

DECEMBER 13, 2016

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# FALSE RIVER ECOSYSTEM RESTORATION – PHASE II NORTH FLATS

PROJECT ALTERNATES  
ESTIMATE OF CONSTRUCTION COSTS

**FALSE RIVER WATERSHED COUNCIL**

Prepared By:



**PEC**  
PROFESSIONAL  
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CORPORATION

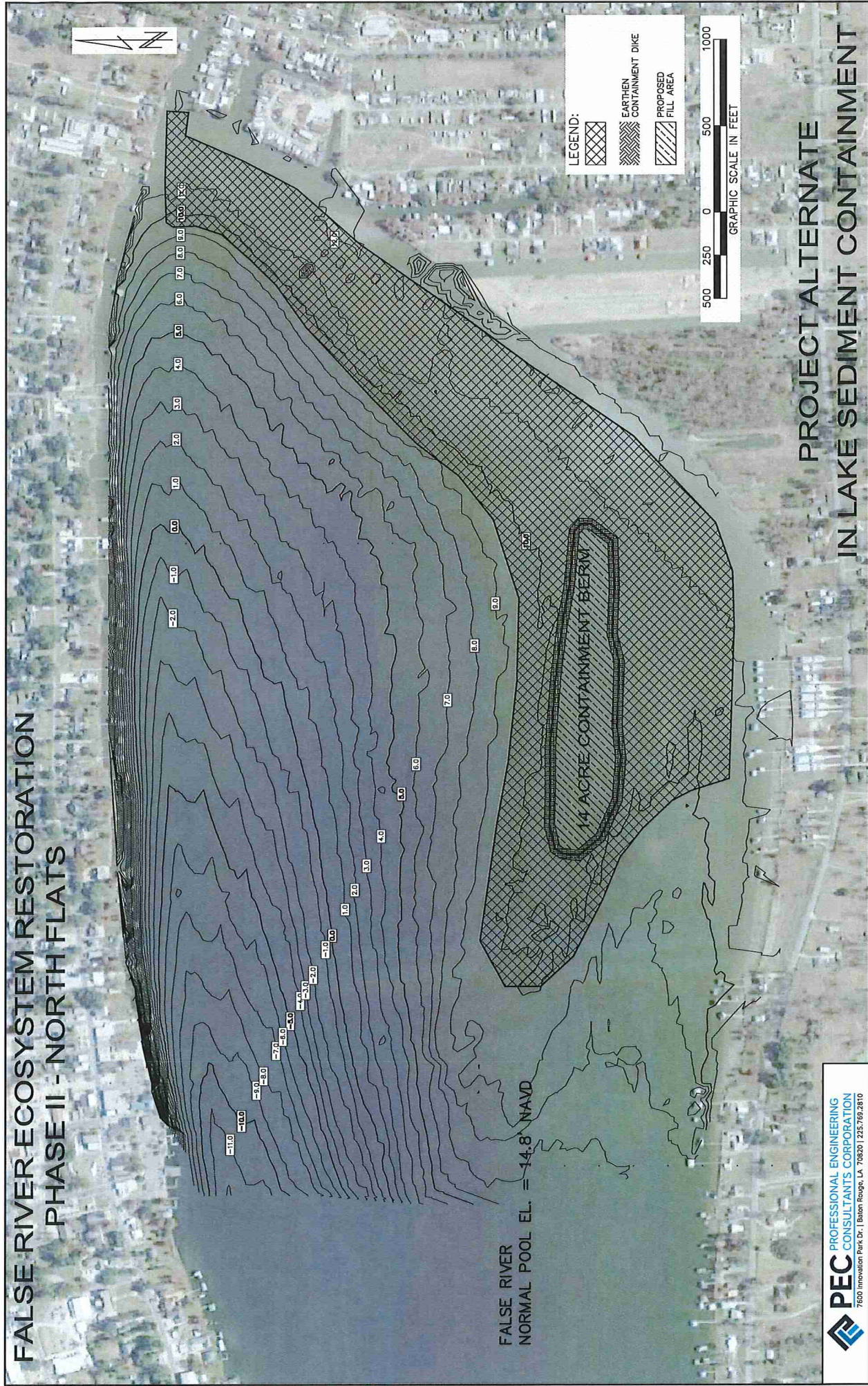
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# FALSE RIVER ECOSYSTEM RESTORATION PHASE II - NORTH FLATS



## PROJECT ALTERNATE IN LAKE SEDIMENT CONTAINMENT

# Estimate of Construction Costs

**FALSE RIVER ECOSYSTEM RESTORATION  
 PHASE 2 - NORTH FLATS  
 IN LAKE SEDIMENT CONTAINMENT (14 ACRE ISLAND**

DATE:

**12/7/2016**

<i>ITEM</i>	<i>QUANTITY</i>	<i>UNIT</i>	<i>UNIT COST</i>	<i>EXTENSION</i>
Mobilization & Demobilization	1	Lump Sum	\$200,000.00	<b>\$200,000.00</b>
Construction Surveys	1	Lump Sum	\$80,000.00	<b>\$80,000.00</b>
Earthen Containment Dike	4,180	Linear Foot	\$90.00	<b>\$376,200.00</b>
Hydraulic Dredging	170,000	Cubic Yard	\$5.00	<b>\$850,000.00</b>
Containment Dike Armoring	20,000	Square Foot	\$10.00	<b>\$200,000.00</b>
Seeding and Vegetative Planting	1	Lump Sum	\$150,000.00	<b>\$150,000.00</b>
<b>Total Estimated Construction</b>				<b>\$1,856,200.00</b>

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**FALSE RIVER ECOSYSTEM RESTORATION  
PHASE II - NORTH FLATS**



FALSE RIVER  
NORMAL POOL EL. = 14.8' NAVD

**PROJECT ALTERNATE  
LAND DISPOSAL ROY / SMITH TRACTS**



# Estimate of Construction Costs

**FALSE RIVER ECOSYSTEM RESTORATION  
PHASE 2 - NORTH FLATS  
LAND DISPOSAL 33 ACRE ROY / SMITH TRACTS**

DATE:

**12/7/2016**

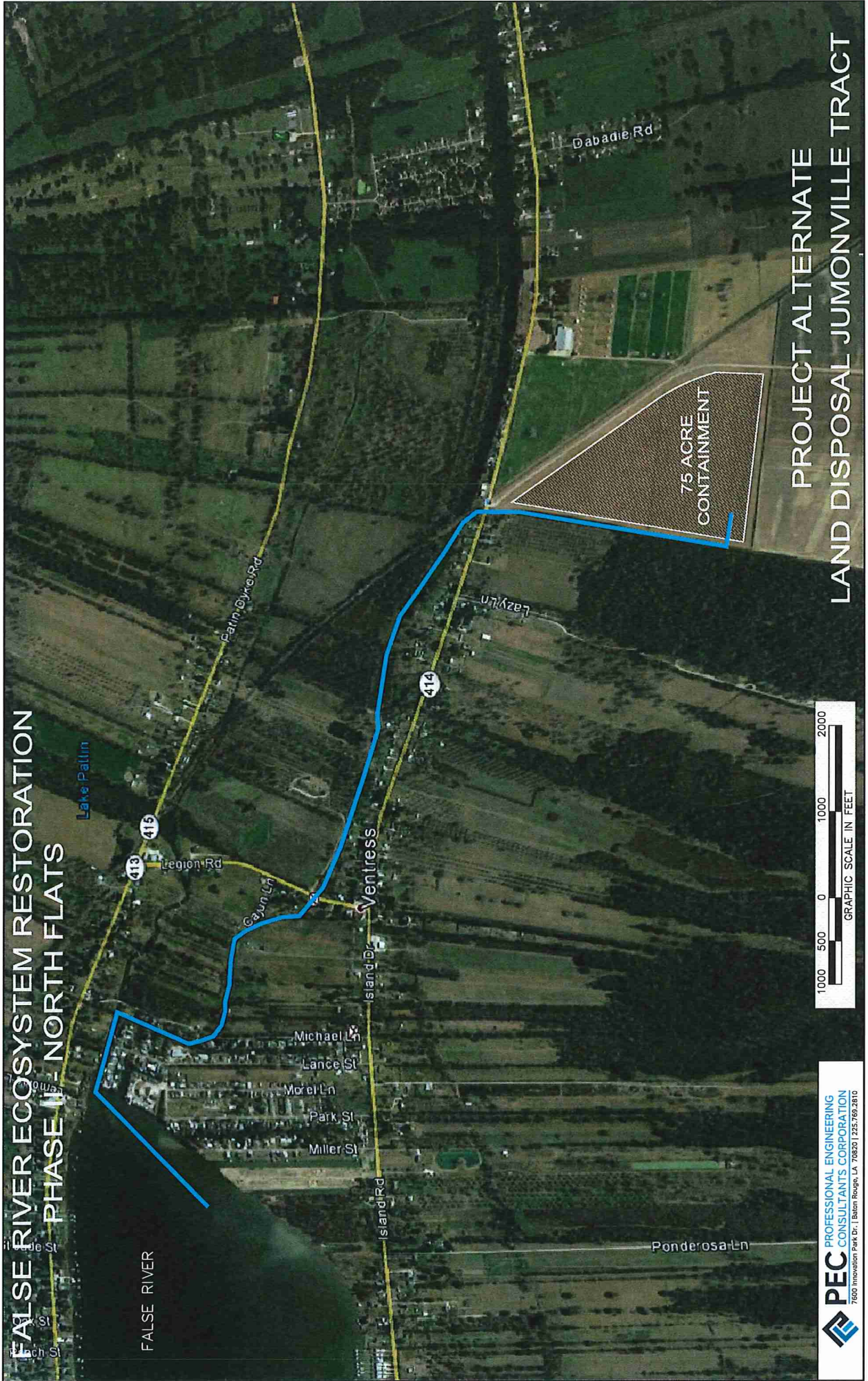
<i>ITEM</i>	<i>QUANTITY</i>	<i>UNIT</i>	<i>UNIT COST</i>	<i>EXTENSION</i>
Mobilization & Demobilization	1	Lump Sum	\$200,000.00	<b>\$200,000.00</b>
Construction Surveys	1	Lump Sum	\$50,000.00	<b>\$50,000.00</b>
Earthen Containment Dike	5,200	Linear Foot	\$50.00	<b>\$260,000.00</b>
Pipeline Installation and Removal	7,000	Linear Foot	\$12.00	<b>\$84,000.00</b>
Hydraulic Dredging	200,000	Cubic Yard	\$5.50	<b>\$1,100,000.00</b>
<b>Total Estimated Construction</b>				<b>\$1,694,000.00</b>

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**FALSE RIVER ECOSYSTEM RESTORATION  
PHASE II - NORTH FLATS**



**PROJECT ALTERNATE  
LAND DISPOSAL JUMONVILLE TRACT**



# Estimate of Construction Costs

**FALSE RIVER ECOSYSTEM RESTORATION  
PHASE 2 - NORTH FLATS  
LAND DISPOSAL 75 ACRE JUMONVILLE TRACT**

DATE:

**12/7/2016**

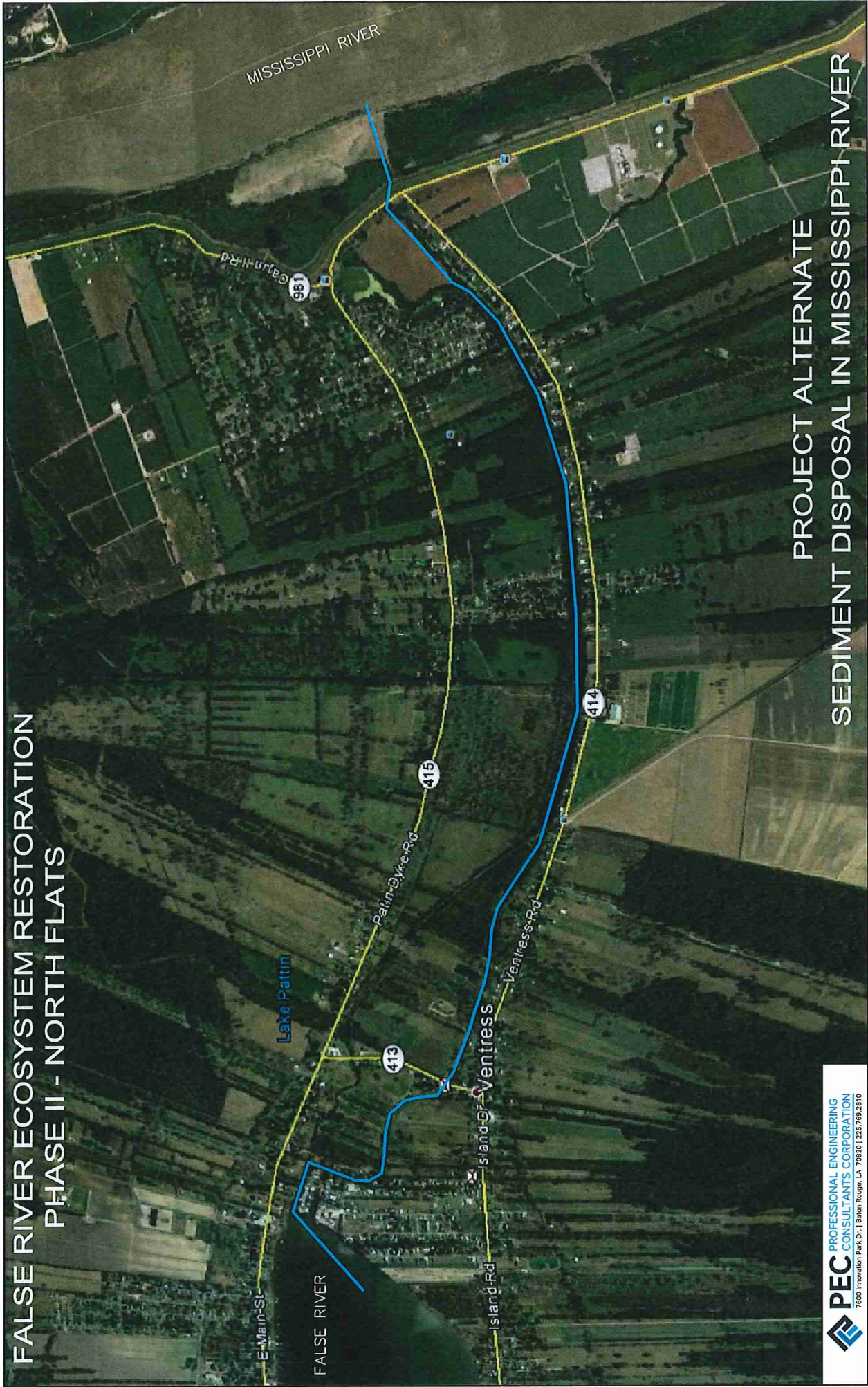
<i>ITEM</i>	<i>QUANTITY</i>	<i>UNIT</i>	<i>UNIT COST</i>	<i>EXTENSION</i>
Mobilization & Demobilization	1	Lump Sum	\$200,000.00	<b>\$200,000.00</b>
Construction Surveys	1	Lump Sum	\$50,000.00	<b>\$50,000.00</b>
Earthen Containment Dike	8,100	Linear Foot	\$30.00	<b>\$243,000.00</b>
Pipeline Installation and Removal	14,500	Linear Foot	\$12.00	<b>\$174,000.00</b>
Hydraulic Dredging	200,000	Cubic Yard	\$5.75	<b>\$1,150,000.00</b>
<b>Total Estimated Construction</b>				<b>\$1,817,000.00</b>

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FALSE RIVER ECOSYSTEM RESTORATION  
PHASE II - NORTH FLATS



PROJECT ALTERNATE  
SEDIMENT DISPOSAL IN MISSISSIPPI RIVER



# Estimate of Construction Costs

**FALSE RIVER ECOSYSTEM RESTORATION  
PHASE 2 - NORTH FLATS  
SEDIMENTS DISCHARGED INTO THE MISSISSIPPI RIVER**

DATE:

**12/7/2016**

<i>ITEM</i>	<i>QUANTITY</i>	<i>UNIT</i>	<i>UNIT COST</i>	<i>EXTENSION</i>
Mobilization & Demobilization	1	Lump Sum	\$375,000.00	<b>\$375,000.00</b>
Construction Surveys	1	Lump Sum	\$25,000.00	<b>\$25,000.00</b>
Pipeline Installation and Removal	27,000	Linear Foot	\$11.25	<b>\$303,750.00</b>
Hydraulic Dredging	200,000	Cubic Yard	\$6.00	<b>\$1,200,000.00</b>
<b>Total Estimated Construction</b>				<b>\$1,903,750.00</b>

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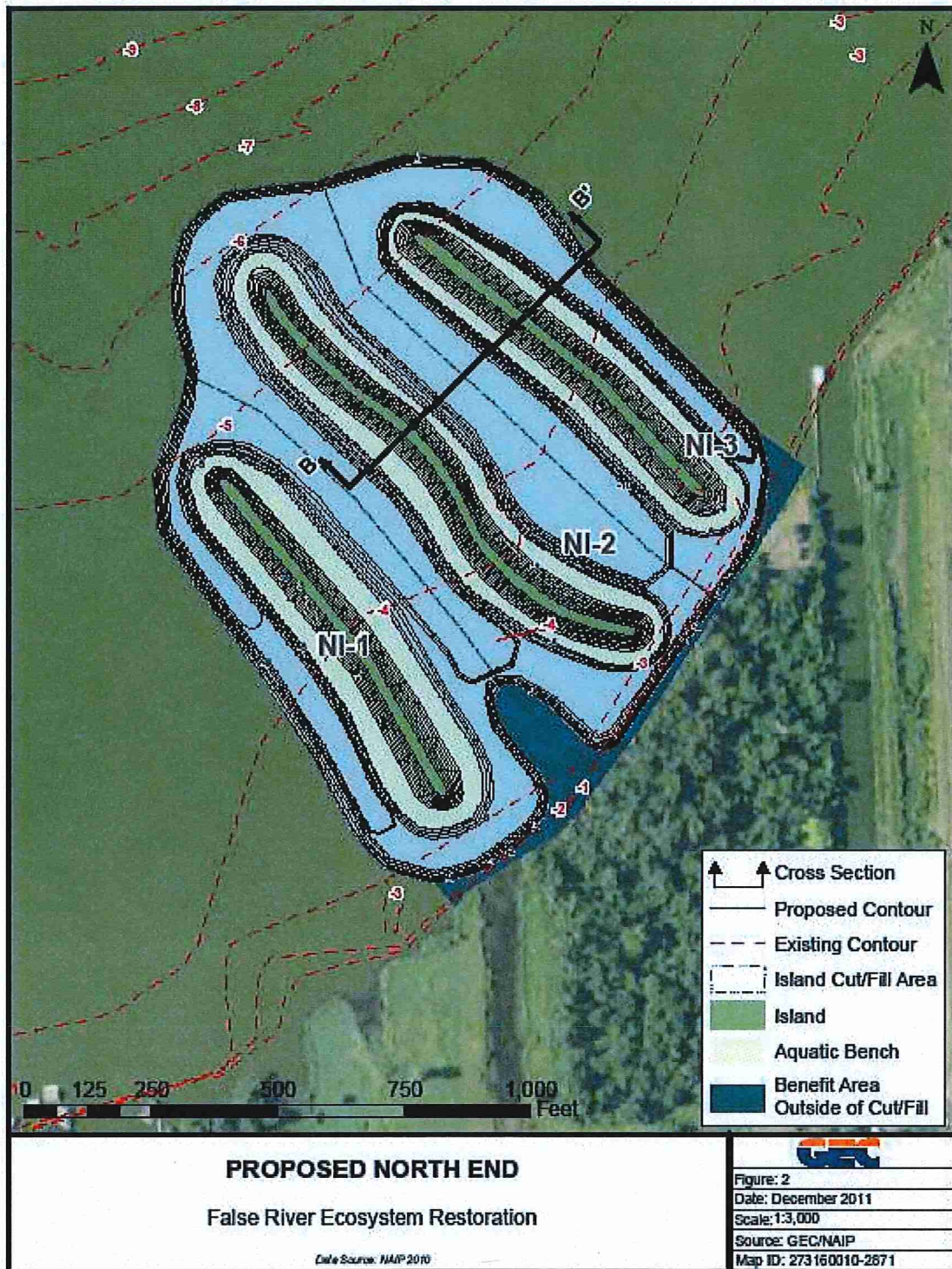


Figure 3-1. Plan View for Alternative A2  
(Dredge North Flats with Island/Edge Disposal and Plantings)

**Table 3-5. Estimated Construction Costs for Alternative 2  
(Dredge North Flats with Island/Edge Disposal and Plantings)**

Item	Unit	Estimated Quantity	Unit Price	Estimated Cost
<b>Mobilization &amp; Demobilization</b>				
Mechanical Dredging Mob/Demob	ls	1	\$ 231,200.00	\$231,200
<b>Earthwork</b>				
Mechanical Dredging (3.5 CY Bucket)	cy	136,200	11.20	1,525,440
<b>Erosion Protection</b>				
Seeding (Islands)	acre	3	217.00	651
Turbidity Curtain	lf	1,500	39.00	58,500
<b>Vegetative Plantings</b>				
Seedlings (Islands)	acre	3	365.00	1,095
Nutria Control	acre	3	1,510.00	4,530
<b>Subtotal</b>				<b>\$1,821,416</b>
Surveying	ls	1	35,000.00	35,000
Preconstruction Engineering and Design	%		12%	218,570
Construction Management	%		9%	163,927
Land Costs (Staging)	acre	1	\$36,000.00	36,000
<b>Construction Costs Subtotal</b>				<b>\$2,274,913</b>
<b>Construction Contingency Cost (35%)</b>			35%	796,220
<b>Study Costs</b>				500,000
<b>Total Project Cost</b>				<b>\$3,571,133</b>
Interest During Construction (1 year)				78,119
<b>Total Estimated Cost</b>				<b>\$3,649,252</b>
Annualized Cost (50 yr, 4.375% Interest)				180,920
Annual Operations and Maintenance*				0
<b>Total Average Annual Cost</b>				<b>\$180,920</b>

Estimates are in 2010 Dollars

Average Annual Cost based upon 50 yr project life, 4.375% interest, and 1 year construction period

Interest During Construction Rate =  $((1.04375^2) - 1) * .5$

Discount Rate: 4.375 Percent

Project Life: 50 Years

Construction Period: 1 Year