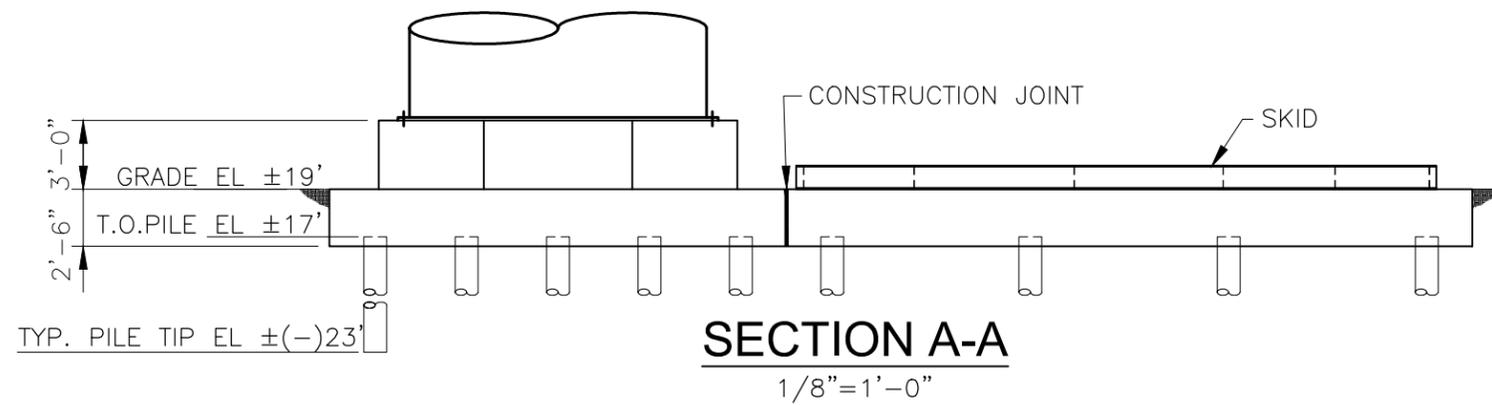
1"=40'





**MVDU FDN AND PILE PLAN**

1/8"=1'-0"  
(SEE PER-SK8 FOR ORIENT.)



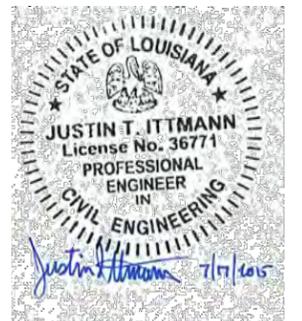
**SECTION A-A**

1/8"=1'-0"

July 17, 2015

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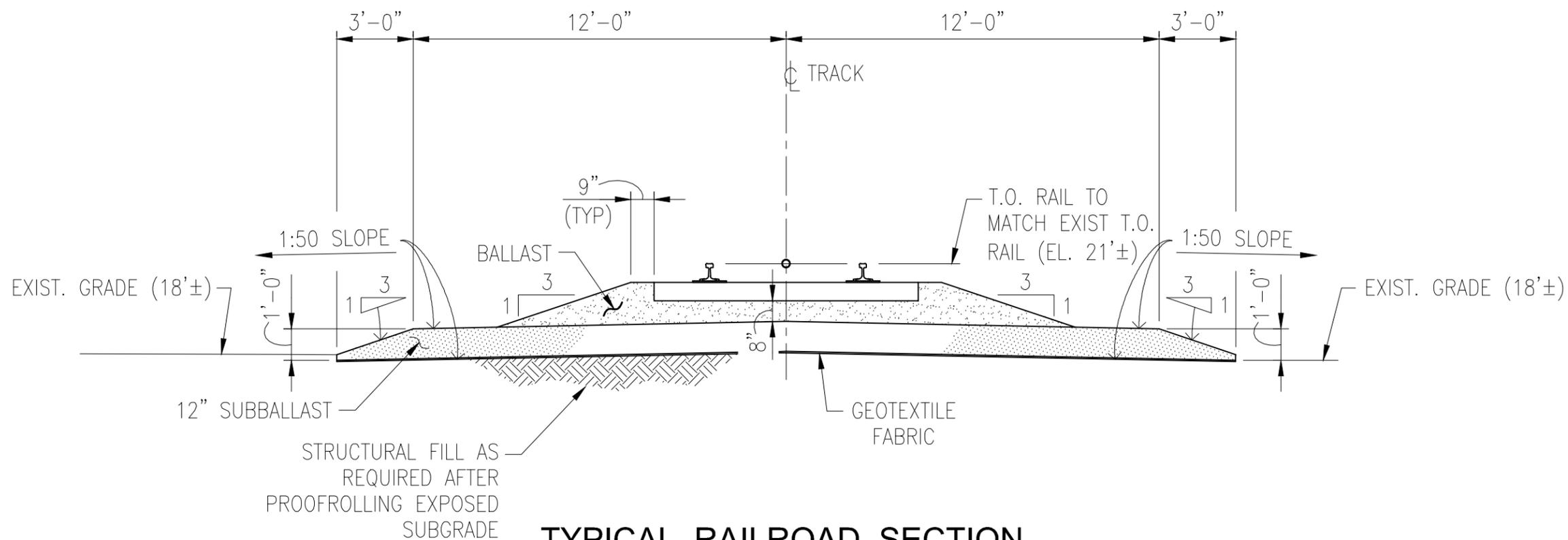
**CDI** Engineering Solutions  
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Project No. N27.S00010.BR00



JUSTIN ITTMANN 36771  
ENGINEER OF RECORD LICENSE NUMBER

REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D
0	ISSUE FOR PERMIT	7/15	JTI	JTI

PROJECT NUMBER	P.O. NUMBER	
<b>NUSTAR, ST. JAMES</b> DOCK #5 METHANOL STORAGE PROJECT ST. JAMES PARISH, LA MVDU FOUNDATION PLAN AND SECTION		
SCALE: NOTED	DRAWN BY: JTI	
DATE: 6/2015	CHECKED BY: JTI	
DESIGNED BY:	APPROVED BY: JTI	
DRAWING NO.	<b>S0010-PER-SK11</b>	REV <b>0</b>



**TYPICAL RAILROAD SECTION**

1/4" = 1'-0"

SEPTEMBER 24 2015

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Project No. N27.S00010.BR00



REV 1 9/24/15  
WAYNE J. BERLIN 30195  
ENGINEER OF RECORD LICENSE NUMBER

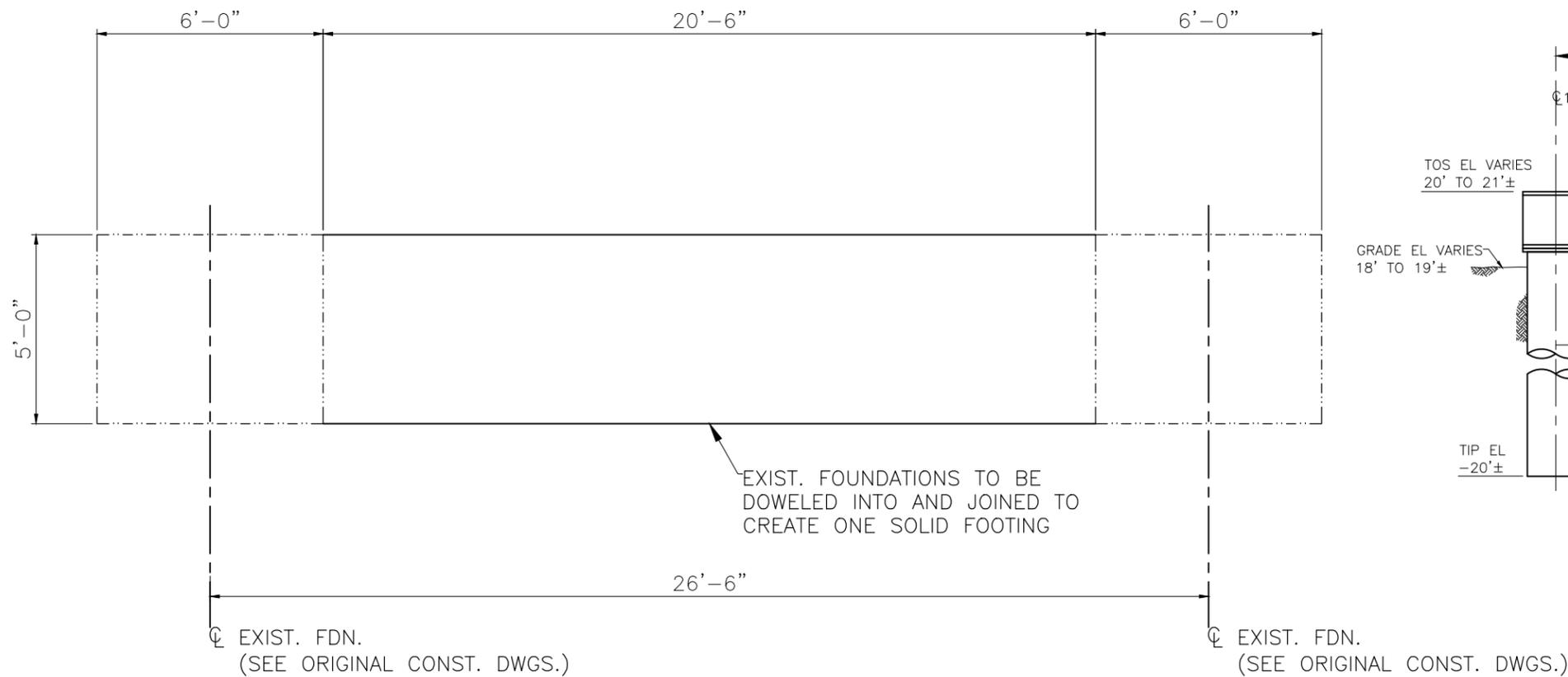
REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D
1	REVISED FOR PERMITTING	9/15	MEO	WJB
0	ISSUE FOR PERMIT	7/15	JTI	JTI

PROJECT NUMBER \_\_\_\_\_ P.O. NUMBER \_\_\_\_\_

**NUSTAR, ST. JAMES**  
DOCK #5 METHANOL STORAGE PROJECT  
ST. JAMES PARISH, LA  
TYPICAL RAILROAD SECTION

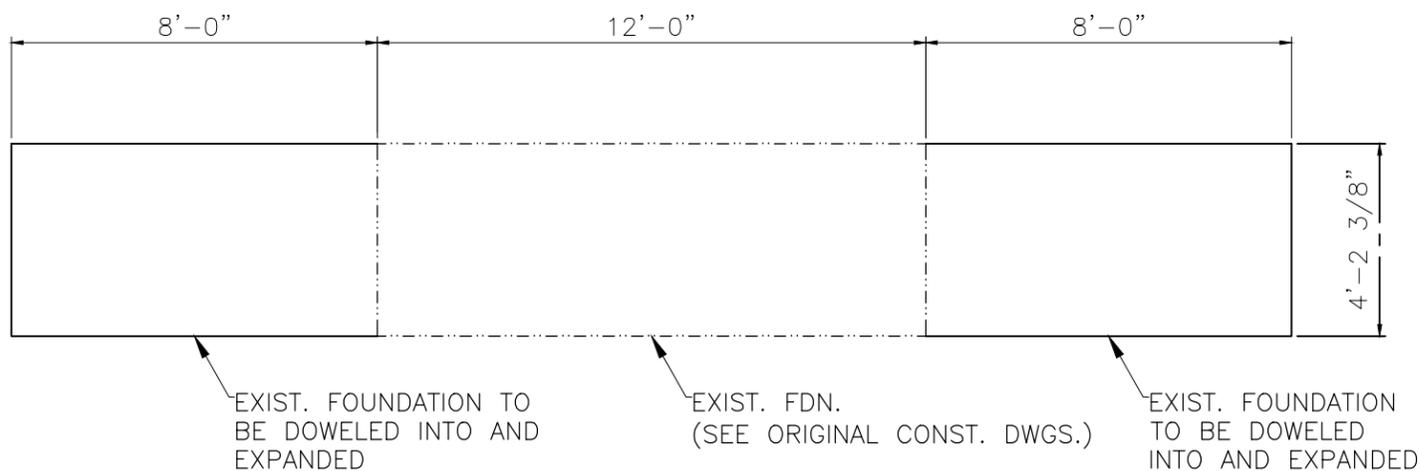
SCALE: NOTED DRAWN BY: JTI  
DATE: 6/2015 CHECKED BY: JTI  
DESIGNED BY: APPROVED BY: JTI

DRAWING NO. **S0010-PER-SK12** REV **1**



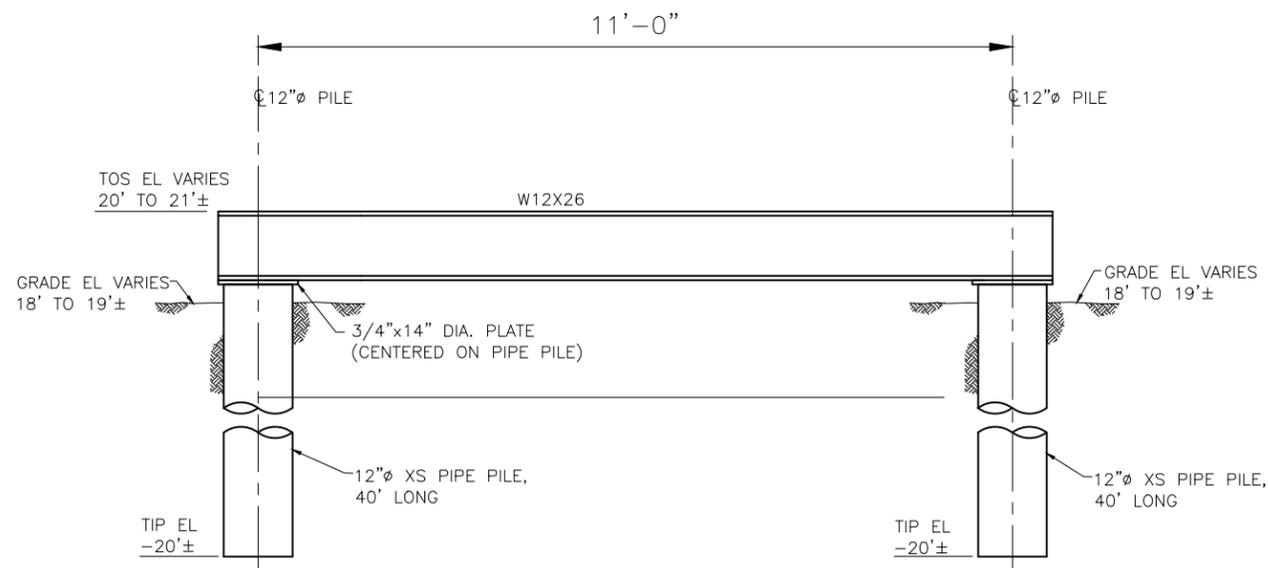
### RIVERSIDE CROSSING FDN. DETAIL

1/4"=1'



### LANDSIDE CROSSING FDN. DETAIL

1/4"=1'



### TYPICAL BENT ELEVATION

3/8"=1'-0"



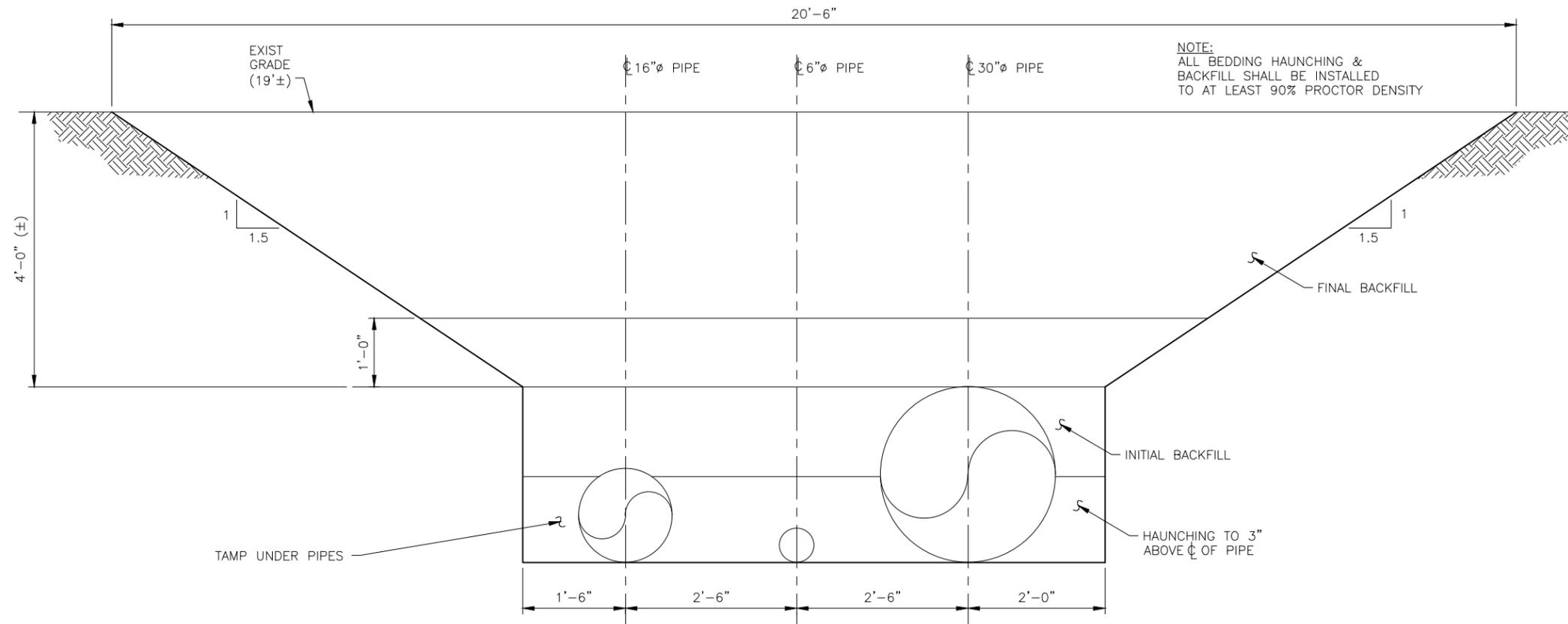
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Project No. N27.S00010.BR00



JUSTIN ITTMANN 36771  
ENGINEER OF RECORD LICENSE NUMBER

July 17, 2015  
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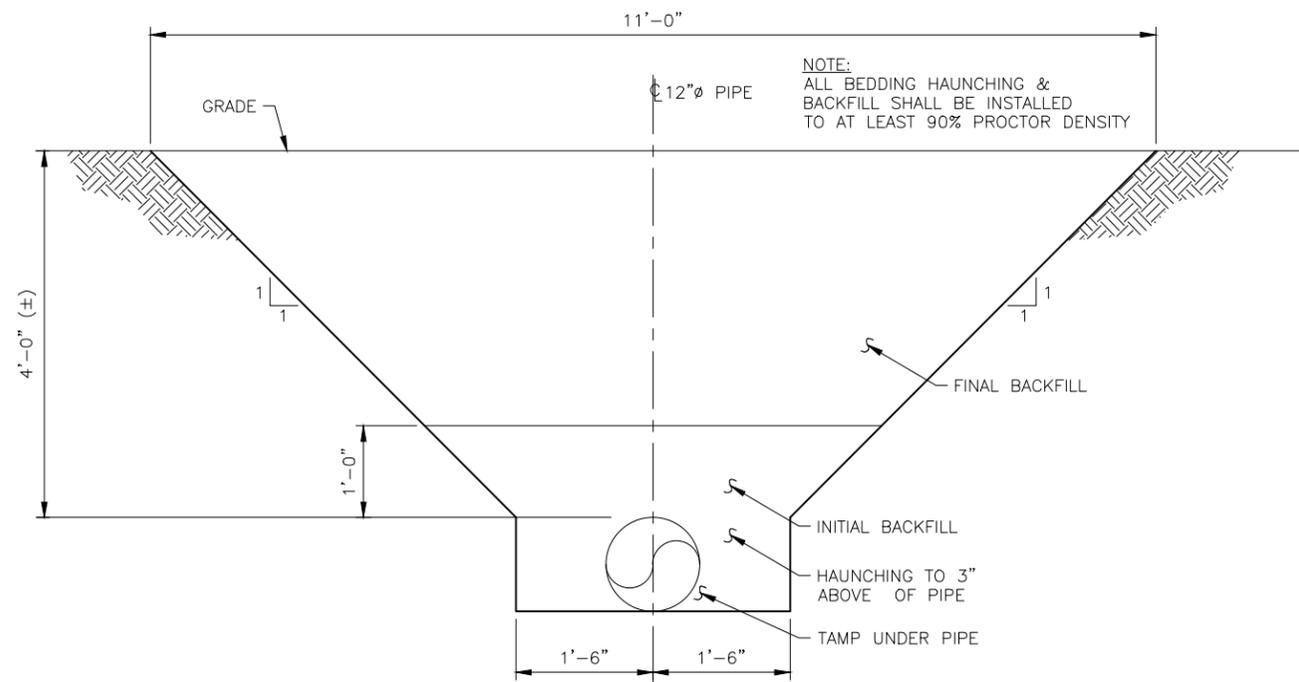
0	ISSUE FOR PERMIT	7/15	JTI	JTI
REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D
PROJECT NUMBER		P.O. NUMBER		
<b>NUSTAR, ST. JAMES</b> DOCK #5 METHANOL STORAGE PROJECT ST. JAMES PARISH, LA ROADCROSSING FOUNDATION EXPANSION DETAILS				
SCALE: NOTED		DRAWN BY: JTI		
DATE: 6/2015		CHECKED BY: JTI		
DESIGNED BY:		APPROVED BY: JTI		
DRAWING NO.	S0010-PER-SK13			REV 0



NOTE:  
ALL BEDDING HAUNCHING &  
BACKFILL SHALL BE INSTALLED  
TO AT LEAST 90% PROCTOR DENSITY

**TYPICAL TRENCH SECTION 1**

N.T.S.



NOTE:  
ALL BEDDING HAUNCHING &  
BACKFILL SHALL BE INSTALLED  
TO AT LEAST 90% PROCTOR DENSITY

**TYPICAL TRENCH SECTION 2**

N.T.S.

SEPTEMBER 24, 2015

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Project No. N27.S000010.BR00



REV 1 9/24/15  
WAYNE J. BERLIN 30195  
ENGINEER OF RECORD LICENSE NUMBER

1	REVISED FOR PERMITTING	9/15	MEO	WJB
0	ISSUE FOR PERMIT	7/15	JTI	JTI
REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D

PROJECT NUMBER \_\_\_\_\_ P.O. NUMBER \_\_\_\_\_

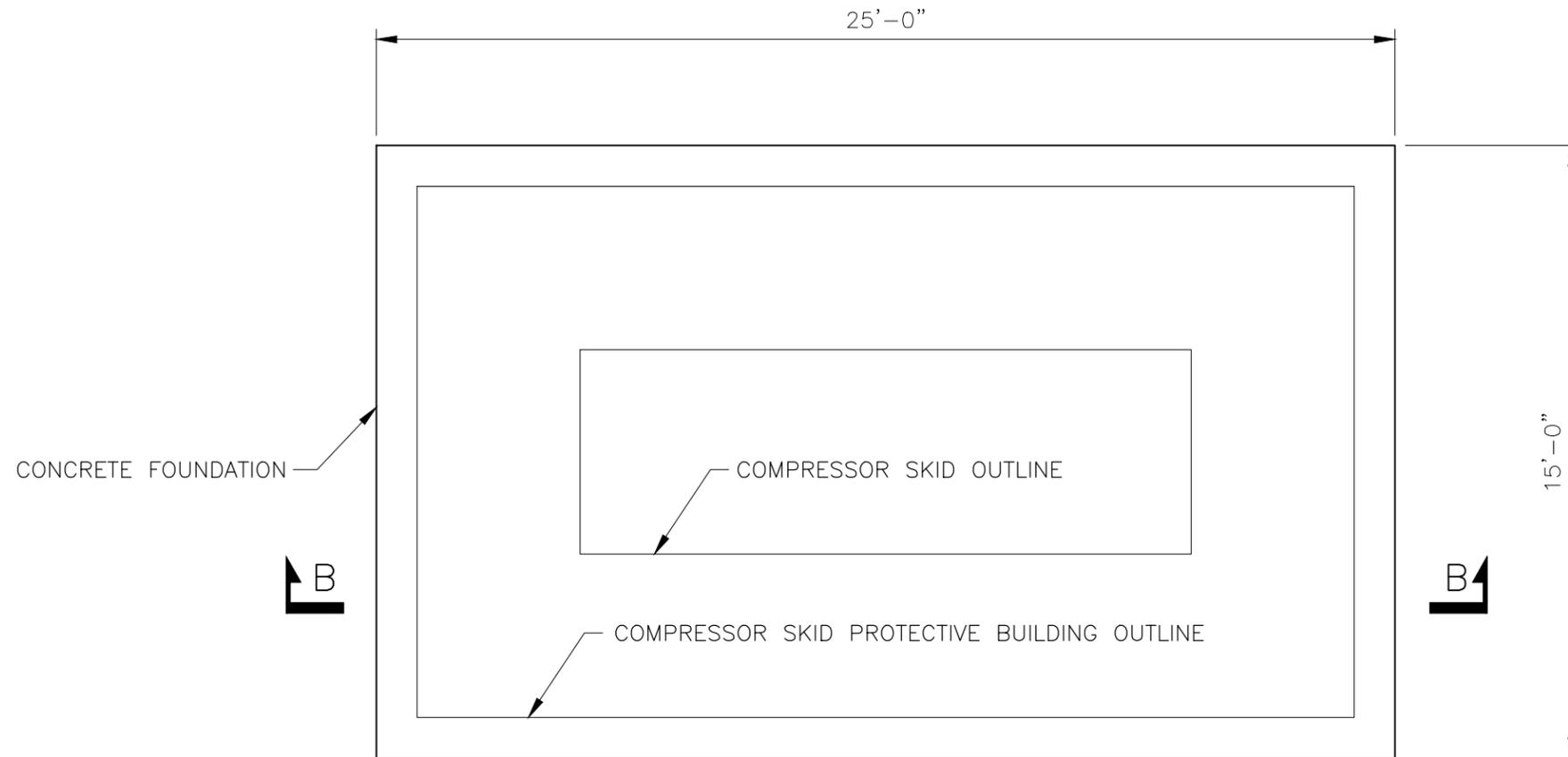
**NUSTAR, ST. JAMES**  
DOCK #5 METHANOL STORAGE PROJECT  
ST. JAMES PARISH, LA  
TYPICAL TRENCH SECTIONS

SCALE: NOTED DRAWN BY: JTI

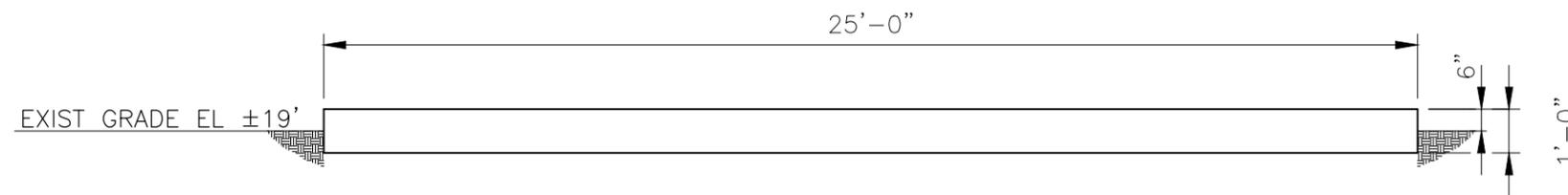
DATE: 6/2015 CHECKED BY: JTI

DESIGNED BY: APPROVED BY: JTI

DRAWING NO. **S0010-PER-SK14** REV **0**



(SEE SK-8 FOR ORIENTATION)  
**COMPRESSOR FOUNDATION PLAN**  
 1/4"=1'

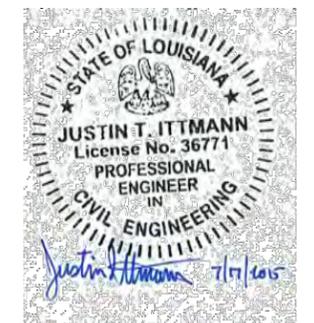


**SECTION B-B**  
 1/4"=1'

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 Project No. N27.S00010.BR00



JUSTIN ITTMANN 36771  
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0	ISSUE FOR PERMIT	7/15	JTI	JTI
REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D
PROJECT NUMBER		P.O. NUMBER		
<b>NUSTAR, ST. JAMES</b> DOCK #5 METHANOL STORAGE PROJECT ST. JAMES PARISH, LA COMPRESSOR FOUNDATION				
SCALE: NOTED		DRAWN BY: JTI		
DATE: 6/2015		CHECKED BY: JTI		
DESIGNED BY:		APPROVED BY: JTI		
DRAWING NO.	S0010-PER-SK15			REV 0

75'-0"

1'-3" 17'-7" 18'-9" 18'-9" 4'-9" 8'-0" 4'-9" 1'-2"

1'-2"

46'-8"

1'-2"

SEE TYP FOOTING  
DETAIL 1 (SK-17)

SEE TYP FOOTING  
DETAIL 1 (SK-17)

SEE TYP FOOTING  
DETAIL 1 (SK-17)

SEE TYP FOOTING  
DETAIL 2 (SK-17)

OUTLINE OF 6" THICK  
CONCRETE PAVING

SEE TYP FOOTING  
DETAIL 1 (SK-17)

SEE TYP FOOTING  
DETAIL 1 (SK-17)

SEE TYP FOOTING  
DETAIL 1 (SK-17)

SEE TYP FOOTING  
DETAIL 2 (SK-17)

July 17, 2015

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JUSTIN ITTMANN 36771  
ENGINEER OF RECORD LICENSE NUMBER

0	ISSUE FOR PERMIT	7/15	JTI	JTI
REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D

PROJECT NUMBER P.O. NUMBER

**NUSTAR, ST. JAMES**  
DOCK #5 METHANOL STORAGE PROJECT  
ST. JAMES PARISH, LA  
TRUCK UNLOADING FOUNDATION PLAN

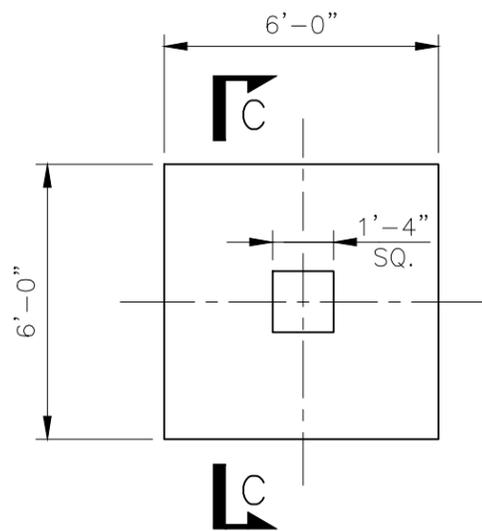
SCALE: NOTED	DRAWN BY: JTI
DATE: 6/2015	CHECKED BY: JTI
DESIGNED BY:	APPROVED BY: JTI

DRAWING NO. **S0010-PER-SK16** REV **0**

(SEE SK-8 FOR ORIENTATION)

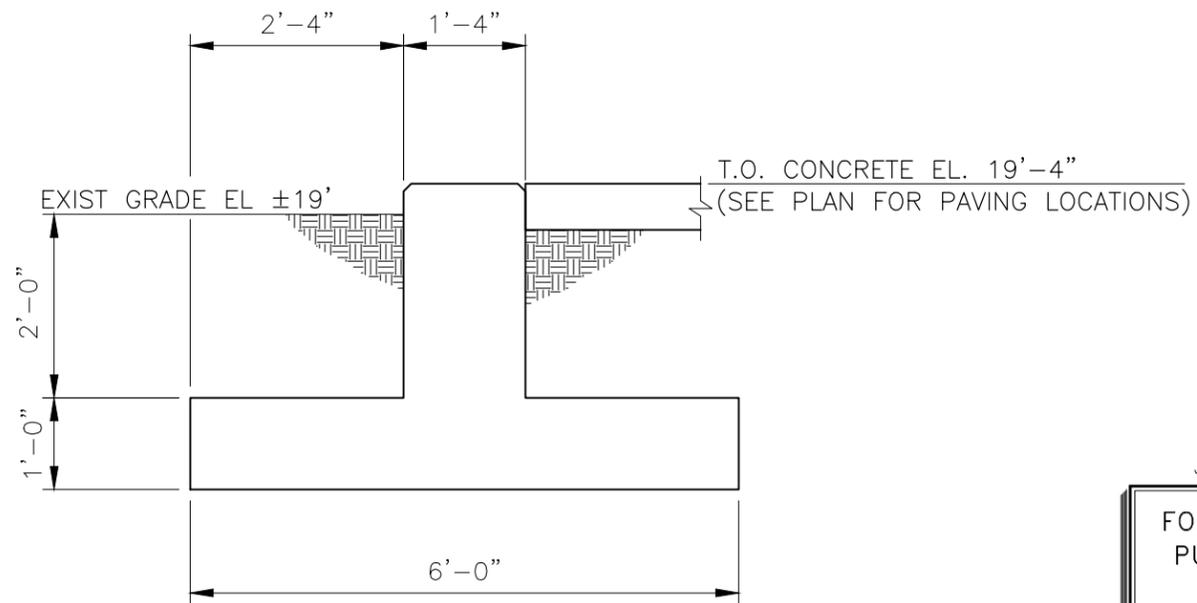
# TRUCK LOADING FOUNDATION PLAN

1/8"=1'



**TYPICAL FOOTING DETAIL 1**

1/4"=1'

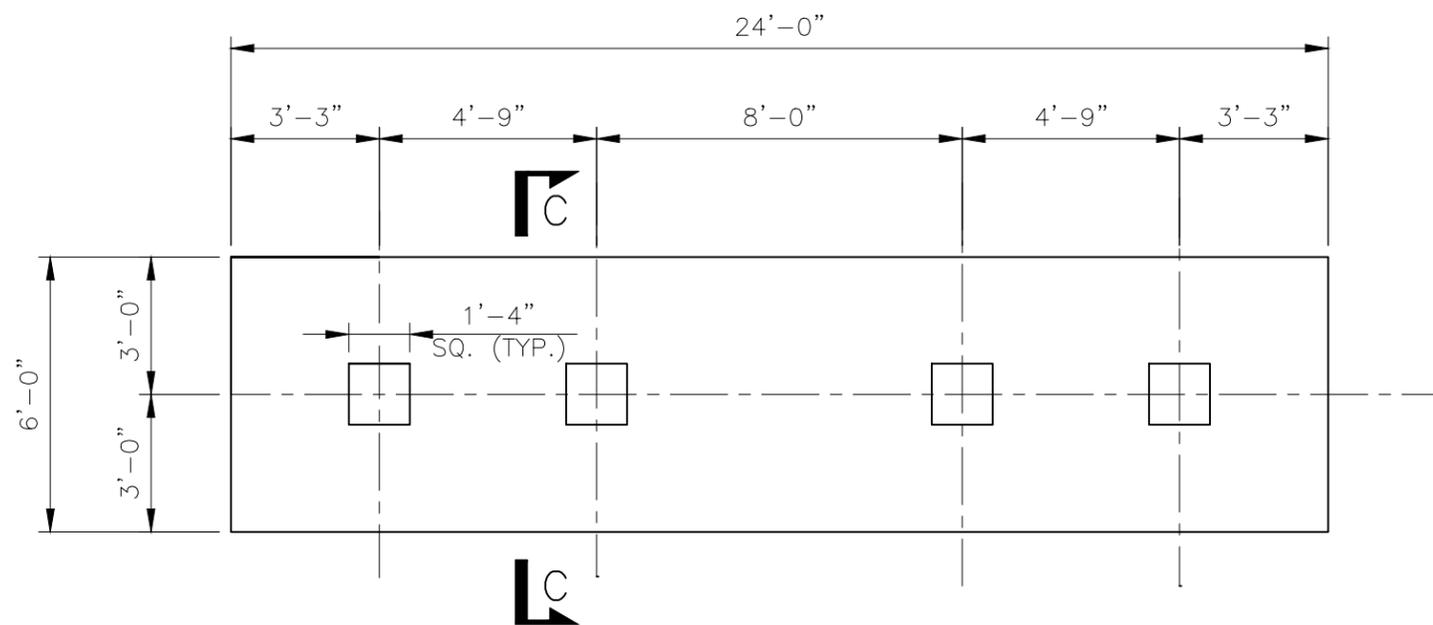


**SECTION C-C**

1/2"=1'

July 17, 2015

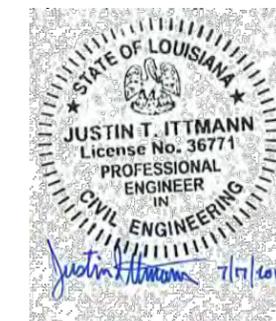
FOR PERMIT  
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**TYPICAL FOOTING DETAIL 2**

1/4"=1'

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Project No. N27.S00010.BR00



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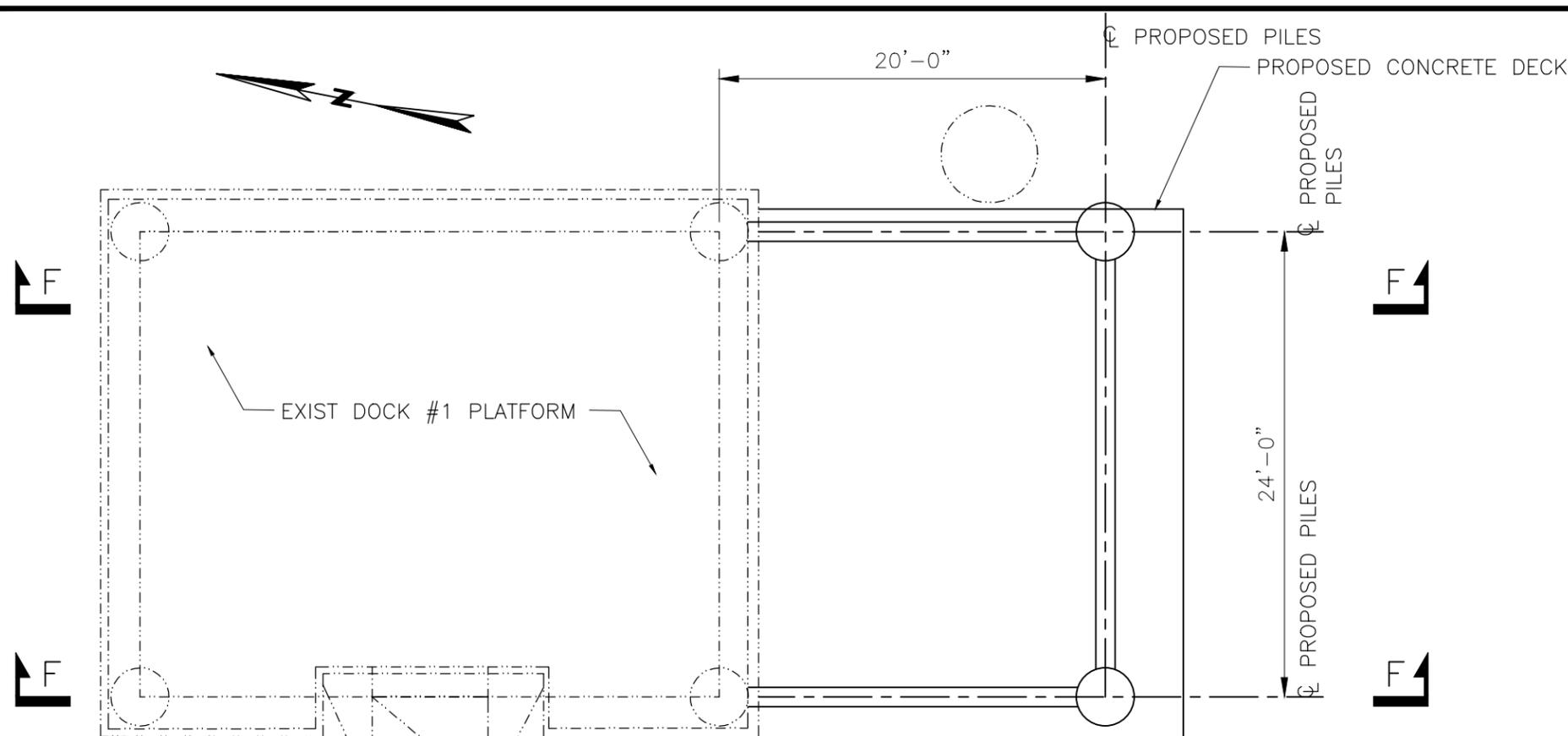
0	ISSUE FOR PERMIT	7/15	JTI	JTI
REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D
PROJECT NUMBER		P.O. NUMBER		
<b>NUSTAR, ST. JAMES</b> DOCK #5 METHANOL STORAGE PROJECT ST. JAMES PARISH, LA TRUCK UNLOADING FOUNDATION DETAILS				
SCALE: NOTED		DRAWN BY: JTI		
DATE: 6/2015		CHECKED BY: JTI		
DESIGNED BY:		APPROVED BY: JTI		
DRAWING NO.	S0010-PER-SK17			REV 0



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 ENGINEER OF RECORD LICENSE NUMBER

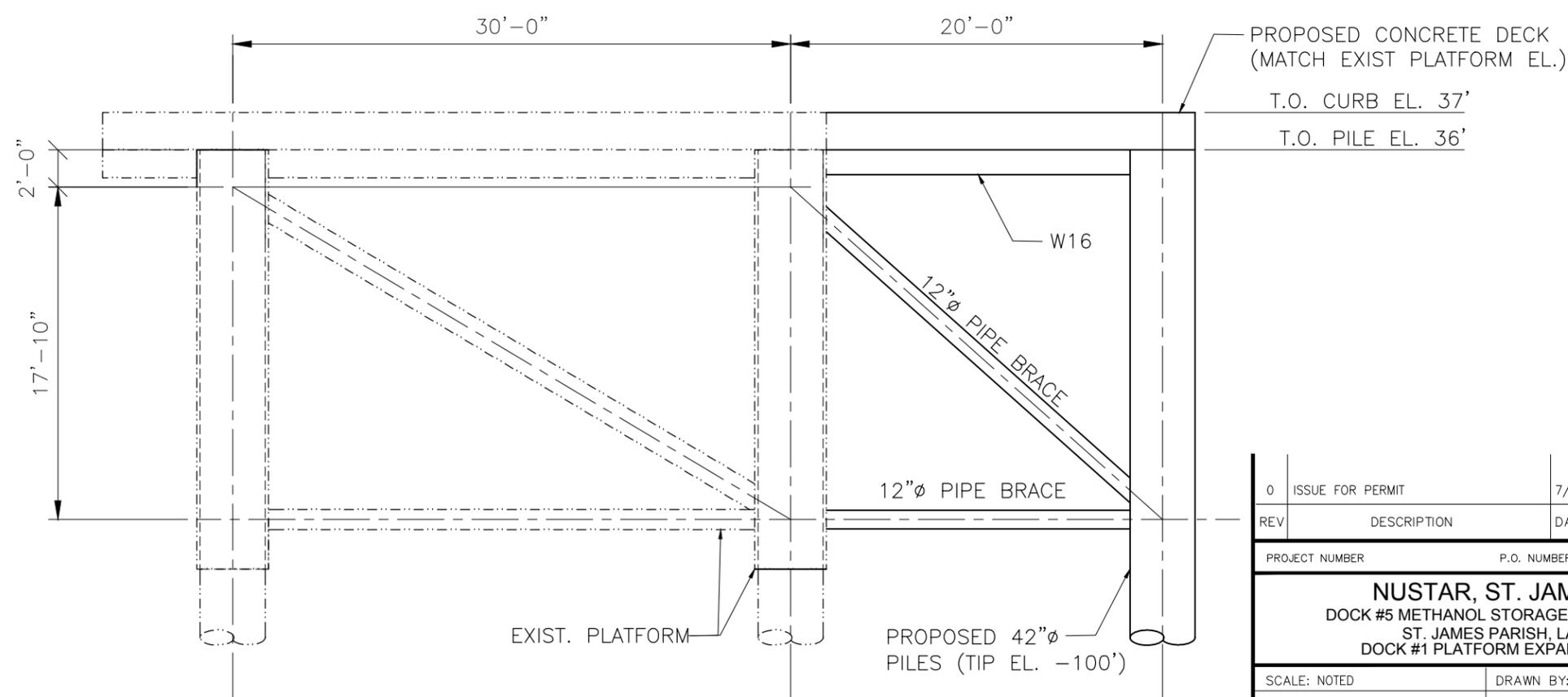
July 17, 2015

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**DOCK 1 PLATFORM PLAN**

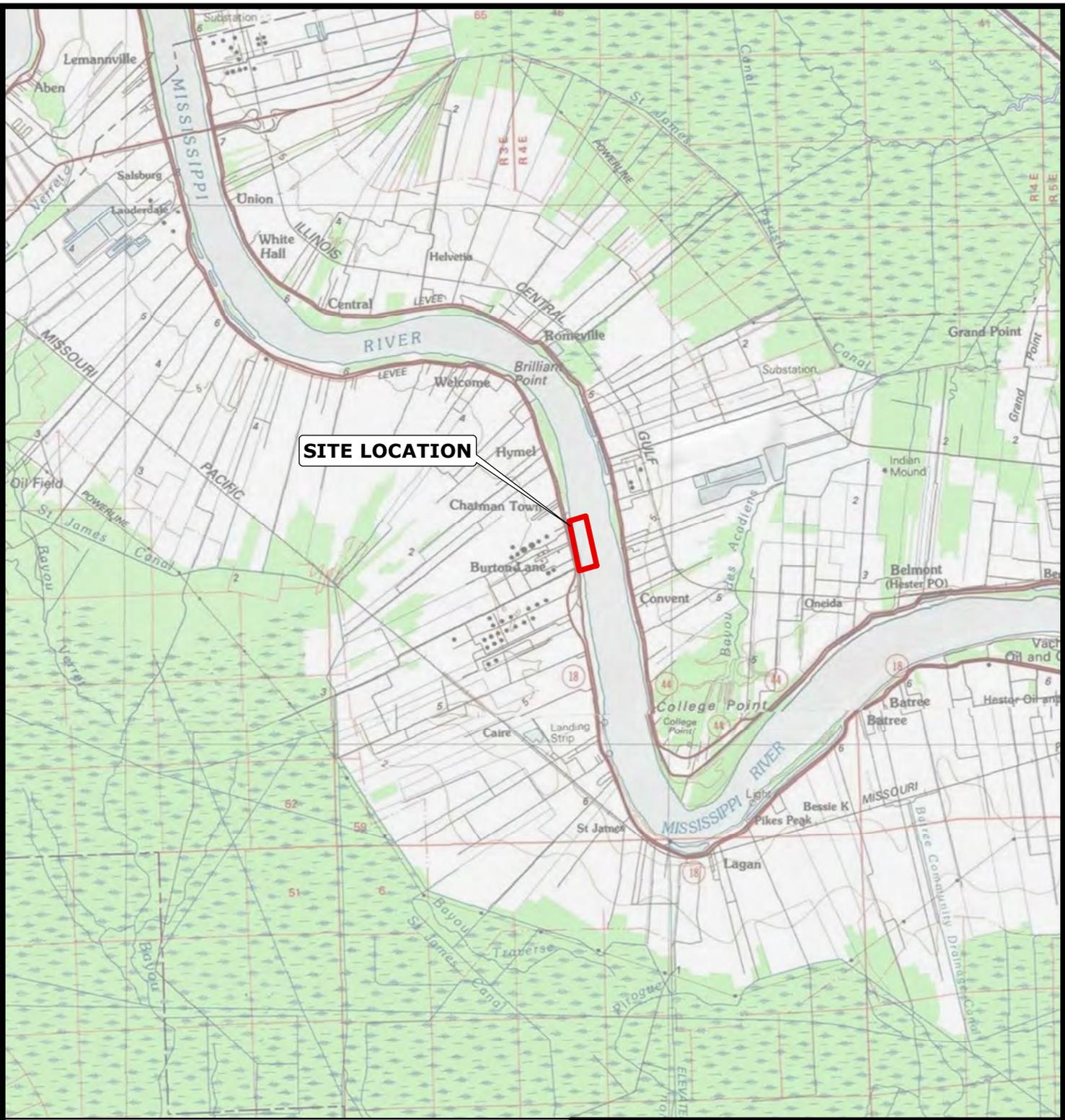
1/8"=1'



**SECTION F-F**

1/8"=1'

0	ISSUE FOR PERMIT	7/15	JTI	JTI
REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D
PROJECT NUMBER		P.O. NUMBER		
<b>NUSTAR, ST. JAMES</b> DOCK #5 METHANOL STORAGE PROJECT ST. JAMES PARISH, LA DOCK #1 PLATFORM EXPANSION				
SCALE: NOTED		DRAWN BY: JTI		
DATE: 6/2015		CHECKED BY: JTI		
DESIGNED BY:		APPROVED BY: JTI		
DRAWING NO.	S0010-PER-SK18			REV 0



**ST. JAMES PARISH**



**Reference**

U.S.G.S. 100K SERIES QUAD MAP, CONVENT, LA.



**NUSTAR ENERGY LP**  
ST. JAMES, LOUISIANA

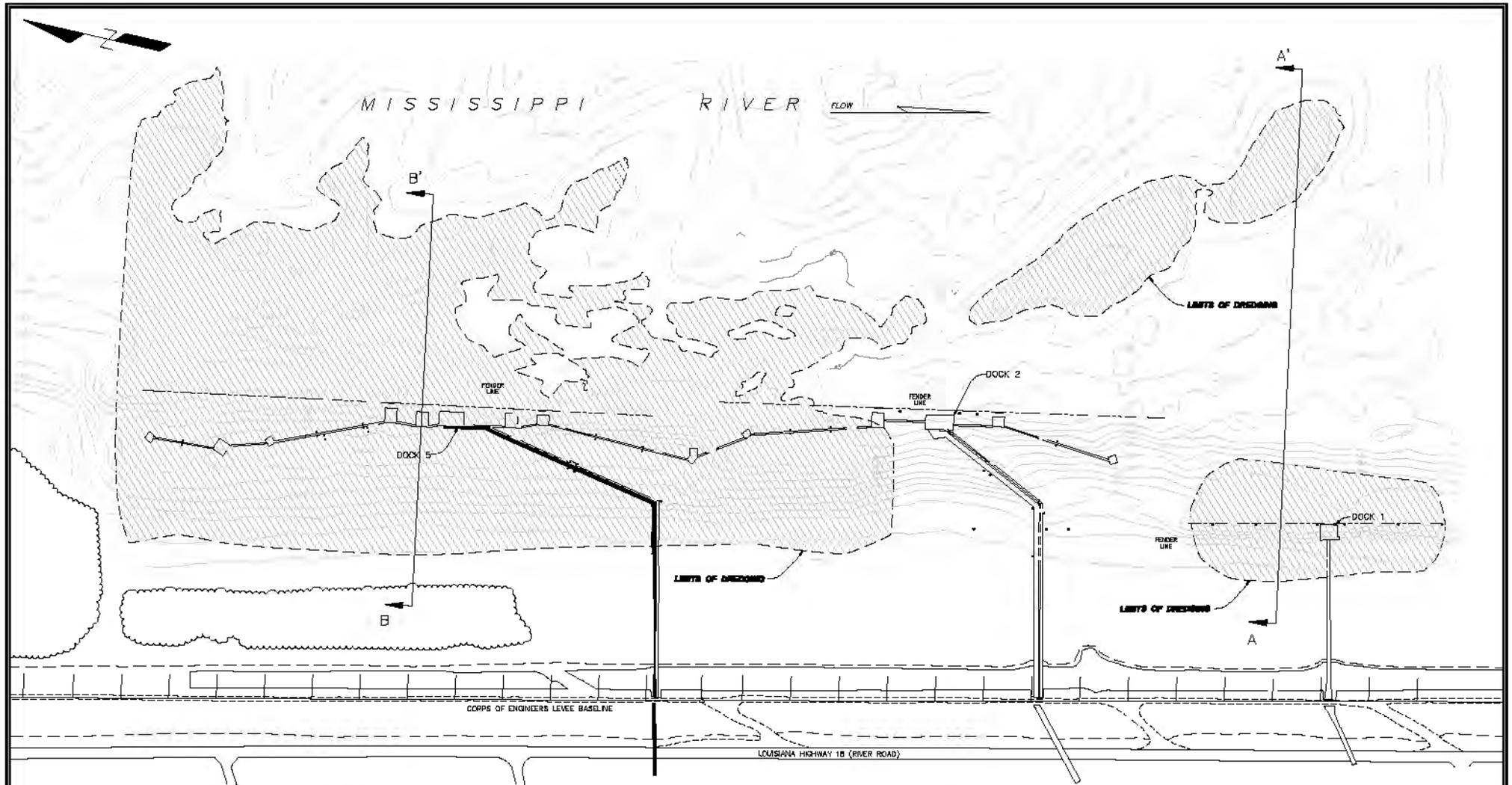
ST JAMES TERMINAL DOCK DREDGING

**VICINITY MAP**

ST. JAMES PARISH

Drawn:	BLN/AM10.2.2
Checked:	BLN
Approved:	BLN
Date:	15/15/15
Dwg. No.:	A12128-43

**FIGURE 1**



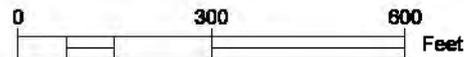
**Legend**

 Limits of Dredging (27.34 acres)

**NOTES:**

- 1) All proposed dredged material will be placed in Mississippi River below -55 foot contour.
- 2) Proposed dredging will be conducted during low water conditions, as needed.
- 3) Anticipate annual maintenance dredging of ~600,000 cubic yards of sediment per year.

REFERENCE: Drawing provided by Hydro Consultants, inc. DWG. NO. C26-850-36, Dated Aug. 20, 2015.



**NUSTAR ENERGY LP**  
ST. JAMES, LOUISIANA

**ST. JAMES TERMINAL DOCK DREDGING**

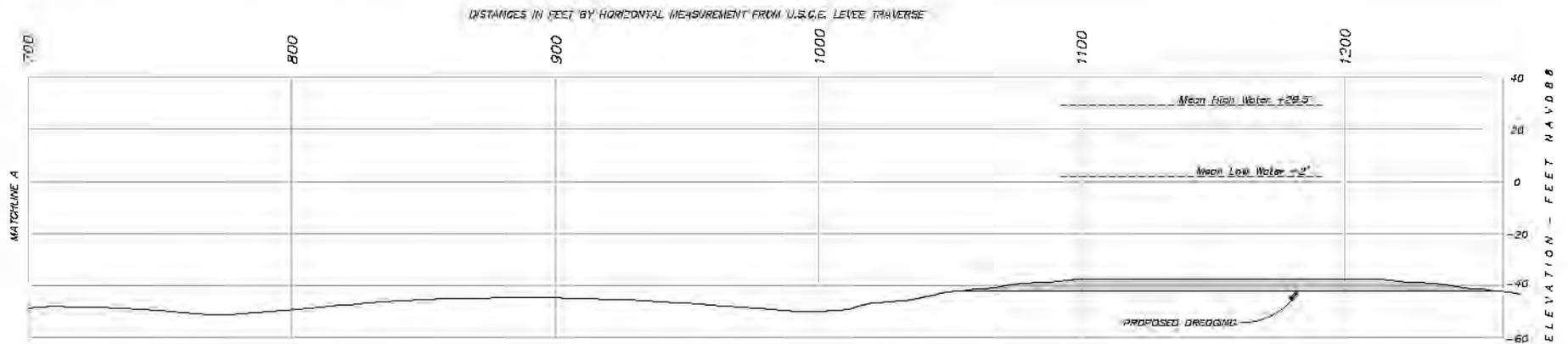
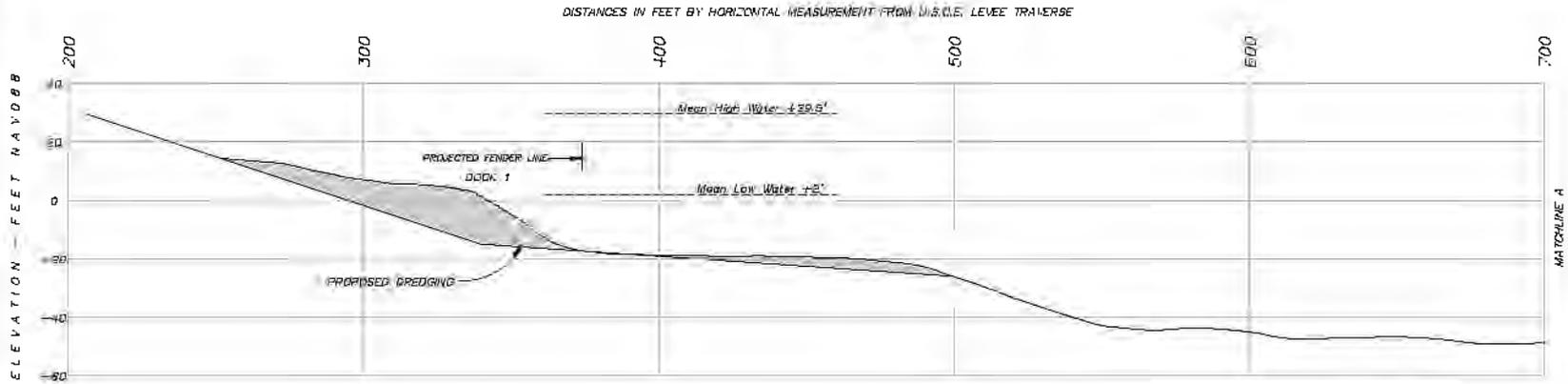
**PLAN VIEW**

ST. JAMES PARISH



Drawn:	GAL/ACAD
Checked:	BLN
Approved:	TEW
Date:	10/09/2015
Dep. No.:	A12128-40

**FIGURE 2**



**Legend**

Proposed Dredging (600,000 cu.yds.)

**NOTES:**

- 1) All proposed dredged material will be placed in Mississippi River below -55 foot contour.
- 2) Proposed dredging will be conducted during low water conditions as needed.
- 3) Anticipate annual maintenance dredging of ~600,000 cubic yards of sediment per year.

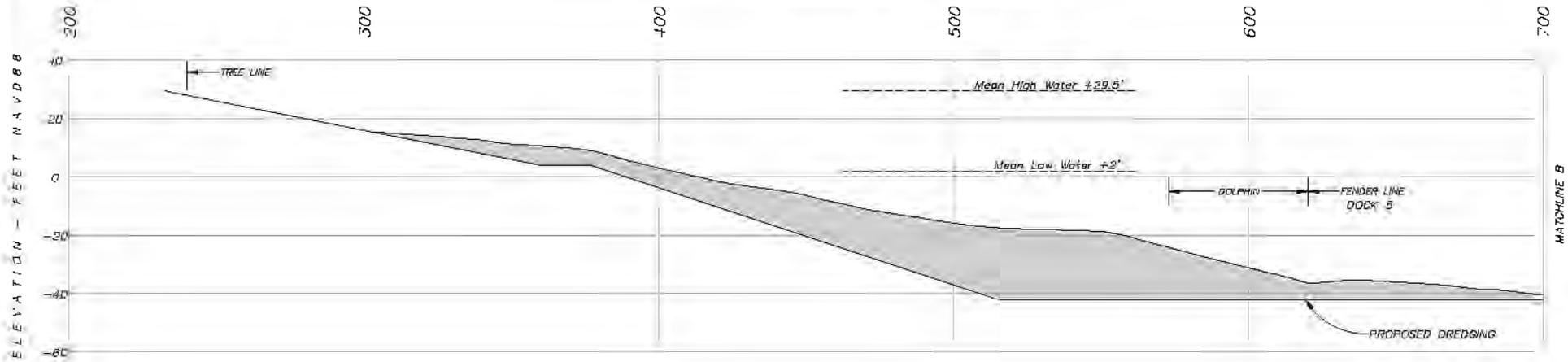
SCALE

Horizontal and Vertical Scale as Shown

REFERENCE: Drawing provided by Hydro Consultants, Inc. DWG. NO. E26-660-37 Sht 01 (8-20-2016).

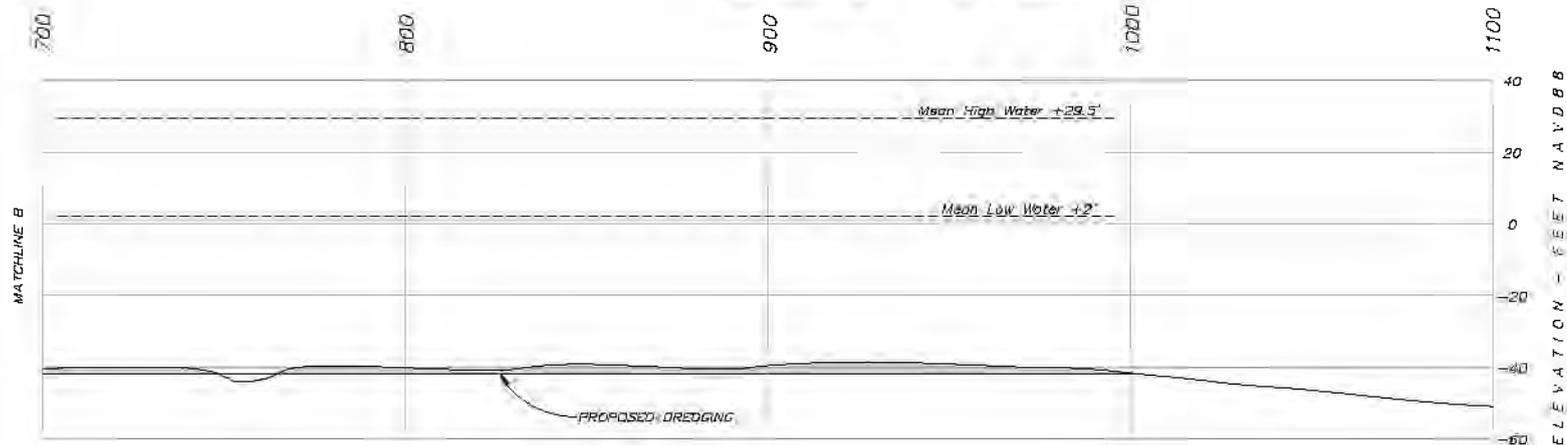
<b>NUSTAR ENERGY LP</b> ST. JAMES, LOUISIANA											
ST. JAMES TERMINAL DOCK DREDGING											
<b>CROSS-SECTION A-A'</b>											
ST. JAMES PARISH											
<b>CK ASSOCIATES</b> <small>Environmental Consultants</small>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Drawn:</td><td>CALACAD</td></tr> <tr><td>Checked:</td><td>BLN</td></tr> <tr><td>Approved:</td><td>TEW</td></tr> <tr><td>Date:</td><td>10/09/2016</td></tr> <tr><td>Dwg. No.:</td><td>A12128-41</td></tr> </table>	Drawn:	CALACAD	Checked:	BLN	Approved:	TEW	Date:	10/09/2016	Dwg. No.:	A12128-41
Drawn:	CALACAD										
Checked:	BLN										
Approved:	TEW										
Date:	10/09/2016										
Dwg. No.:	A12128-41										
<b>FIGURE 3</b>											

DISTANCES IN FEET BY HORIZONTAL MEASUREMENT FROM U.S.C.E. LEVEE TRAVERSE



MATCHLINE B

DISTANCES IN FEET BY HORIZONTAL MEASUREMENT FROM U.S.C.E. LEVEE TRAVERSE



MATCHLINE B

ELEVATION - FEET NAVD88

**Legend**

Proposed Dredging (600,000 cu.yds.)

**NOTES:**

- 1) All proposed dredged material will be placed in Mississippi River below -55 foot contour.
- 2) Proposed dredging will be conducted during low water conditions as needed.
- 3) Anticipate annual maintenance dredging of ~600,000 cubic yards of sediment per year.

SCALE

Horizontal and Vertical Scale as Shown

REFERENCE: Drawing provided by Hydro Consultants, inc. DWG. NO. E26-850-37 Sht 06 (8-20-2015).

**NUSTAR ENERGY LP**  
ST. JAMES, LOUISIANA

ST. JAMES TERMINAL DOCK DREDGING

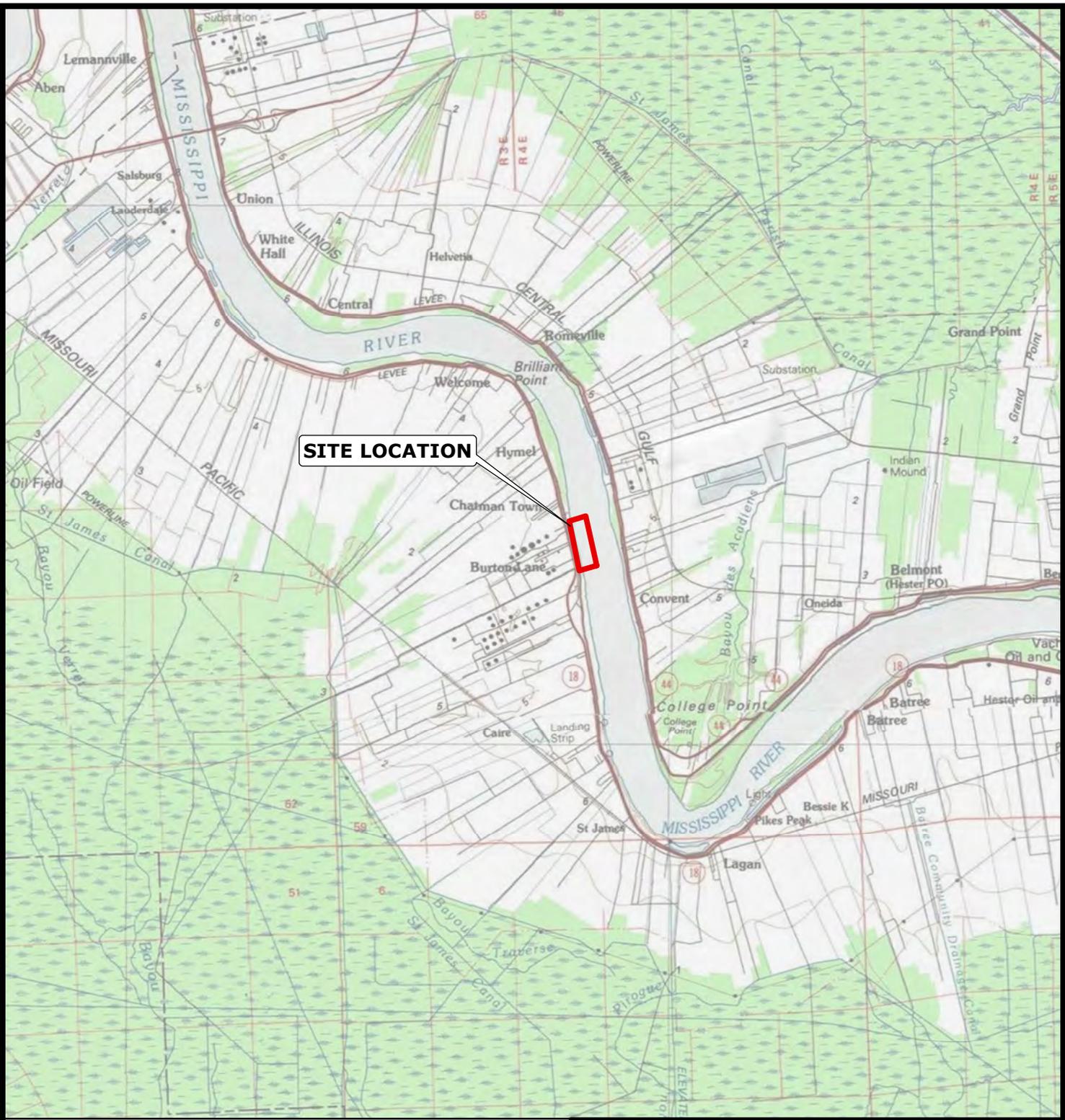
**CROSS-SECTION B-B'**

ST. JAMES PARISH



Drawn:	CALACAD
Checked:	RLN
Approved:	TEW
Date:	10/02/2015
Dwg. No.:	A12128-42

**FIGURE 4**



**ST. JAMES PARISH**



**Reference**  
U.S.G.S. 100K SERIES QUAD MAP, CONVENT, LA.



**NUSTAR ENERGY LP**  
ST. JAMES, LOUISIANA

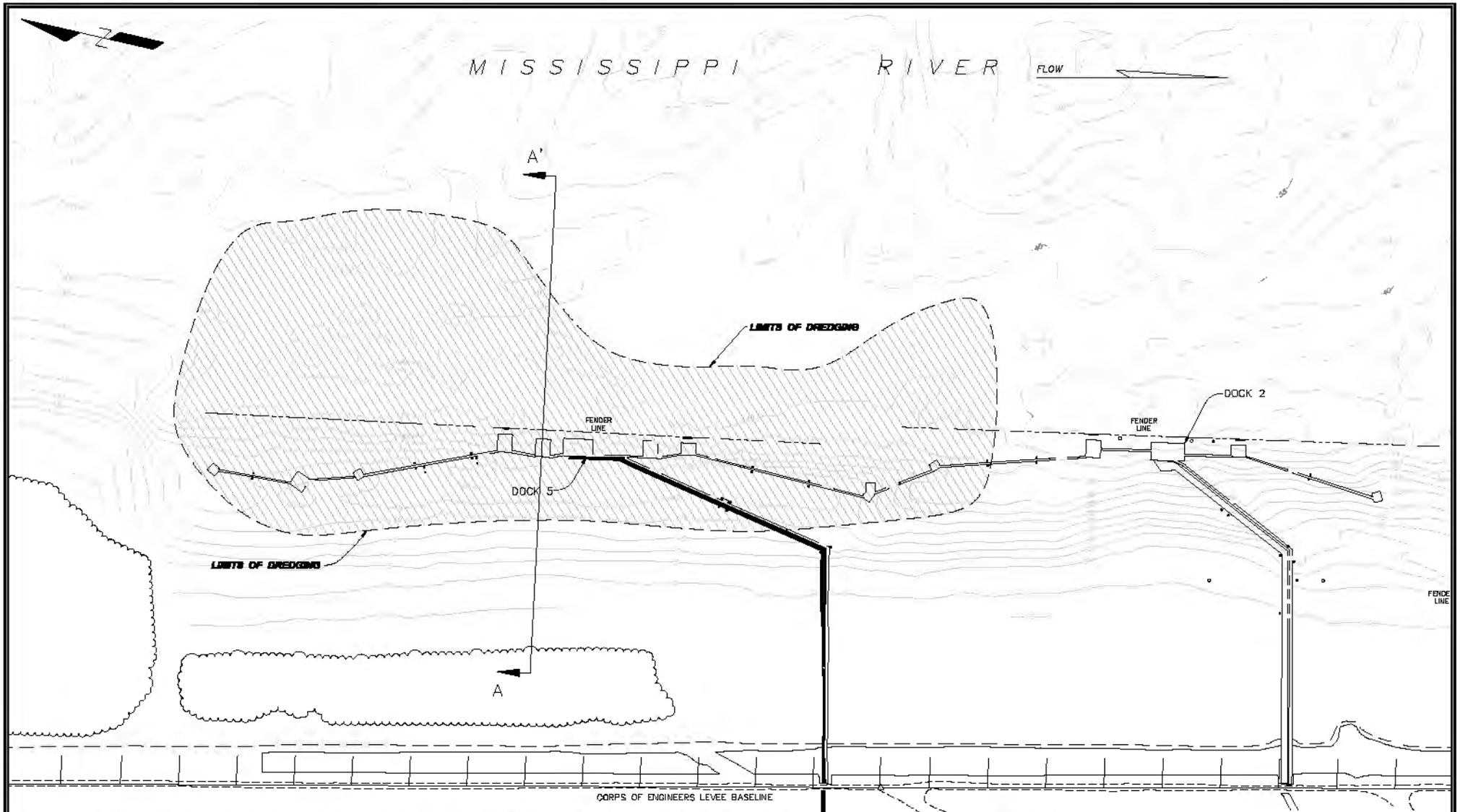
ST JAMES TERMINAL DOCK DREDGING

**VICINITY MAP**

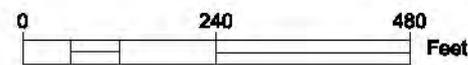
ST. JAMES PARISH

Drawn:	BLN/AM10.2.2
Checked:	BLN
Approved:	BLN
Date:	15/15/15
Dwg. No.:	A12128-43

**FIGURE 1**



**Legend**  
 Limits of Dredging (12.8 acres)

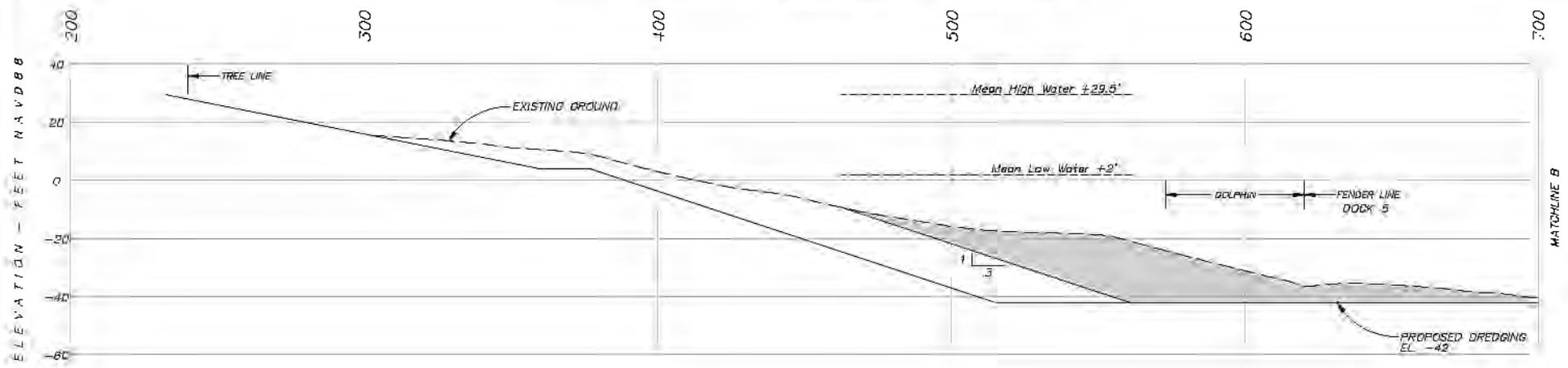


- NOTES:
- 1) All proposed dredged material will be placed in Mississippi River below -55 foot contour.
  - 2) Proposed dredging will be conducted during low water conditions.
  - 3) Anticipate maintenance dredging of 125 cubic yards of sediment.

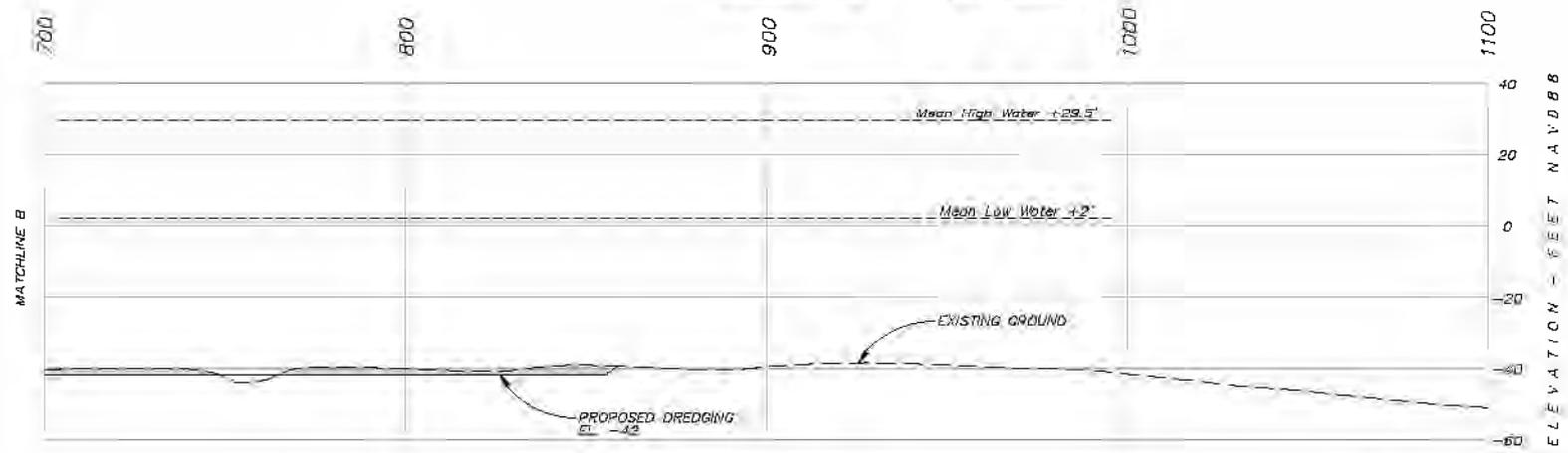
REFERENCE: Drawing provided by Hydro Consultants, Inc. DWG. NO. C26-850-36, Dated Aug. 20, 2015.

<b>NUSTAR ENERGY LP</b> ST. JAMES, LOUISIANA	
<b>ST. JAMES TERMINAL DOCK DREDGING</b>	
<b>PLAN VIEW</b>	
ST. JAMES PARISH	
	Drawn: CAL/ACAD
	Checked: BLN
	Approved: TEW
	Date: 10/09/2015
	Dep. No.: A12128D5-02
<b>FIGURE 2</b>	

DISTANCES IN FEET BY HORIZONTAL MEASUREMENT FROM U.S.C.E. LEVEL TRVERSE



DISTANCES IN FEET BY HORIZONTAL MEASUREMENT FROM U.S.C.E. LEVEL TRVERSE



**Legend**

Proposed Dredging (125 cu.yds.)

- NOTES:
- 1) All proposed dredged material will be placed in Mississippi River below -55 foot contour.
  - 2) Proposed dredging will be conducted during low water conditions.
  - 3) Anticipate dredging of 125 cubic yards of sediment.

SCALE

Horizontal and Vertical Scale as Shown

**NUSTAR ENERGY LP**  
ST. JAMES, LOUISIANA

ST. JAMES TERMINAL DOCK DREDGING

**CROSS-SECTION A-A'**

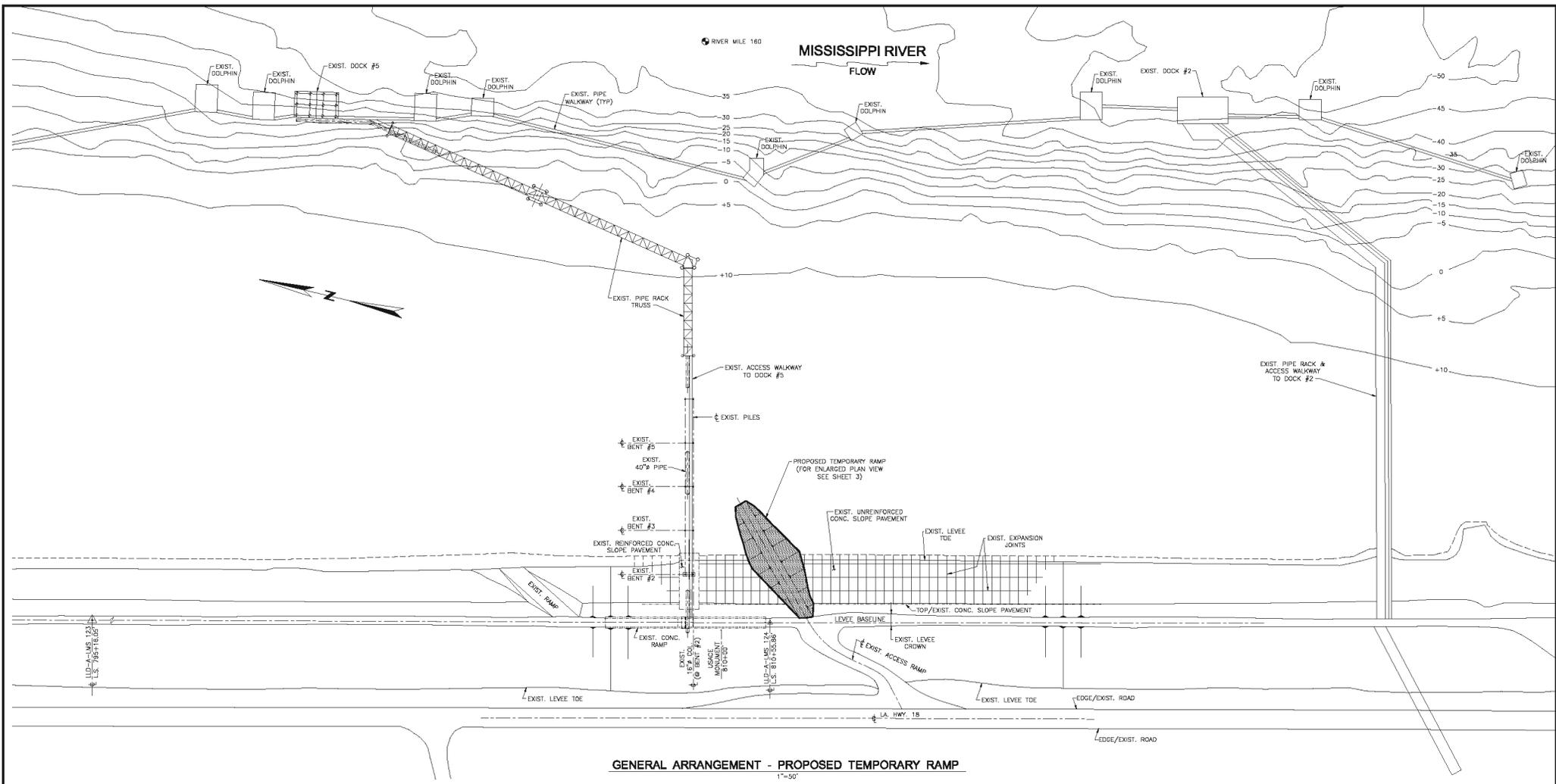
ST. JAMES PARISH



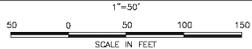
Drawn:	CALACAD
Checked:	RLN
Approved:	TEW
Date:	10/29/2015
Dwg. No.:	A12128D5-03

**FIGURE 3**

REFERENCE: Drawing provided by Hydro Consultants, inc. DWG. NO. E26-850-37 SH 06 (8-20-2015).



**GENERAL ARRANGEMENT - PROPOSED TEMPORARY RAMP**



**NOTES:**

1. ALL ELEVATIONS AND CONTOURS SHOWN ON THESE DRAWINGS ARE BASED ON A HYDROGRAPHIC SURVEY OF APRIL 6 THROUGH 12, 2010, CONDUCTED BY HYDRO CONSULTANTS, INC. THIS VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM (NAVD 83) BASED ON NATIONAL GEODETIC SURVEY BENCHMARK "16 LLD ANO" BENCHMARK ELEVATION 18.48 FEET.
2. NORTH ARROW REFERS TO THE LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (NAD 83) BASED ON TIES TO U.S.A.C.E. LEVEE TRAVERSE MONUMENTS.
3. DOCK STRUCTURES AND OTHER PLANIMETRIC FEATURES SHOWN HEREON WERE TAKEN FROM THE REFERENCED AERIAL PHOTOGRAPH.
4. DISTANCES IN FEET BY HORIZONTAL MEASUREMENT.
5. LOW WATER REFERENCE PLANE - 1 FOOT.

**REFERENCES:**

- HYDRO CONSULTANTS HYDROGRAPHIC SURVEY APRIL 6-10, 2010  
 DWG. No. C26-850-25  
 AERIAL PHOTOGRAPH TAKEN MAY 16, 2003

DRAWING INDEX:	
SHEET 1	VICINITY MAP
SHEET 2	GENERAL ARRANGEMENT PLAN
SHEET 3	PLAN VIEW - PROPOSED TEMPORARY RAMP
SHEET 4	PROPOSED TEMPORARY RAMP - SECTIONS & DETAILS
SHEET 5	PLAN - PROPOSED SLOPE PAVEMENT REMOVAL & REPLACEMENT

REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D
A	ISSUED FOR PERMIT REVIEW	10/10	MEQ/NMB	EM

PROJECT NUMBER: N27.18440.BR

**PROPOSED TEMPORARY LEVEE RAMP  
 FOR NUSTAR ENERGY, L.P. - ST. JAMES TERMINAL  
 MISSISSIPPI RIVER, MILE 160 A.H.P.,  
 ST. JAMES PARISH, LOUISIANA**

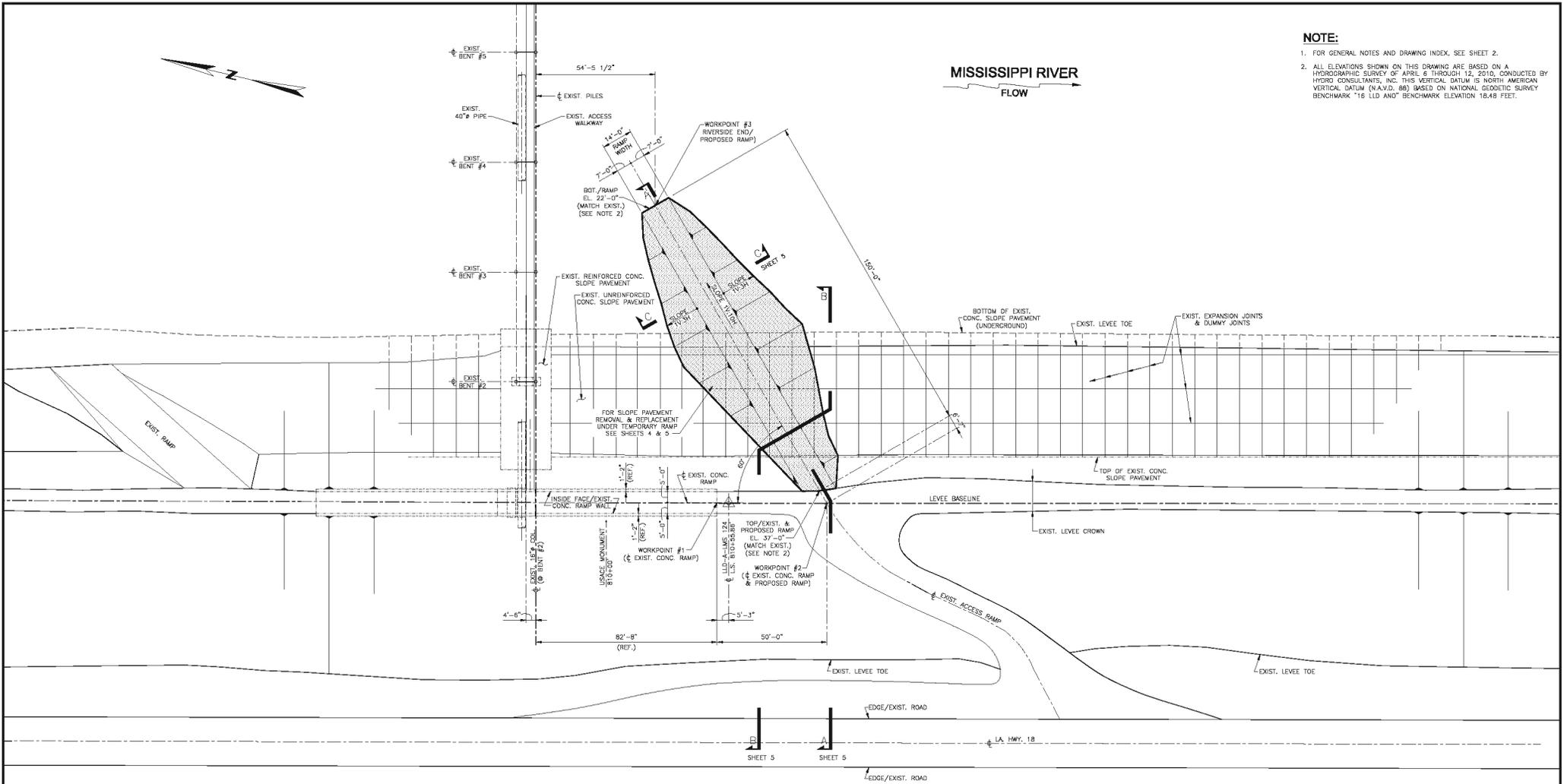
SCALE: AS NOTED	DRAWN BY: MED
DATE: 10/21/10	CHECKED BY: NMB
DESIGNED BY: EM	APPROVED BY: EM

DRAWING NO. SHEET 2 OF 5

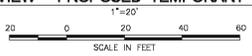


**NOTE:**

1. FOR GENERAL NOTES AND DRAWING INDEX, SEE SHEET 2.
2. ALL ELEVATIONS SHOWN ON THIS DRAWING ARE BASED ON A HYDROGRAPHIC SURVEY OF APRIL 6 THROUGH 12, 2010, CONDUCTED BY HYDRO CONSULTANTS, INC. THIS VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM (N.A.V.D. 88) BASED ON NATIONAL GEODETIC SURVEY BENCHMARK "16 LLD ANO" BENCHMARK ELEVATION 18.48 FEET.



**PLAN VIEW - PROPOSED TEMPORARY RAMP**



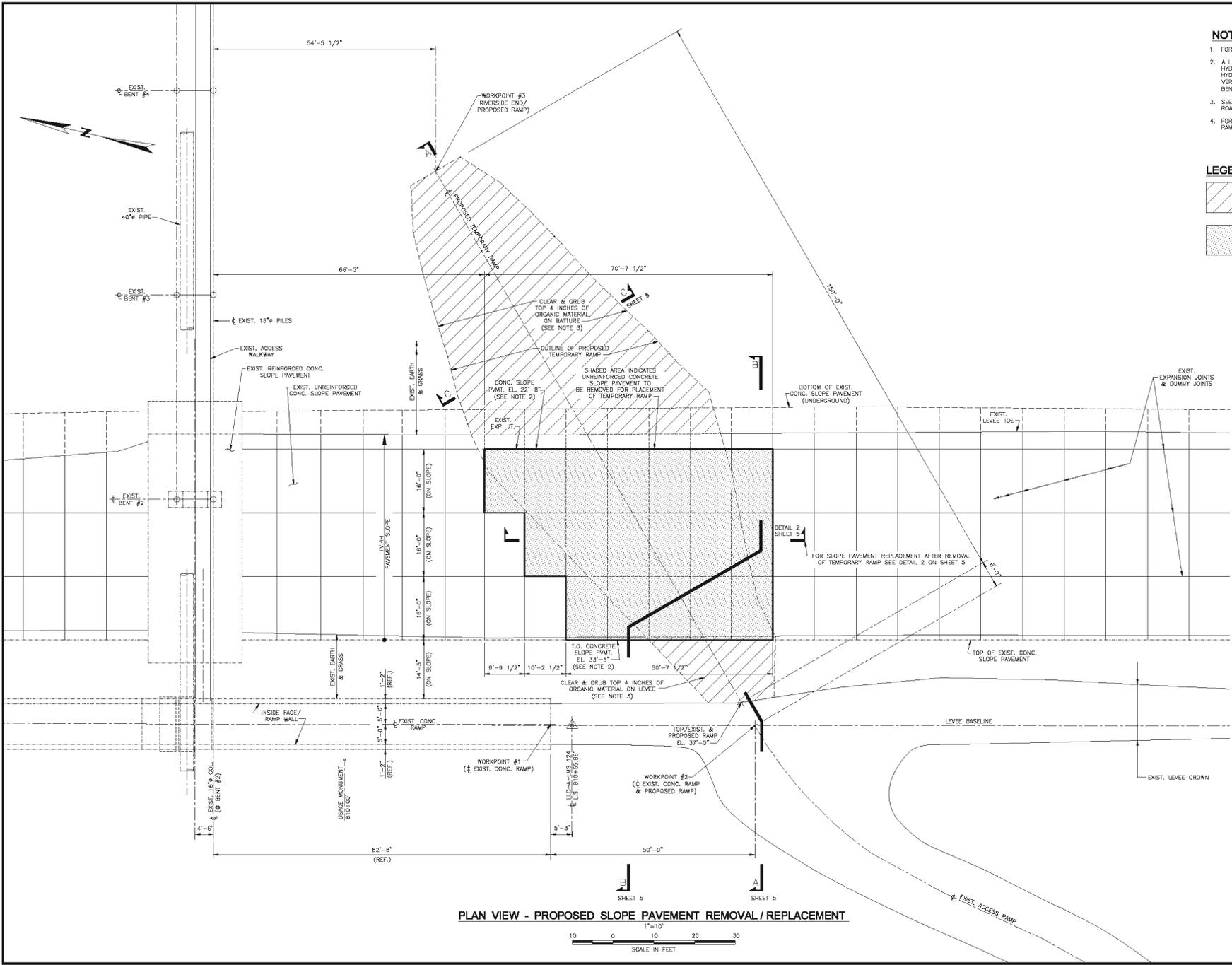
ISSUED FOR PERMIT REVIEW	10/10	MED/NMS	CM
REV	DESCRIPTION	DATE	DRN./CHK'D/APP'D
PROJECT NUMBER: N27.18440.BR			
<b>PROPOSED TEMPORARY LEVEE RAMP FOR NUSTAR ENERGY, L.P. - ST. JAMES TERMINAL MISSISSIPPI RIVER, MILE 160 A.H.P. ST. JAMES PARISH, LOUISIANA</b>			
SCALE: AS NOTED	DRAWN BY: MED		
DATE: 10/21/10	CHECKED BY: NMS		
DESIGNED BY: CM	APPROVED BY: CM		
DRAWING NO.	<b>SHEET 3 OF 5</b>		<b>A</b>

**NOTE:**

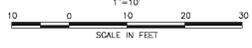
1. FOR GENERAL NOTES AND DRAWING INDEX, SEE SHEET 2.
2. ALL ELEVATIONS SHOWN ON THIS DRAWING ARE BASED ON A HYDROGRAPHIC SURVEY OF APRIL 6 THROUGH 12, 2010, CONDUCTED BY HYDRO CONSULTANTS, INC. THIS VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM (N.A.V.D. 88) BASED ON NATIONAL GEODETIC SURVEY BENCHMARK "16 LLD AND" BENCHMARK ELEVATION 16.48 FEET.
3. SEE SECTION 201 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES FOR CLEARING AND GRUBBING REQUIREMENTS.
4. FOR SLOPE PAVEMENT REPLACEMENT AFTER REMOVAL OF TEMPORARY RAMP SEE DETAIL 2 ON SHEET 5

**LEGEND**

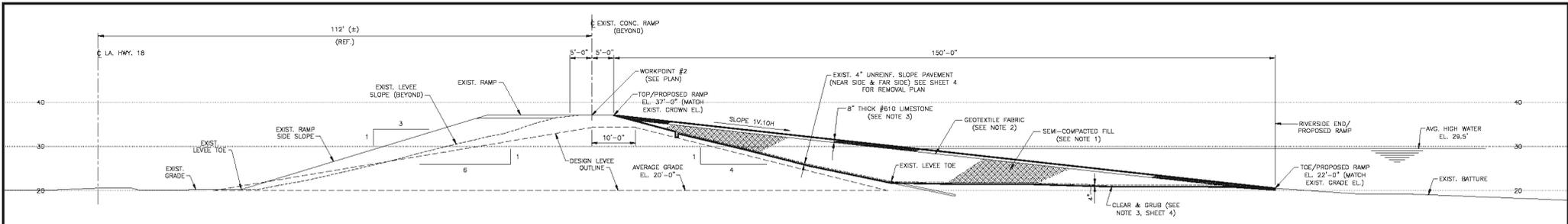
-  AREA TO BE CLEARED OF VEGETATION AND DEBRIS (SEE NOTE 3)
-  UNREINFORCED SLOPE PAVEMENT TO BE REMOVED (SEE NOTE 4)



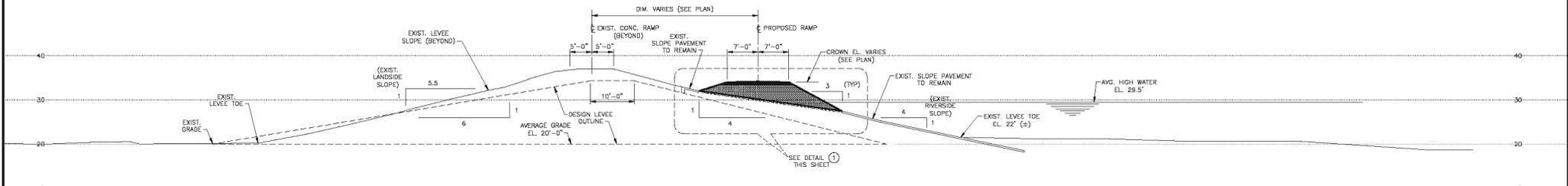
**PLAN VIEW - PROPOSED SLOPE PAVEMENT REMOVAL / REPLACEMENT**



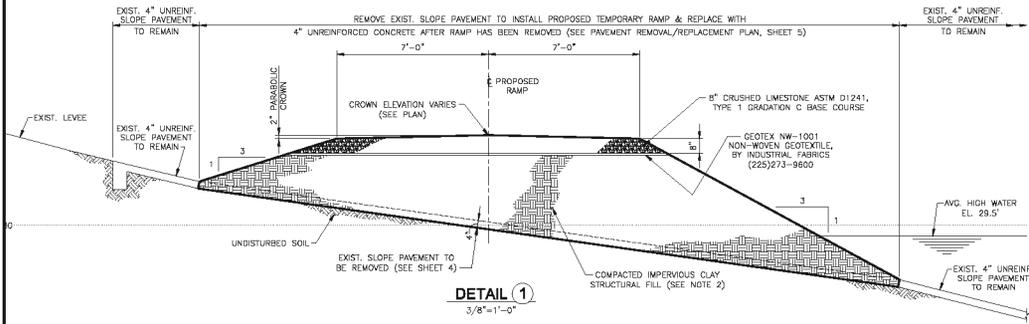
A	ISSUED FOR PERMIT REVIEW	10/10	MEQ/NMB	EM
REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D
PROJECT NUMBER: N27.1B440.BR				
<b>PROPOSED TEMPORARY LEVEE RAMP FOR MUSTAR ENERGY, L.P. - ST. JAMES TERMINAL MISSISSIPPI RIVER, MILE 160 A.H.P. ST. JAMES PARISH, LOUISIANA</b>				
SCALE: AS NOTED	DRAWN BY: MED			
DATE: 10/21/10	CHECKED BY: NMB			
DESIGNED BY: EM	APPROVED BY: EM			
DRAWING NO.	<b>SHEET 4 OF 5</b>			REV. A



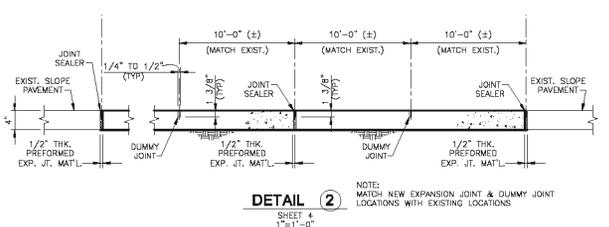
**SECTION A-A**  
SHEETS 3 & 4  
1"=10'



**SECTION B-B**  
SHEETS 3 & 4  
1"=10'

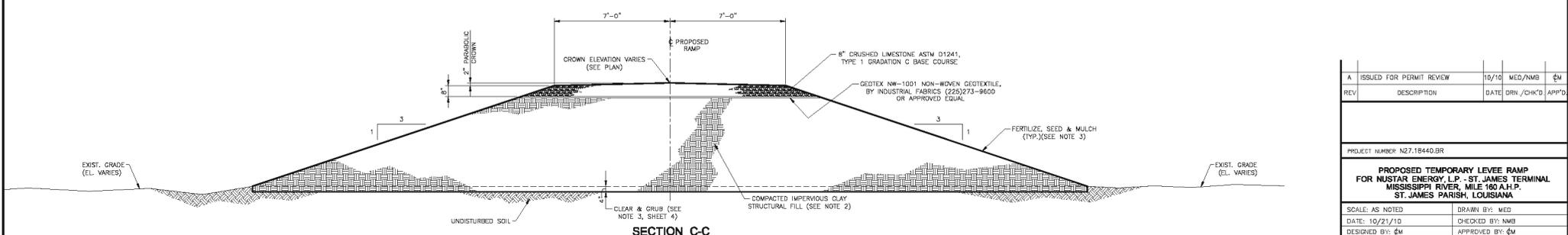


**DETAIL 1**  
3/8"=1'-0"



**DETAIL 2**  
SHEET 4  
1"=1'-0"

- NOTES:**
- FOR GENERAL ARRANGEMENT PLAN & DRAWING INDEX SEE SHEET 2.
  - FILL MATERIAL USED IN CONSTRUCTION OF THE ACCESS RAMP SHALL BE IMPERVIOUS CLAY FILL. THE MATERIAL SHALL BE PLACED OR SPREAD IN LAYERS. THE FIRST LAYER NOT MORE THAN 4 INCHES THICK AND THE SUCCEEDING LAYERS NOT MORE THAN 8 INCHES THICK PRIOR TO COMPACTION. EACH LAYER SHALL BE COMPACTED BY 10 COMPLETE PASSES OF A CRAWLER TYPE TRACTOR WEIGHING NOT LESS THAN 20,000 POUNDS AND EXERTING A UNIT TREAD PRESSURE OF NOT LESS THAN 6 POUNDS PER SQUARE INCH.
  - ALL FRESH FILLS SHALL BE SODED OR FERTILIZED AND SEEDED AND SHALL BE MAINTAINED UNTIL A HEALTHY GROWTH IS OBTAINED.



**SECTION C-C**  
SHEETS 3 & 4  
3/8"=1'-0"

A	ISSUED FOR PERMIT REVIEW	10/10	MEQ/NMB	EM
REV	DESCRIPTION	DATE	DRN./CHK'D	APP'D
PROJECT NUMBER: N27.18440.BR				
PROPOSED TEMPORARY LEVEE RAMP FOR MUSTAR ENERGY, L.P. - ST. JAMES TERMINAL MISSISSIPPI RIVER, MILE 160 A.H.P., ST. JAMES PARISH, LOUISIANA				
SCALE: AS NOTED	DRAWN BY: MED			
DATE: 10/21/10	CHECKED BY: NMB			
DESIGNED BY: EM	APPROVED BY: EM			
DRAWING NO.	SHEET 5 OF 5			REV A