

APPENDIX M: ENGINEERING REPORTS

Volume 4 of 4

Contents:

Basis of Design Report -15% Design Appendices as follows:

- 12. F Rough Order of Magnitude Cost Estimate
- 13. G Utility Disposition Report
- 14. H Shapefiles Supplied for WVA

It should be noted that the Engineering Reports were provided by CPRA as standalone documents and in some cases the terminology within may not match the terminology used in the SEIS (e.g. MSP vs. MSA-2 for the selected alternative).

Construction Cost Estimate

RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT

Design Level: 15%

CPRA Project Number: PO-0029

AECOM Project Number: 60632162

Prepared For:

Louisiana Coastal Protection and Restoration Authority (CPRA)
Coastal Engineering Division



Prepared by:

AECOM Cost Estimating, Scheduling, And Claims Group
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COST ESTIMATE NARRATIVE

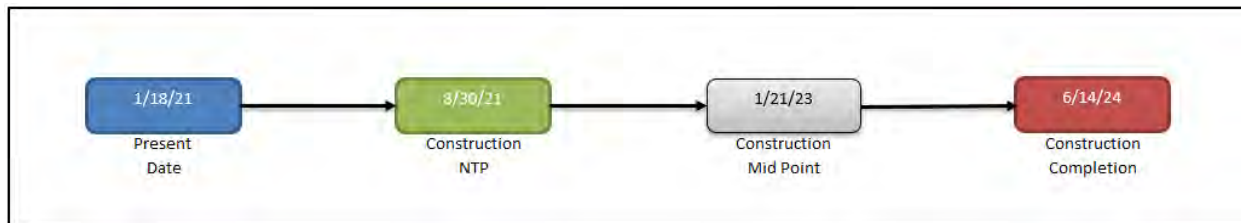
EXECUTIVE SUMMARY

AECOM has been contracted by CPRA to establish an expected construction budget for the River Reintroduction into Maurepas Swamp and West Shore Lake Pontchartrain Flood Risk Reduction Project. The construction cost for this project has been estimated and organized at a unit price level by major work items. The intent of this construction cost estimate is to establish a project budget based on expected construction activities and sequencing. The construction cost estimate has been developed by using 15% plans and certain assumptions to establish the expected project cost. This estimate is an AACEI class 3 estimate and includes an estimate uncertainty contingency of 35% to account for design development. Referencing the USACE EM 110-2-1304 Civil Works Construction Cost Index System an escalation percentage of 2.9% per year has been applied from present day dollars to the midpoint of the construction schedule. All unit cost presented in this estimate includes contractor markups and burdens. Below is a summary of the project cost and the summary of the project schedule.

Summary of Project Cost

			% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
Subtotal		\$155,735,981	70%	30%	\$108,695,758	\$47,040,223
Project Escalation 2.9%/yr =	5.90%	\$9,188,423	70%	30%	\$6,413,050	\$2,775,373
Subtotal		\$164,924,404	70%	30%	\$115,108,808	\$49,815,596
Estimate Uncertainty Contingency =	35%	\$57,723,541	70%	30%	\$40,288,083	\$17,435,459
Total Construction Cost =		\$222,647,946	70%	30%	\$155,396,891	\$67,251,055
Changes & Claims =	5%	\$11,132,397	70%	30%	\$7,769,845	\$3,362,553
Resident Inspect, Testing, etc. =	4%	\$8,905,918	70%	30%	\$6,215,876	\$2,690,042
Engr Svcs During Const. =	2%	\$4,452,959	70%	30%	\$3,107,938	\$1,345,021
	Grand Total =	\$247,139,220	70%	30%	\$172,490,549	\$74,648,671

Summary of Project Schedule



PROJECT SCOPE

The Maurepas Diversion major scope items are the headworks; conveyance channel; and the road and railway crossings. The main components of the WSLP Project are levee, floodwalls, floodgates, and the raising of Airline Highway to tie-in to the levee.

ESTIMATING METHODOLOGY

The methodology used for estimating labor, material, and equipment costs for this estimate is based on RS Means data base cost items and LA DOT Bid Tab Construction cost history. Each estimate item has been adjusted based on the project location, the type of work, access to the work, and quantity of the work item. The estimate work breakdown structure is formatted by Major Work items in a unit price format. All cost presented are gross cost including all contractor markups. The markups included in the unit price are Job Office Overhead, Home Office Overhead, Profit, Taxes, Labor Burdens, Insurance, and Bonds.

ESTIMATE CLASSIFICATION

This estimate is considered an AACE International Class 3 estimate based on the classification detailed in the table below.

	Primary Characteristic	Secondary Characteristic		
ESTIMATE CLASS	MATURITY LEVEL OF PROJECT DEFINITION DELIVERABLES Expressed as % of complete definition	END USAGE Typical purpose of estimate	METHODOLOGY Typical estimating method	EXPECTED ACCURACY RANGE Typical variation in low and high ranges at an 80% confidence interval
Class 5	0% to 2%	Concept screening	Capacity factored, parametric models, judgment, or analogy	L: -20% to -50% H: +30% to +100%
Class 4	1% to 15%	Study or feasibility	Equipment factored or parametric models	L: -15% to -30% H: +20% to +50%
Class 3	10% to 40%	Budget authorization or control	Semi-detailed unit costs with assembly level line items	L: -10% to -20% H: +10% to +30%
Class 2	30% to 75%	Control or bid/tender	Detailed unit cost with forced detailed take-off	L: -5% to -15% H: +5% to +20%
Class 1	65% to 100%	Check estimate or bid/tender	Detailed unit cost with detailed take-off	L: -3% to -10% H: +3% to +15%



COST SUMMARY

Below shows the cost estimate summary as seen in Attachment A of this report.

Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
1	Mobilization and Demobilization	LS	1	\$14,157,816	\$14,157,816	60%	40%	\$8,494,689.89	\$5,663,126.59
2	Temporary Retaining Structures	LS	1	\$11,990,371	\$11,990,371	85%	15%	\$10,233,031.04	\$1,757,340.00
3	Traffic Control and Coordination	LS	1	\$2,678,003	\$2,678,003	27%	73%	\$713,051.73	\$1,964,951.20
4	Silt Fences	LF	72,839	\$3.50	\$254,937	68%	32%	\$174,544.13	\$80,392.38
5	Turbidity Curtain	LF	1,000	\$10.00	\$10,000	100%	0%	\$10,000.00	\$0.00
6	Truck Wash Down Racks	LS	8	\$127,831	\$1,022,652	50%	50%	\$511,326	\$511,326
7	Demolition	LS	1	\$557,601	\$557,601	45%	55%	\$251,929.87	\$305,671.48
8	Concrete for Minor Structures	LS	1	\$177,100	\$177,100	100%	0%	\$177,100.00	\$0.00
9	Structural Concrete	CY	13,772	\$650.00	\$8,951,800	79%	21%	\$7,098,780.00	\$1,853,020.00
10	Stabilization Slab Concrete	CY	748	\$450.00	\$336,600	76%	24%	\$254,160.00	\$82,440.00
11	Structural Steel	LS	1	\$327,000	\$327,000	0%	100%	\$0.00	\$327,000.00
12	Miscellaneous Metalwork	LS	1	\$60,560	\$60,560	66%	34%	\$40,130.00	\$20,430.00
13	Metal Railings	LS	1	\$27,000	\$27,000	100%	0%	\$27,000.00	\$0.00
14	Steel Doors and Frames	LS	1	\$8,000	\$8,000	100%	0%	\$8,000.00	\$0.00
15	Paints and Coatings	SF	1,981	\$3.55	\$7,033	0%	100%	\$0.00	\$7,032.55
16	Painting: Coal Tar Epoxy System	SF	177,165	\$5.00	\$885,825	23%	77%	\$200,435.00	\$685,390.00
17	Project Signage at Road Crossings	EA	4	\$500.00	\$2,000	50%	50%	\$1,000.00	\$1,000.00
18	Foundation Instrumentation	LS	1	\$158,100	\$158,100	100%	0%	\$158,100.00	\$0.00
19	Electrical Work at Head Works	LS	1	\$108,313	\$108,313	100%	0%	\$108,313.00	\$0.00
20	Separator Geotextile	SY	70,166	\$4.00	\$280,665	18%	82%	\$51,216.84	\$229,448.00
21	Geogrid Soil Reinforcement	SY	77,316	\$1.70	\$131,437	100%	0%	\$131,064.79	\$372.19
22	Clearing and Grubbing	LS	1	\$7,754,250	\$7,754,250	73%	27%	\$5,687,475.00	\$2,066,775.00
23	Excavation	CY	1,284,577	\$14.00	\$17,984,083	94%	6%	\$16,874,477.76	\$1,109,605.00
24	Dewatering	LS	1	\$4,100,000	\$4,100,000	100%	0%	\$4,100,000.00	\$0.00
25	Embankment, Compacted Fill	CY	756,060	\$30.00	\$22,681,800	57%	43%	\$12,850,800.00	\$9,831,000.00
26	Fiber Mulch	CY	11	\$194.00	\$2,173	10%	90%	\$217.28	\$1,955.52
27	Riprap (Class 30 lb)	CY	2,051	\$110.00	\$225,647	100%	0%	\$225,646.67	\$0.00
28	Riprap (Class 55 lb)	CY	4,148	\$150.00	\$622,200	100%	0%	\$622,200.00	\$0.00
29	Riprap (Class 130 lb)	CY	247	\$168.00	\$41,469	100%	0%	\$41,469.12	\$0.00
30	Riprap (Class 250 lb)	CY	8,333	\$200.00	\$1,666,667	100%	0%	\$1,666,666.67	\$0.00
31	Grouted Riprap	SY	336	\$207.00	\$69,552	100%	0%	\$69,552.00	\$0.00
32	Steel Sheet Piling, Type PZ-22	SF	109,900	\$45.00	\$4,945,500	9%	91%	\$442,890.00	\$4,502,610.00
33	Prestressed Concrete Piles, Type 24"x24"	LF	40,425	\$160.00	\$6,468,000	90%	10%	\$5,821,200.00	\$646,800.00
34	Pile Load Tests	LS	1	\$265,654	\$265,654	56%	44%	\$148,192.00	\$117,462.00
35	Steel H-Piles, HP 14 x 73	LF	6,288	\$89.00	\$559,632	0%	100%	\$0.00	\$559,632.00
36	Steel H-Piles, HP 14 x 89	LF	28,460	\$102.00	\$2,902,920	100%	0%	\$2,902,920.00	\$0.00



COST SUMMARY CONTINUED

Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
37	Steel H-Piles, HP 16 x 101	LF	6,371	\$130.00	\$828,230	100%	0%	\$828,230.00	\$0.00
38	Timber Piles, 12" Diameter	LF	1710	\$48.00	\$82,080	50%	50%	\$41,040.00	\$41,040.00
39	Asphaltic Pavement	LS	1	\$2,434,996	\$2,434,996	28%	72%	\$670,477.00	\$1,764,519.00
40	Nonplastic Embankment Sand	CY	1,785	\$62.25	\$111,116	20%	80%	\$22,223.25	\$88,893.00
41	Crushed Stone Surfacing	TONS	26,927	\$37.00	\$996,313	100%	0%	\$996,312.77	\$0.00
42	Temporary Access Roads (6" Crushed Stone with Geogrid)	SY	154,099	\$37.00	\$5,701,658	83%	17%	\$4,723,008.00	\$978,650.00
43	Pavement Markings	LS	1	\$39,918.45	\$39,918	44%	56%	\$17,515.41	\$22,403.04
44	Miscellaneous Roadwork Items	LS	1	\$16,670	\$16,670	20%	80%	\$3,334.04	\$13,336.16
45	Precast Concrete Platform	LS	1	\$68,610	\$68,610	100%	0%	\$68,609.64	\$0.00
46	Chain Link Fence and Gate	LF	1,016	\$62.46	\$63,464	100%	0%	\$63,463.60	\$0.00
47	Turf Establishment and Maintenance	AC	157	\$5,000.00	\$787,350	74%	26%	\$580,800.00	\$206,550.00
48	Modifications to Existing Utilities	LS	1	\$13,046,200	\$13,046,200	50%	50%	\$6,523,100	\$6,523,100
49	Storm Drain Pipes	LF	428	\$101.41	\$43,404	100%	0%	\$43,404.00	\$0.00
50	Precast Concrete Box Culverts for New Drainage Ditches	LS	1	\$1,566,438	\$1,566,438	36%	64%	\$560,141.40	\$1,006,296.60
51	Elastomeric Check Valves, 42" Dia. w/44"x55" Elliptical Cuff	EA	16	\$42,870.00	\$685,920	100%	0%	\$685,920.00	\$0.00
52	Elastomeric Check Valves, 36" Diameter	EA	8	\$33,442.00	\$267,536	100%	0%	\$267,536.00	\$0.00
53	Drainage Ditch Headwalls	EA	12	\$22,300.00	\$267,600	25%	75%	\$66,900.00	\$200,700.00
54	Railroad Falsework at KCS Railroad	LS	1	\$250,000	\$250,000	50%	50%	\$125,000.00	\$125,000.00
55	Railroad Flagman at KCS Railroad	LS	1	\$216,000	\$216,000	50%	50%	\$108,000.00	\$108,000.00
56	Railroad Flagman at CN Railroad	LS	1	\$216,000	\$216,000	50%	50%	\$108,000.00	\$108,000.00
57	Railroad Insurance for KCS Railroad	LS	1	\$84,186	\$84,186	50%	50%	\$42,092.91	\$42,092.91
58	Railroad Insurance for CN Railroad	LS	1	\$241,786	\$241,786	50%	50%	\$120,893.10	\$120,893.10
59	Demolition of Existing KCS Railroad Tracks	LS	1	\$182,627	\$182,627	80%	20%	\$146,101.79	\$36,525.45
60	Demolition of Existing CN Railroad Tracks	LS	1	\$276,040	\$276,040	50%	50%	\$138,020.00	\$138,020.00
61	New KCS Railroad Tracks	TFT	1,773	\$1,338.67	\$2,373,566	90%	10%	\$2,139,710	\$233,856
62	New CN Railroad Tracks	TFT	1,375	\$4,024.02	\$5,533,028	75%	25%	\$4,123,731.88	\$1,409,296.10
63	Shoofly at CN Railroad	LS	1	\$2,250,472	\$2,250,472	50%	50%	\$1,125,236.10	\$1,125,236.10
64	Sluice Gates and Hydraulic Operated Valve Actuators	EA	3	\$804,166.67	\$2,412,500	100%	0%	\$2,412,500.00	\$0.00
65	Sluice Gates - Dewatering, Manual Operation	EA	6	\$150,000.00	\$900,000	100%	0%	\$900,000.00	\$0.00
66	Lateral Release Valve Assemblies	EA	8	\$89,749.53	\$717,996	100%	0%	\$717,996.26	\$0.00
67	Stone Bedding	CY	506	\$43.50	\$21,992	100%	0%	\$21,991.67	\$0.00
68	Concrete Slope Pavement (6" thick)	SY	3,666	\$115.00	\$421,627	15%	85%	\$62,596.80	\$359,030.00
69	Diesel-Generator Set Standby	EA	1	\$30,288.00	\$30,288	100%	0%	\$30,288.00	\$0.00
70	Flow Measuring Equipment System	LS	1	\$50,000	\$50,000	100%	0%	\$50,000.00	\$0.00
71	Boat Launch and Dock	LS	1	\$128,011	\$128,011	50%	50%	\$64,005.66	\$64,005.66
						% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
			Subtotal		\$155,735,981	70%	30%	\$108,695,758	\$47,040,223
			Project Escalation 2.9%/yr =	5.90%	\$9,188,423	70%	30%	\$6,413,050	\$2,775,373
			Subtotal		\$164,924,404	70%	30%	\$115,108,808	\$49,815,596
			Estimate Uncertainty Contingency =	35%	\$57,723,541	70%	30%	\$40,288,083	\$17,435,459
			Total Construction Cost =		\$222,647,946	70%	30%	\$155,396,891	\$67,251,055
			Changes & Claims =	5%	\$11,132,397	70%	30%	\$7,769,845	\$3,362,553
			Resident Inspect, Testing, etc. =	4%	\$8,905,918	70%	30%	\$6,215,876	\$2,690,042
			Engr Svcs During Const. =	2%	\$4,452,959	70%	30%	\$3,107,938	\$1,345,021
			Grand Total =		\$247,139,220	70%	30%	\$172,490,549	\$74,648,671



DESIGN BASIS

The construction cost estimate was produced using 15% design plans dated December 2020.

PLANNING BASIS

The cost estimate planning is based on a standard Design, Bid, and Build procurement, with three or more bidders. It has been assumed that the contractor will have labor resources available and no labor shortage cost was accounted for.

COST BASIS

Material and Labor pricing

- Labor and material rates are localized to New Orleans, LA using the RS Means City Cost Multiplier and LA DOT Bid Result historic data.

Indirect costs

- Contractor overhead is estimated to be 10% of the direct costs based on previous similar projects.
- Bonds are estimated to be 1% of the direct costs based on previous similar projects.
- General Liability Insurance is estimated to be 1% of the direct costs based on previous similar projects.

Taxes and Duties

- Taxes on material is estimated at 9.7% of the material cost which is based off the tax rate established in Garyville, LA.
- Taxes on equipment is estimated at 9.7% of the equipment cost which is based off the tax rate established in Garyville, LA.

Escalation

- Escalation has been applied by referencing the USACE EM 110-2-1304 Civil Works Construction Cost Index System for projects classified under Item 15 Floodway Control & Diversion Structure.
- Below shows the index numbers used and the overall escalation for the project (2.90% per year)

	Start	End	Escalation
Index Date	1/18/2021	1/21/2023	
Index	913.2	967.08	= 5.90 %

Contractor Markup/Profit is estimated at 10% of direct costs plus markup.

Subcontractor Overhead and Profit is estimated at 20% of the subcontracting cost.



ASSUMPTIONS

- Cost Allowances have been used for certain scopes of work due to current design stage.
- Construction will take 33 months.
- Construction start date August 30, 2021
- Construction midpoint Date January 21, 2023
- Construction completion date June 14, 2024

EXCLUSIONS

- This cost estimate does not include any additional markups, costs or escalations due to the market uncertainty given the current COVID-19 crisis.
- Does not include additional cost or markups for loss time or added work from hurricanes or other weather events.
- Does not included escalation past the current mid-point of construction.

CONTINGENCIES

- As detailed in the estimate classification section of this report, the cost estimate has an estimate uncertainty contingency of 35%. This contingency is based on the estimate AACEI classification of 3 and the details in the 15% drawings.

RISKS

- Quantity Adjustment Risk- due to project being at an early design stage there is a likelihood that quantities will change. This could result in increased construction cost and extended contract durations beyond what is allocated in the contingency line item.
- Cost increase or decrease due to market fluctuations because of current COVID-19 crisis.
- Cost increase due to major weather events causing project rework or loss time.
- Encountering unknow utilities throughout the project causing project lost time.
- Relocation of known existing utilities causing loss time due to multiple company coordination.



ESTIMATE QUALITY ASSURANCE

The estimate has been reviewed by both the estimate team and the design team and the comments have been incorporated into this narrative and the estimate itself.

ESTIMATING TEAM

Eric Jones – Lead Estimator – Developed Unit Cost and Cost Narrative.

Russ Russo – Senior Estimator – Developed Unit Cost.

Felipe Poletto – Estimating Manager – Quality Control of Estimate.



ATTACHMENTS



ATTACHMENT – A

CONSTRUCTION COST ESTIMATE





RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
1	Mobilization and Demobilization	LS	1	\$14,157,816	\$14,157,816	60%	40%	\$8,494,689.89	\$5,663,126.59
2	Temporary Retaining Structures	LS	1	\$11,990,371	\$11,990,371	85%	15%	\$10,233,031.04	\$1,757,340.00
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6	Truck Wash Down Racks	LS	8	\$127,831	\$1,022,652	50%	50%	\$511,326	\$511,326
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8	Concrete for Minor Structures	LS	1	\$177,100	\$177,100	100%	0%	\$177,100.00	\$0.00
9	Structural Concrete	CY	13,772	\$650.00	\$8,951,800	79%	21%	\$7,098,780.00	\$1,853,020.00
10	Stabilization Slab Concrete	CY	748	\$450.00	\$336,600	76%	24%	\$254,160.00	\$82,440.00
11	Structural Steel	LS	1	\$327,000	\$327,000	0%	100%	\$0.00	\$327,000.00
12	Miscellaneous Metalwork	LS	1	\$60,560	\$60,560	66%	34%	\$40,130.00	\$20,430.00
13	Metal Railings	LS	1	\$27,000	\$27,000	100%	0%	\$27,000.00	\$0.00
14	Steel Doors and Frames	LS	1	\$8,000	\$8,000	100%	0%	\$8,000.00	\$0.00
15	Paints and Coatings	SF	1,981	\$3.55	\$7,033	0%	100%	\$0.00	\$7,032.55
16	Painting: Coal Tar Epoxy System	SF	177,165	\$5.00	\$885,825	23%	77%	\$200,435.00	\$685,390.00
17	Project Signage at Road Crossings	EA	4	\$500.00	\$2,000	50%	50%	\$1,000.00	\$1,000.00
18	Foundation Instrumentation	LS	1	\$158,100	\$158,100	100%	0%	\$158,100.00	\$0.00
19	Electrical Work at Head Works	LS	1	\$108,313	\$108,313	100%	0%	\$108,313.00	\$0.00
20	Separator Geotextile	SY	70,166	\$4.00	\$280,665	18%	82%	\$51,216.84	\$229,448.00
21	Geogrid Soil Reinforcement	SY	77,316	\$1.70	\$131,437	100%	0%	\$131,064.79	\$372.19
22	Clearing and Grubbing	LS	1	\$7,754,250	\$7,754,250	73%	27%	\$5,687,475.00	\$2,066,775.00
23	Excavation	CY	1,284,577	\$14.00	\$17,984,083	94%	6%	\$16,874,477.76	\$1,109,605.00
24	Dewatering	LS	1	\$4,100,000	\$4,100,000	100%	0%	\$4,100,000.00	\$0.00
25	Embankment, Compacted Fill	CY	756,060	\$30.00	\$22,681,800	57%	43%	\$12,850,800.00	\$9,831,000.00
26	Fiber Mulch	CY	11	\$194.00	\$2,173	10%	90%	\$217.28	\$1,955.52
27	Riprap (Class 30 lb)	CY	2,051	\$110.00	\$225,647	100%	0%	\$225,646.67	\$0.00
28	Riprap (Class 55 lb)	CY	4,148	\$150.00	\$622,200	100%	0%	\$622,200.00	\$0.00
29	Riprap (Class 130 lb)	CY	247	\$168.00	\$41,469	100%	0%	\$41,469.12	\$0.00
30	Riprap (Class 250 lb)	CY	8,333	\$200.00	\$1,666,667	100%	0%	\$1,666,666.67	\$0.00
31	Grouted Riprap	SY	336	\$207.00	\$69,552	100%	0%	\$69,552.00	\$0.00
32	Steel Sheet Piling, Type PZ-22	SF	109,900	\$45.00	\$4,945,500	9%	91%	\$442,890.00	\$4,502,610.00
33	Prestressed Concrete Piles, Type 24"x24"	LF	40,425	\$160.00	\$6,468,000	90%	10%	\$5,821,200.00	\$646,800.00
34	Pile Load Tests	LS	1	\$265,654	\$265,654	56%	44%	\$148,192.00	\$117,462.00
35	Steel H-Piles, HP 14 x 73	LF	6,288	\$89.00	\$559,632	0%	100%	\$0.00	\$559,632.00
36	Steel H-Piles, HP 14 x 89	LF	28,460	\$102.00	\$2,902,920	100%	0%	\$2,902,920.00	\$0.00
37	Steel H-Piles, HP 16 x 101	LF	6,371	\$130.00	\$828,230	100%	0%	\$828,230.00	\$0.00
38	Timber Piles, 12" Diameter	LF	1710	\$48.00	\$82,080	50%	50%	\$41,040.00	\$41,040.00
39	Asphaltic Pavement	LS	1	\$2,434,996	\$2,434,996	28%	72%	\$670,477.00	\$1,764,519.00
40	Nonplastic Embankment Sand	CY	1,785	\$62.25	\$111,116	20%	80%	\$22,223.25	\$88,893.00
41	Crushed Stone Surfacing	TONS	26,927	\$37.00	\$996,313	100%	0%	\$996,312.77	\$0.00
42	Temporary Access Roads (6" Crushed Stone with Geogrid)	SY	154,099	\$37.00	\$5,701,658	83%	17%	\$4,723,008.00	\$978,650.00
43	Pavement Markings	LS	1	\$39,918.45	\$39,918	44%	56%	\$17,515.41	\$22,403.04



RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
44	Miscellaneous Roadwork Items	LS	1	\$16,670	\$16,670	20%	80%	\$3,334.04	\$13,336.16
45	Precast Concrete Platform	LS	1	\$68,610	\$68,610	100%	0%	\$68,609.64	\$0.00
46	Chain Link Fence and Gate	LF	1,016	\$62.46	\$63,464	100%	0%	\$63,463.60	\$0.00
47	Turf Establishment and Maintenance	AC	157	\$5,000.00	\$787,350	74%	26%	\$580,800.00	\$206,550.00
48	Modifications to Existing Utilities	LS	1	\$13,046,200	\$13,046,200	50%	50%	\$6,523,100	\$6,523,100
49	Storm Drain Pipes	LF	428	\$101.41	\$43,404	100%	0%	\$43,404.00	\$0.00
50	Precast Concrete Box Culverts for New Drainage Ditches	LS	1	\$1,566,438	\$1,566,438	36%	64%	\$560,141.40	\$1,006,296.60
51	Elastomeric Check Valves, 42" Dia. w/44"x55" Elliptical Cuff	EA	16	\$42,870.00	\$685,920	100%	0%	\$685,920.00	\$0.00
52	Elastomeric Check Valves, 36" Diameter	EA	8	\$33,442.00	\$267,536	100%	0%	\$267,536.00	\$0.00
53	Drainage Ditch Headwalls	EA	12	\$22,300.00	\$267,600	25%	75%	\$66,900.00	\$200,700.00
54	Railroad Falsework at KCS Railroad	LS	1	\$250,000	\$250,000	50%	50%	\$125,000.00	\$125,000.00
55	Railroad Flagman at KCS Railroad	LS	1	\$216,000	\$216,000	50%	50%	\$108,000.00	\$108,000.00
56	Railroad Flagman at CN Railroad	LS	1	\$216,000	\$216,000	50%	50%	\$108,000.00	\$108,000.00
57	Railroad Insurance for KCS Railroad	LS	1	\$84,186	\$84,186	50%	50%	\$42,092.91	\$42,092.91
58	Railroad Insurance for CN Railroad	LS	1	\$241,786	\$241,786	50%	50%	\$120,893.10	\$120,893.10
59	Demolition of Existing KCS Railroad Tracks	LS	1	\$182,627	\$182,627	80%	20%	\$146,101.79	\$36,525.45
60	Demolition of Existing CN Railroad Tracks	LS	1	\$276,040	\$276,040	50%	50%	\$138,020.00	\$138,020.00
61	New KCS Railroad Tracks	TFT	1,773	\$1,338.67	\$2,373,566	90%	10%	\$2,139,710	\$233,856
62	New CN Railroad Tracks	TFT	1,375	\$4,024.02	\$5,533,028	75%	25%	\$4,123,731.88	\$1,409,296.10
63	Shoofly at CN Railroad	LS	1	\$2,250,472	\$2,250,472	50%	50%	\$1,125,236.10	\$1,125,236.10
64	Sluice Gates and Hydraulic Operated Valve Actuators	EA	3	\$804,166.67	\$2,412,500	100%	0%	\$2,412,500.00	\$0.00
65	Sluice Gates - Dewatering, Manual Operation	EA	6	\$150,000.00	\$900,000	100%	0%	\$900,000.00	\$0.00
66	Lateral Release Valve Assemblies	EA	8	\$89,749.53	\$717,996	100%	0%	\$717,996.26	\$0.00
67	Stone Bedding	CY	506	\$43.50	\$21,992	100%	0%	\$21,991.67	\$0.00
68	Concrete Slope Pavement (6" thick)	SY	3,666	\$115.00	\$421,627	15%	85%	\$62,596.80	\$359,030.00
69	Diesel-Generator Set Standby	EA	1	\$30,288.00	\$30,288	100%	0%	\$30,288.00	\$0.00
70	Flow Measuring Equipment System	LS	1	\$50,000	\$50,000	100%	0%	\$50,000.00	\$0.00
71	Boat Launch and Dock	LS	1	\$128,011	\$128,011	50%	50%	\$64,005.66	\$64,005.66
						% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
			Subtotal		\$155,735,981	70%	30%	\$108,695,758	\$47,040,223
			Project Escalation 2.9%/yr =	5.90%	\$9,188,423	70%	30%	\$6,413,050	\$2,775,373
			Subtotal		\$164,924,404	70%	30%	\$115,108,808	\$49,815,596
			Estimate Uncertainty Contingency =	35%	\$57,723,541	70%	30%	\$40,288,083	\$17,435,459
			Total Construction Cost =		\$222,647,946	70%	30%	\$155,396,891	\$67,251,055
			Changes & Claims =	5%	\$11,132,397	70%	30%	\$7,769,845	\$3,362,553
			Resident Inspect, Testing, etc. =	4%	\$8,905,918	70%	30%	\$6,215,876	\$2,690,042
			Engr Svcs During Const.=	2%	\$4,452,959	70%	30%	\$3,107,938	\$1,345,021
					Grand Total =	70%	30%	\$172,490,549	\$74,648,671



RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
1	Mobilization and Demobilization	LS	1	\$14,157,816	\$14,157,816	60%	40%	\$8,494,689.89	\$5,663,126.59
1.01	Mobilization		\$141,578,164.87	6%	\$8,494,689.89	60%	40%	\$5,096,813.94	\$3,397,875.96
1.02	Demobilization		\$141,578,164.87	4%	\$5,663,126.59	60%	40%	\$3,397,875.96	\$2,265,250.64
2	Temporary Retaining Structures	LS	1	\$11,990,371	\$11,990,371	85%	15%	\$10,233,031.04	\$1,757,340.00
2.01	TRS at Culverts C-4 & C-5 @ Headworks (HW)								
	Sheet pile (PZ 27)	SF	10,575	\$30.00	\$317,250.00	100%	0%	\$317,250.00	\$0.00
	W14x30 Whaler	LF	219	\$163.00	\$35,697.00	100%	0%	\$35,697.00	\$0.00
	W21x111 Whaler	LF	219	\$163.00	\$35,697.00	100%	0%	\$35,697.00	\$0.00
	W14x45 Strut	LF	422	\$163.00	\$68,786.00	100%	0%	\$68,786.00	\$0.00
	W14x90 Strut	LF	422	\$163.00	\$68,786.00	100%	0%	\$68,786.00	\$0.00
2.02	TRS at Culverts U-1 & U-2 @ HW								
	Sheet pile (PZ 27)	SF	13,677	\$30.00	\$410,310.00	100%	0%	\$410,310.00	\$0.00
	W14x30 Whaler	LF	279	\$163.00	\$45,477.00	100%	0%	\$45,477.00	\$0.00
	W21x111 Whaler	LF	279	\$163.00	\$45,477.00	100%	0%	\$45,477.00	\$0.00
	W14x45 Strut	LF	399	\$163.00	\$65,037.00	100%	0%	\$65,037.00	\$0.00
	W14x90 Strut	LF	399	\$163.00	\$65,037.00	100%	0%	\$65,037.00	\$0.00
2.03	PZ-22 Cofferdam Seepage cutoff wall (Phase I @ HW) Sta. 2+75.66 to Sta. 10+65.98	SF	45,048	\$121.00	\$5,450,837.04	100%	0%	\$5,450,837.04	\$0.00
2.04	MSE Wall/Reinforced Soil Slope @ HW								
	Fill for MSE Retaining Wall	CY	1,413	\$30.00	\$42,382.22	100%	0%	\$42,382.22	\$0.00
	Geotextile fabric	SY	1,324	\$4.00	\$5,297.78	100%	0%	\$5,297.78	\$0.00
2.05	Airline Hwy const. combi-wall, assume PPZ-72/PZ-27 section (Top EL 8, Tip EL -65, Length = 62.5' culvert + 3' gap*2 + 15' excavation * 2H:V * 2 = 129')	SF	9,417	\$180.00	\$1,695,060.00	50%	50%	\$847,530.00	\$847,530.00
2.06	CN Railroad construction combi-wall, assume PPZ-72/PZ-27 section	SF	20,218	\$180.00	\$3,639,240.00	75%	25%	\$2,729,430.00	\$909,810.00
				Sub-Total =	\$11,990,371.04				
3	Traffic Control and Coordination	LS	1	\$2,678,003	\$2,678,003	27%	73%	\$713,051.73	\$1,964,951.20
	River Road Temporary Detour (Phase I & II)								
3.01	End Road Work (G20-2, 48"x24")	SF	16	\$34.00	\$544.00	75%	25%	\$408.00	\$136.00
3.02	Road Work Ahead (W20-1, 48"x48")	SF	32	\$34.00	\$1,088.00	75%	25%	\$816.00	\$272.00
3.03	Trucks Entering Hwy (48"x48")	SF	64	\$34.00	\$2,176.00	75%	25%	\$1,632.00	\$544.00
3.04	Flagmen (assume 2 men @ 8hrs/day, 60 days)	HR	960	\$12.00	\$11,520.00	75%	25%	\$8,640.00	\$2,880.00
	Signs (Phase III & IV)								
3.05	End Road Work (G20-2, 48"x24")	SF	16	\$34.00	\$544.00	75%	25%	\$408.00	\$136.00
3.06	Road Work Ahead (W20-1, 48"x48")	SF	80	\$34.00	\$2,720.00	75%	25%	\$2,040.00	\$680.00
3.07	Trucks Entering Hwy (48"x48")	SF	64	\$34.00	\$2,176.00	75%	25%	\$1,632.00	\$544.00
3.08	Speed Limit 35 MPH (W3-5, 48"x48")	SF	32	\$34.00	\$1,088.00	75%	25%	\$816.00	\$272.00
3.09	Speed Limit 35 MPH (R2-1, 24"x30")	SF	10	\$34.00	\$340.00	75%	25%	\$255.00	\$85.00
3.1	Detour Sign (W1-4R, 48"x48")	SF	32	\$34.00	\$1,088.00	75%	25%	\$816.00	\$272.00
3.11	Speed Limit 35 MPH (R2-1, 24"x30")	SF	64	\$34.00	\$2,176.00	75%	25%	\$1,632.00	\$544.00
3.12	Detour Sign (W1-4L, 48"x48")	SF	32	\$34.00	\$1,088.00	75%	25%	\$816.00	\$272.00
3.13	Road Closed Barricade (R11-2, 48"x30")	SF	20	\$34.00	\$680.00	75%	25%	\$510.00	\$170.00



RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
3.14	Arrow Sign (W1-6R, 48"X18")	SF	12	\$34.00	\$408.00	75%	25%	\$306.00	\$102.00
3.15	Flagmen (assume 2 men @ 8hrs/day, 60 days)	HR	960	\$12.00	\$11,520.00	75%	25%	\$8,640.00	\$2,880.00
	Signs (Phase V, VI& VIII)								
3.16	End Road Work (G20-2, 48"X24") =	SF	40	\$34.00	\$1,360.00	75%	25%	\$1,020.00	\$340.00
3.17	Road Work Ahead (W20-1, 48"X48")=	SF	32	\$34.00	\$1,088.00	75%	25%	\$816.00	\$272.00
3.18	Trucks Entering Hwy (48"x48") =	SF	64	\$34.00	\$2,176.00	75%	25%	\$1,632.00	\$544.00
3.19	Flagmen (assume 2 men @ 8hrs/day, 60 days)	HR	960	\$12.00	\$11,520.00	75%	25%	\$8,640.00	\$2,880.00
	Airline Hwy (US 61), both Phases of Construction								
3.20	Temporary crash cushion	EA	2	\$9,000.00	\$18,000.00	50%	50%	\$9,000.00	\$9,000.00
3.21	Temporary concrete median barrier	LF	1,637	\$81.00	\$132,597.00	25%	75%	\$33,149.25	\$99,447.75
3.22	Temporary Detour Roads	SY	19,600	\$122.00	\$2,391,200.00	25%	75%	\$597,800.00	\$1,793,400.00
3.23	End Road Work (G20-2, 48"X24")	SF	32	\$34.00	\$1,088.00	50%	50%	\$544.00	\$544.00
3.24	Road Work Ahead (W20-1, 48"X48")	SF	4	\$34.00	\$136.00	50%	50%	\$68.00	\$68.00
3.25	Speed Limit 55 MPH (W3-5, 48"X48")	SF	64	\$34.00	\$2,176.00	50%	50%	\$1,088.00	\$1,088.00
3.26	Speed Limit 55 MPH (R2-1, 36"X48")	SF	48	\$34.00	\$1,632.00	50%	50%	\$816.00	\$816.00
3.27	Lane shift ahead (W20-1, 48"x48")	SF	64	\$34.00	\$2,176.00	50%	50%	\$1,088.00	\$1,088.00
3.28	Lane shift arrow (W1-4bR, 48"x48")	SF	48	\$34.00	\$1,632.00	50%	50%	\$816.00	\$816.00
3.29	Type III Road Closed Barricade (R11-2, 48"X30")	EA	4	\$500.00	\$2,000.00	50%	50%	\$1,000.00	\$1,000.00
3.30	Lane shift Arrow Sign (W1-4bL, 48"X18")	SF	6	\$34.00	\$204.00	50%	50%	\$102.00	\$102.00
3.31	Temporary Pavement Markings (Broken Line 4")	MILE	5.21	\$360.00	\$1,875.60	25%	75%	\$468.90	\$1,406.70
3.32	Temporary Pavement Markings (Solid Line 4")	FT	52,430	\$0.34	\$17,826.34	25%	75%	\$4,456.58	\$13,369.75
3.33	Removal of Existing Markings	MILE	2.60	\$6,000.00	\$15,600.00	25%	75%	\$3,900.00	\$11,700.00
3.34	Flagmen (assume 4 men @ 8hrs/day, 90 days)	HR	2880	\$12.00	\$34,560.00	50%	50%	\$17,280.00	\$17,280.00
				Sub-total =	\$2,678,002.94				
4	Silt Fences	LF	72,839	\$3.50	\$254,937	68%	32%	\$174,544.13	\$80,392.38
4.01	Airline Hwy Silt Fence	LF	4,519	\$3.50	\$15,816.50	25%	75%	\$3,954.13	\$11,862.38
4.02	Silt Fence at other locations (2 sides of ROW)	LF	58,320	\$3.50	\$204,120.00	75%	25%	\$153,090.00	\$51,030.00
4.03	Miscellaneous location (add 10, 000 LF)	LF	10,000	\$3.50	\$35,000.00	50%	50%	\$17,500.00	\$17,500.00
		Sub-Total =	72,839						
5	Turbidity Curtain	LF	1,000	\$10.00	\$10,000	100%	0%	\$10,000.00	\$0.00
5.01	Assume qty. for Turbidity Curtain	LF	1,000	\$10.00	\$10,000.00	100%	0%	\$10,000.00	\$0.00
6	Truck Wash Down Racks	LS	8	\$127,831	\$1,022,652	50%	50%	\$511,326	\$511,326
6.01	3" Asphalt Pavement (Grade 1)	TONS	106.9	\$140.00	\$14,962.50				
6.02	Prime Coat (Type MC-30)	SY	633	\$0.30	\$190.00				
6.03	12" Crushed Stone Surfacing	SY	928	\$37.00	\$34,321.57				
6.04	Geotextile Fabric	SY	967	\$4.00	\$3,866.67				
6.05	Floor Grating (60'L x 20'W)	SF	1,200	\$1.00	\$1,200.00				
6.05	Maintenance (power washing equipment, water supplied by tankers, labor, etc)	LS	1	\$150,000.00	\$150,000.00				
				Sub-total =	\$127,831.47	50%	50%	\$63,915.74	\$63,915.74



RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
7	Demolition	LS	1	\$557,601	\$557,601	45%	55%	\$251,929.87	\$305,671.48
7.01	Remove Slope Paving at MS Levee (Phase I)	SY	3,375	\$35.00	\$118,125.00	100%	0%	\$118,125.00	\$0.00
7.02	Remove Slope Paving at MS Levee (Phase III)	SY	1,500	\$35.00	\$52,500.00	100%	0%	\$52,500.00	\$0.00
7.03	Remove existing Asphalt River Road (Phase III)	SY	576	\$7.00	\$4,032.00	100%	0%	\$4,032.00	\$0.00
7.04	Airline Highway Road Raise								
	Removal of asphalt drives	SY	162	\$7.00	\$1,137.36	20%	80%	\$227.47	\$909.88
	Removal of asphalt pavement	SY	25,104	\$7.00	\$175,729.84	20%	80%	\$35,145.97	\$140,583.87
	Removal of base (recycled PCC or stone)	SY	25,603	\$6.00	\$153,619.15	20%	80%	\$30,723.83	\$122,895.32
	Removal of signs and U-channel post	EA	2	\$89.00	\$178.00	20%	80%	\$35.60	\$142.40
	Saw Cutting Asphalt concrete pavement	FT	152	\$15.00	\$2,280.00	50%	50%	\$1,140.00	\$1,140.00
7.05	Miscellaneous Demolition	LS	1	\$50,000.00	\$50,000.00	20%	80%	\$10,000.00	\$40,000.00
				Sub-total =	\$557,601.35				
8	Concrete for Minor Structures	LS	1	\$177,100	\$177,100	100%	0%	\$177,100.00	\$0.00
8.01	Lateral Release Valves north end of Conveyance Channel	CY	500	\$350.00	\$175,000.00	100%	0%	\$175,000.00	\$0.00
8.02	Dewatering Needle Storage Platform @ Headworks	CY	6	\$350.00	\$2,100.00	100%	0%	\$2,100.00	\$0.00
9	Structural Concrete	CY	13,772	\$650.00	\$8,951,800	79%	21%	\$7,098,780.00	\$1,853,020.00
9.01	WSLP River Road Crossing	CY	158	\$650.00	\$102,700.00	0%	100%	\$0.00	\$102,700.00
9.02	WSLP I-wall River Rd to CN RR	CY	1,129	\$650.00	\$733,850.00	0%	100%	\$0.00	\$733,850.00
9.03	WSLP CN RR Crossing	CY	442	\$650.00	\$287,300.00	0%	100%	\$0.00	\$287,300.00
9.04	WSLP KCS RR Crossing	CY	200	\$650.00	\$130,000.00	0%	100%	\$0.00	\$130,000.00
9.05	Maurepas Headworks	CY	7,234	\$650.00	\$4,702,100.00	100%	0%	\$4,702,100.00	\$0.00
9.06	Maurepas Airline Crossing	CY	4,609	\$650.00	\$2,995,850.00	80%	20%	\$2,396,680.00	\$599,170.00
10	Stabilization Slab Concrete	CY	748	\$450.00	\$336,600	76%	24%	\$254,160.00	\$82,440.00
10.01	WSLP River Road Crossing	CY	15	\$450.00	\$6,750.00	0%	100%	\$0.00	\$6,750.00
10.02	WSLP I-wall River Rd to CN RR	CY	54	\$450.00	\$24,300.00	0%	100%	\$0.00	\$24,300.00
10.03	WSLP CN RR Crossing	CY	36	\$450.00	\$16,200.00	0%	100%	\$0.00	\$16,200.00
10.04	WSLP KCS RR Crossing	CY	15	\$450.00	\$6,750.00	0%	100%	\$0.00	\$6,750.00
10.05	Maurepas Headworks	CY	312	\$450.00	\$140,400.00	100%	0%	\$140,400.00	\$0.00
10.06	Maurepas Airline Crossing	CY	316	\$450.00	\$142,200.00	80%	20%	\$113,760.00	\$28,440.00
11	Structural Steel	LS	1	\$327,000	\$327,000	0%	100%	\$0.00	\$327,000.00
11.01	WSLP River Road Crossing (Gates)	TON	9	\$10,000.00	\$94,000.00	0%	100%	\$0.00	\$94,000.00
11.02	WSLP CN RR Crossing (Gates)	TON	19	\$10,000.00	\$194,000.00	0%	100%	\$0.00	\$194,000.00
11.03	WSLP KCS RR Crossing (Gates)	TON	4	\$10,000.00	\$39,000.00	0%	100%	\$0.00	\$39,000.00
				Sub-total =	\$327,000.00				



RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
12	Miscellaneous Metalwork	LS	1	\$60,560	\$60,560	66%	34%	\$40,130.00	\$20,430.00
12.01	Galv. Steel Grating at Headworks (8'-5"x11'-3")	SF	285	\$40.00	\$11,400.00	100%	0%	\$11,400.00	\$0.00
12.02	Miscellaneous steel at HW (assume 400 lb)	LS	1	\$20,000.00	\$20,000.00	100%	0%	\$20,000.00	\$0.00
12.03	WSLP H-pile tension connectors	EA	227	\$90.00	\$20,430.00	0%	100%	\$0.00	\$20,430.00
12.04	Maurepas Headworks H-pile tension connectors	EA	97	\$90.00	\$8,730.00	100%	0%	\$8,730.00	\$0.00
				Sub-total =	\$60,560.00				
13	Metal Railings	LS	1	\$27,000	\$27,000	100%	0%	\$27,000.00	\$0.00
13.01	Guardrail at HW equipment room	LF	60	\$450.00	\$27,000.00	100%	0%	\$27,000.00	\$0.00
14	Steel Doors and Frames	LS	1	\$8,000	\$8,000	100%	0%	\$8,000.00	\$0.00
14.01	HW Equipment Room Door: 3'-4"x7' hollow metal door w/steel frame	EA	1	\$4,000.00	\$4,000.00	100%	0%	\$4,000.00	\$0.00
14.02	Installation & Miscellaneous hardware	LS	1	\$4,000.00	\$4,000.00	100%	0%	\$4,000.00	\$0.00
				Sub-total =	\$8,000.00				
15	Paints and Coatings	SF	1,981	\$3.55	\$7,033	0%	100%	\$0.00	\$7,032.55
15.01	WSLP River Road Crossing	SF	614	\$3.55	\$2,179.70	0%	100%	\$0.00	\$2,179.70
15.02	WSLP CN RR Crossing	SF	1,046	\$3.55	\$3,713.30	0%	100%	\$0.00	\$3,713.30
15.03	WSLP KCS RR Crossing	SF	321	\$3.55	\$1,139.55	0%	100%	\$0.00	\$1,139.55
16	Painting: Coal Tar Epoxy System	SF	177,165	\$5.00	\$885,825	23%	77%	\$200,435.00	\$685,390.00
16.01	WSLP River Road Crossing	SF	9,814	\$5.00	\$49,070.00	0%	100%	\$0.00	\$49,070.00
16.02	WSLP I-wall River Rd to CN RR	SF	96,710	\$5.00	\$483,550.00	0%	100%	\$0.00	\$483,550.00
16.03	WSLP CN RR Crossing	SF	19,360	\$5.00	\$96,800.00	0%	100%	\$0.00	\$96,800.00
16.04	WSLP KCS RR Crossing	SF	11,194	\$5.00	\$55,970.00	0%	100%	\$0.00	\$55,970.00
16.05	Maurepas Headworks	SF	40,087	\$5.00	\$200,435.00	100%	0%	\$200,435.00	\$0.00
17	Project Signage at Road Crossings	EA	4	\$500.00	\$2,000	50%	50%	\$1,000.00	\$1,000.00
17.01	Assume 4 Project Signs, including installation costs	EA	4	\$500.00	\$2,000.00	50%	50%	\$1,000.00	\$1,000.00
18	Foundation Instrumentation	LS	1	\$158,100	\$158,100	100%	0%	\$158,100.00	\$0.00
	Instrumentation at Headworks								
18.01	Scour Indicators	EA	3	\$5,000.00	\$15,000.00	100%	0%	\$15,000.00	\$0.00
18.02	1" Scour indicator conduits	LF	360	\$10.00	\$3,600.00	100%	0%	\$3,600.00	\$0.00
18.03	Channel Master H-ADCP Acoustic Doppler Current Profiler	EA	2	\$50,000.00	\$100,000.00	100%	0%	\$100,000.00	\$0.00
18.04	Piezometers	EA	3	\$10,000.00	\$30,000.00	100%	0%	\$30,000.00	\$0.00
18.05	Wireless signal w/ solar panel	EA	1	\$5,000.00	\$5,000.00	100%	0%	\$5,000.00	\$0.00
18.06	3/4" stainless steel pipe (3 pipes/unit, 3 units)	EA	9	\$500.00	\$4,500.00	100%	0%	\$4,500.00	\$0.00



RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
				Sub-total =	<u>\$158,100.00</u>				
19	Electrical Work at Head Works	LS	1	\$108,313	\$108,313	100%	0%	\$108,313.00	\$0.00
19.01	PP1 Panelboard 480/277V 100A 24 circuit MLO (1 - 60A/3, 1- 30A/3, 1-20A/3, 4-20A/1)	EA	1	\$7,103.00	\$7,103.00	100%	0%	\$7,103.00	\$0.00
19.02	LP1 Panelboard 120/208V 100A 24 circuit 50A MB (17 - 20A/1, 1 - 20A/1 GFI)	EA	1	\$4,766.00	\$4,766.00	100%	0%	\$4,766.00	\$0.00
19.03	LIGHT FXTURE TYPE BA HOLOPHANE DESOTO M-60	EA	1	\$867.00	\$867.00	100%	0%	\$867.00	\$0.00
19.04	LIGHT FXTURE TYPE FA HOLOPHANE HES SERIES	EA	3	\$618.00	\$1,854.00	100%	0%	\$1,854.00	\$0.00
19.05	LIGHT FXTURE TYPE HA GE DECASHIELD SPMM17POA1AMC3DB	EA	3	\$415.00	\$1,245.00	100%	0%	\$1,245.00	\$0.00
19.06	LIGHT FXTURE TYPE HB HOLOPHANE WALLPACK IV W415AHP27SZ	EA	2	\$674.00	\$1,348.00	100%	0%	\$1,348.00	\$0.00
19.07	POLE TYPE PA FOR FIXTURE HA 12' TALL 4" SQUARE STEEL	EA	3	\$1,500.00	\$4,500.00	100%	0%	\$4,500.00	\$0.00
19.08	35KW 50KVA 480/277V GENERATOR	EA	1	\$33,565.00	\$33,565.00	100%	0%	\$33,565.00	\$0.00
19.09	100A 480V 3 PHASE AUTOMATIC TRANSFER SWITCH	EA	1	\$2,095.00	\$2,095.00	100%	0%	\$2,095.00	\$0.00
19.1	15KVA 480V - 120/208V TRANSFORMER	EA	1	\$4,618.00	\$4,618.00	100%	0%	\$4,618.00	\$0.00
19.11	GATE HYDRAULIC CONTROL PANEL (FURNISHED WITH PUMPS)	EA	1	\$5,000.00	\$5,000.00	100%	0%	\$5,000.00	\$0.00
19.12	GROUND RODS 10 FEET X 3/4" COPPER CLAD	EA	12	\$262.00	\$3,144.00	100%	0%	\$3,144.00	\$0.00
19.13	4/0 BARE CABLE COPPER	EA	160	\$150.00	\$24,000.00	100%	0%	\$24,000.00	\$0.00
19.14	EXOTHERMIC WELDS	EA	28	\$136.00	\$3,808.00	100%	0%	\$3,808.00	\$0.00
19.15	PHOTOCELL AND LIGHTING CONTACTOR	EA	1	\$400.00	\$400.00	100%	0%	\$400.00	\$0.00
19.16	MISCELLANEOUS ELECTRICAL WORK (CONDIUT, WIRE, WIRING DEVICES, CONDUIT FITTINGS, ETC.)	LS	1	\$10,000.00	\$10,000.00	100%	0%	\$10,000.00	\$0.00
				Sub-Total =	<u>\$108,313.00</u>				
20	Separator Geotextile	SY	70,166	\$4.00	\$280,665	18%	82%	\$51,216.84	\$229,448.00
20.01	Geotextile fabric (under Riprap for Intake Channel)	SY	7,342.00	\$4.00	\$29,368.00	100%	0%	\$29,368.00	\$0.00
20.02	Geotextile fabric (discharge box for lateral release valves)	SY	77.38	\$4.00	\$309.51	100%	0%	\$309.51	\$0.00
20.03	Geotextile fabric (weirs)	SY	300.83	\$4.00	\$1,203.33	100%	0%	\$1,203.33	\$0.00
20.04	Geotextile fabric Airline Hwy Embankment - Class D	SY	25,420.00	\$4.00	\$101,680.00	20%	80%	\$20,336.00	\$81,344.00
20.05	Geotextile fabric WSLP Typical Levee Section (1/6 th of clear & grub WSLP alignment)	SY	37,026.00	\$4.00	\$148,104.00	0%	100%	\$0.00	\$148,104.00
21	Geogrid Soil Reinforcement	SY	77,316	\$1.70	\$131,437	100%	0%	\$131,064.79	\$372.19
21.01	Geogrid at Access Road (West side -Sta. 16+49 to Sta. 18+12.26) and (East side - Sta. 15+99 to Sta. 18+12.26)	SY	437.87	\$1.70	\$744.37	50%	50%	\$372.19	\$372.19
21.02	Convey Channel: Sedimentation Basin to CN RR	SY	4,200	\$1.70	\$7,140.00	100%	0%	\$7,140.00	\$0.00
21.03	Convey Channel: CN RR to KCS RR	SY	18,100	\$1.70	\$30,770.00	100%	0%	\$30,770.00	\$0.00
21.04	Convey Channel: KCS RR to Airline Hwy	SY	5,578	\$1.70	\$9,482.60	100%	0%	\$9,482.60	\$0.00
21.05	Convey Channel: Airline to WSLP Pump Station	SY	7,600	\$1.70	\$12,920.00	100%	0%	\$12,920.00	\$0.00
21.06	Convey Channel: Pump Station to End of Maurepas Project	SY	41,400	\$1.70	\$70,380.00	100%	0%	\$70,380.00	\$0.00
22	Clearing and Grubbing	LS	1	\$7,754,250	\$7,754,250	73%	27%	\$5,687,475.00	\$2,066,775.00
22.01	Clearing and Grubbing, Maurepas Diversion (300' ROW, Sta. 10+00 to Sta. 302+19)								
	Intake to River Road Crossing (4 acres wooded, 3.5 acres clear)	ACRE	7.50	\$10,000.00	\$75,000.00	100%	0%	\$75,000.00	\$0.00



RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
	River Road Crossing to CN RR Crossing (10.6 acres wooded)	ACRE	10.60	\$10,000.00	\$106,000.00	100%	0%	\$106,000.00	\$0.00
	CN RR Crossing to KCS RR Crossing (17.7 acres wooded, 19 acres clear)	ACRE	36.70	\$10,000.00	\$367,000.00	100%	0%	\$367,000.00	\$0.00
	KCS RR Crossing to Airline Hwy Crossing (7.5 acres wooded, 2.5 acres clear)	ACRE	10.00	\$10,000.00	\$100,000.00	100%	0%	\$100,000.00	\$0.00
	Airline Hwy Crossing to WSLP-114 Pump Station (11.8 acres wooded)	ACRE	11.80	\$10,000.00	\$118,000.00	100%	0%	\$118,000.00	\$0.00
	WSLP-114 Pump Station to end of Convey. Channel (117 acres wooded)	ACRE	117.00	\$10,000.00	\$1,170,000.00	100%	0%	\$1,170,000.00	\$0.00
22.02	Clearing and Grubbing, WSLP Alignment additional								
	River Road Crossing to CN RR Crossing (4 acres wooded)	ACRE	4.00	\$10,000.00	\$40,000.00	0%	100%	\$0.00	\$40,000.00
	CN RR Crossing to KCS RR Crossing (22 acres wooded, 3.5 acres clear)	ACRE	25.50	\$10,000.00	\$255,000.00	0%	100%	\$0.00	\$255,000.00
	KCS RR Crossing to Airline Hwy Crossing (5.2 acres wooded, 1.7 acres clear)	ACRE	6.90	\$10,000.00	\$69,000.00	0%	100%	\$0.00	\$69,000.00
	Airline Hwy Crossing to WSLP-114 Pump Station (9.5 acres wooded)	ACRE	9.50	\$10,000.00	\$95,000.00	0%	100%	\$0.00	\$95,000.00
22.04	Tree Stump Removal and Backfill voids w/ excavated material (assume 10% of the area)	ACRE	23.95	\$15,000.00	\$359,250.00	70%	30%	\$251,475.00	\$107,775.00
22.05	Disposal of trees, stumps and debris offsite, access allowance	LS	1.00	\$5,000,000.00	\$5,000,000.00	70%	30%	\$3,500,000.00	\$1,500,000.00
				Sub-Total =	\$7,754,250.00				
23	Excavation	CY	1,284,577	\$14.00	\$17,984,083	94%	6%	\$16,874,477.76	\$1,109,605.00
23.01	Intake Phase 1	CY	29,680	\$14.00	\$415,520.00	100%	0%	\$415,520.00	\$0.00
23.02	Intake Phase 2	CY	63,800	\$14.00	\$893,200.00	100%	0%	\$893,200.00	\$0.00
23.03	Excavation U1 & U2	CY	9,300	\$14.00	\$130,200.00	100%	0%	\$130,200.00	\$0.00
23.04	Degrade Cofferdam to EL 22	CY	20,000	\$14.00	\$280,000.00	100%	0%	\$280,000.00	\$0.00
23.05	Intake Excavation from River	CY	34,700	\$14.00	\$485,800.00	100%	0%	\$485,800.00	\$0.00
23.06	Sedimentation Basin	CY	42,670	\$14.00	\$597,380.00	100%	0%	\$597,380.00	\$0.00
23.07	Convey Channel: Sedimentation Basin to CN RR	CY	30,500	\$14.00	\$427,000.00	100%	0%	\$427,000.00	\$0.00
23.08	Convey Channel: CN RR to KCS RR (Marathon fill not included see item i)	CY	282,100	\$14.00	\$3,949,400.00	100%	0%	\$3,949,400.00	\$0.00
23.09	Convey Channel: Marathon Fill (Excavate dumped organic material to original 2013 grade)	CY	40,000	\$14.00	\$560,000.00	100%	0%	\$560,000.00	\$0.00
23.1	Convey Channel: KCS RR to Airline Hwy	CY	50,100	\$14.00	\$701,400.00	100%	0%	\$701,400.00	\$0.00
23.11	Convey Channel: Airline to WSLP Pump Station	CY	66,100	\$14.00	\$925,400.00	100%	0%	\$925,400.00	\$0.00
23.12	Convey Channel: Pump Station to End of Maurepas Project	CY	500,000	\$14.00	\$7,000,000.00	100%	0%	\$7,000,000.00	\$0.00
23.13	Airline Highway Embankment Crossing	CY	3,550	\$14.00	\$49,700.00	75%	25%	\$37,275.00	\$12,425.00
23.14	Embankment cuts	CY	4,777	\$14.00	\$66,882.76	100%	0%	\$66,882.76	\$0.00
23.15	East Drainage Ditch	CY	35,500	\$14.00	\$497,000.00	50%	50%	\$248,500.00	\$248,500.00
23.16	West Drainage Ditch	CY	61,800	\$14.00	\$865,200.00	10%	90%	\$86,520.00	\$778,680.00
23.17	Miscellaneous	CY	10,000	\$14.00	\$140,000.00	50%	50%	\$70,000.00	\$70,000.00
24	Dewatering	LS	1	\$4,100,000	\$4,100,000	100%	0%	\$4,100,000.00	\$0.00
24.01	Install and remove 10" dia. well, 15 HP 300 gpm pumps, discharge pipe, vacuum pump & header syst.	EA	20	\$120,000.00	\$2,400,000.00	100%	0%	\$2,400,000.00	\$0.00
24.02	Install & abandon small dia (4") pumped wells, drive pumps & jet educators w/ vacuum pump syst.	EA	20	\$50,000.00	\$1,000,000.00	100%	0%	\$1,000,000.00	\$0.00
24.03	Construction Instrumentation (piezometers, transducers, and flow meters)	LS	1	\$150,000.00	\$150,000.00	100%	0%	\$150,000.00	\$0.00
24.04	Install and remove temporary 3-Phase 480V electric service, electrical distribution and automatically switched standby power generation	LS	1	\$250,000.00	\$250,000.00	100%	0%	\$250,000.00	\$0.00



RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
24.05	Operations of dewatering and surface water control system (assume 2 skilled workers 24/7 @ \$100/mhr + \$2500/day for other expenses, 10% markup)	LS	1	\$300,000.00	\$300,000.00	100%	0%	\$300,000.00	\$0.00
				Sub-Total =	\$4,100,000.00				
25	Embankment, Compacted Fill	CY	756,060	\$30.00	\$22,681,800	57%	43%	\$12,850,800.00	\$9,831,000.00
25.01	Cofferdam Pond Fill	CY	2,920	\$30.00	\$87,600.00	100%	0%	\$87,600.00	\$0.00
25.02	Remaining Pond Fill	CY	10,540	\$30.00	\$316,200.00	100%	0%	\$316,200.00	\$0.00
25.03	Mainline Levee Reconstruction	CY	102,000	\$30.00	\$3,060,000.00	100%	0%	\$3,060,000.00	\$0.00
25.04	Cofferdam	CY	30,000	\$30.00	\$900,000.00	100%	0%	\$900,000.00	\$0.00
25.05	Sedimentation Basin	CY	13,300	\$30.00	\$399,000.00	100%	0%	\$399,000.00	\$0.00
25.06	River Road Emergency Bypass	CY	1,200	\$30.00	\$36,000.00	0%	100%	\$0.00	\$36,000.00
25.07	Sedimentation Basin to CN RR								
	Maurepas	CY	14,100	\$30.00	\$423,000.00	100%	0%	\$423,000.00	\$0.00
	WSLP	CY	8,500	\$30.00	\$255,000.00	0%	100%	\$0.00	\$255,000.00
25.08	CN RR to KCS RR								
	Maurepas	CY	45,500	\$30.00	\$1,365,000.00	100%	0%	\$1,365,000.00	\$0.00
	WSLP	CY	132,000	\$30.00	\$3,960,000.00	0%	100%	\$0.00	\$3,960,000.00
25.09	KCS RR to Airline Hwy								
	Maurepas	CY	14,000	\$30.00	\$420,000.00	100%	0%	\$420,000.00	\$0.00
	WSLP	CY	40,000	\$30.00	\$1,200,000.00	0%	100%	\$0.00	\$1,200,000.00
25.10	Airline to WSLP Pump Station								
	Maurepas	CY	16,000	\$30.00	\$480,000.00	100%	0%	\$480,000.00	\$0.00
	WSLP	CY	51,000	\$30.00	\$1,530,000.00	0%	100%	\$0.00	\$1,530,000.00
25.11	Pump Station to End of Maurepas Project	CY	165,000	\$30.00	\$4,950,000.00	100%	0%	\$4,950,000.00	\$0.00
25.12	Airline Highway Embankment Crossing	CY	100,000	\$30.00	\$3,000,000.00	10%	90%	\$300,000.00	\$2,700,000.00
25.13	Miscellaneous Fill	CY	10,000	\$30.00	\$300,000.00	50%	50%	\$150,000.00	\$150,000.00
26	Fiber Mulch	CY	11	\$194.00	\$2,173	10%	90%	\$217.28	\$1,955.52
26.1	Airline Highway Road Raise	CY	11.2	\$194.00	\$2,172.80	10%	90%	\$217.28	\$1,955.52
27	Riprap (Class 30 lb)	CY	2,051	\$110.00	\$225,647	100%	0%	\$225,646.67	\$0.00
26.01	Riprap at CN RR Crossing, either side of box culvert	CY	333	\$110.00	\$36,666.67	100%	0%	\$36,666.67	\$0.00
26.02	Riprap at KCS RR Crossing, Channel STA. 96+97 to 97+97	CY	829	\$110.00	\$91,226.67	100%	0%	\$91,226.67	\$0.00
26.03	Riprap at Airline Highway Crossing	CY	889	\$110.00	\$97,753.33	100%	0%	\$97,753.33	\$0.00
28	Riprap (Class 55 lb)	CY	4,148	\$150.00	\$622,200	100%	0%	\$622,200.00	\$0.00
28.01	Riprap at sedimentation basin	CY	4,148	\$150.00	\$622,200.00	100%	0%	\$622,200.00	\$0.00
29	Riprap (Class 130 lb)	CY	247	\$168.00	\$41,469	100%	0%	\$41,469.12	\$0.00
29.01	Riprap for Weirs at Bayou Secret and Bourgeois Canal	CY	247	\$168.00	\$41,469.12	100%	0%	\$41,469.12	\$0.00



RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT

15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
30	Riprap (Class 250 lb)	CY	8,333	\$200.00	\$1,666,667	100%	0%	\$1,666,666.67	\$0.00
30.01	Riprap at Intake Structure	CY	8,333	\$200.00	\$1,666,666.67	100%	0%	\$1,666,666.67	\$0.00
31	Grouted Riprap	SY	336	\$207.00	\$69,552	100%	0%	\$69,552.00	\$0.00
31.01	Grouted Riprap for Sedimentation Basin	SY	336	\$207.00	\$69,552.00	100%	0%	\$69,552.00	\$0.00
32	Steel Sheet Piling, Type PZ-22	SF	109,900	\$45.00	\$4,945,500	9%	91%	\$442,890.00	\$4,502,610.00
32.01	Sheet pile PZ-22 at HW	SF	9,842	\$45.00	\$442,890.00	100%	0%	\$442,890.00	\$0.00
32.02	WSLP River Rd Crossing	SF	4,752	\$45.00	\$213,817.50	0%	100%	\$0.00	\$213,817.50
32.03	WSLP CN RR Crossing	SF	9,195	\$45.00	\$413,752.50	0%	100%	\$0.00	\$413,752.50
32.04	WSLP KCS RR Crossing	SF	6,030	\$45.00	\$271,350.00	0%	100%	\$0.00	\$271,350.00
32.05	WSLP I-wall bw River Rd and CN RR	SF	72,317	\$45.00	\$3,254,265.00	0%	100%	\$0.00	\$3,254,265.00
32.06	Airline Highway Seepage Cutoff (w/in road embankment, TOW EL 9.5, Tip EL -20, 190' length)	SF	5,605	\$45.00	\$252,225.00	0%	100%	\$0.00	\$252,225.00
32.07	Airline Highway Levee Tie-ins (TOW EL 16, Tip EL -20, 30' length, 2 tie-ins)	SF	2,160	\$45.00	\$97,200.00	0%	100%	\$0.00	\$97,200.00
33	Prestressed Concrete Piles, Type 24"x24"	LF	40,425	\$160.00	\$6,468,000	90%	10%	\$5,821,200.00	\$646,800.00
33.01	Maurepas Airline Crossing	LF	40,425.00	\$160.00	\$6,468,000.00	90%	10%	\$5,821,200.00	\$646,800.00
34	Pile Load Tests	LS	1	\$265,654	\$265,654	56%	44%	\$148,192.00	\$117,462.00
	Assume 5 Compression Pile Load Tests								
34.01	2 at HW/River Road	EA	2	\$61,460.00	\$122,920.00	50%	50%	\$61,460.00	\$61,460.00
34.02	1 at CN Crossing	EA	1	\$30,730.00	\$30,730.00	50%	50%	\$15,365.00	\$15,365.00
34.03	1 at KCS Crossing	EA	1	\$30,730.00	\$30,730.00	50%	50%	\$15,365.00	\$15,365.00
34.04	1 at Airline Crossing	EA	1	\$30,730.00	\$30,730.00	100%	0%	\$30,730.00	\$0.00
	Assume 2 PDA (Pile Driving Analyzer) Tests								
34.05	1 at HW/River Road	EA	1	\$25,272.00	\$25,272.00	50%	50%	\$12,636.00	\$12,636.00
34.06	1 at CN Crossing	EA	1	\$25,272.00	\$25,272.00	50%	50%	\$12,636.00	\$12,636.00
35	Steel H-Piles, HP 14 x 73	LF	6,288	\$89.00	\$559,632	0%	100%	\$0.00	\$559,632.00
35.01	WSLP River Rd Crossing	LF	1,144	\$89.00	\$101,816.00	0%	100%	\$0.00	\$101,816.00
35.02	WSLP CN RR Crossing	LF	3,594	\$89.00	\$319,866.00	0%	100%	\$0.00	\$319,866.00
35.03	WSLP KCS RR Crossing	LF	1,550	\$89.00	\$137,950.00	0%	100%	\$0.00	\$137,950.00
36	Steel H-Piles, HP 14 x 89	LF	28,460	\$102.00	\$2,902,920	100%	0%	\$2,902,920.00	\$0.00
36.01	Maurepas Headworks	LF	28,460	\$102.00	\$2,902,920.00	100%	0%	\$2,902,920.00	\$0.00
37	Steel H-Piles, HP 16 x 101	LF	6,371	\$130.00	\$828,230	100%	0%	\$828,230.00	\$0.00
37.01	Maurepas Headworks	LF	6,371	\$130.00	\$828,230.00	100%	0%	\$828,230.00	\$0.00
38	Timber Piles, 12" Diameter	LF	1710	\$48.00	\$82,080	50%	50%	\$41,040.00	\$41,040.00



RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
38.01	Timber Piles, 12" Diameter at Boat Launch	LF	1440	\$48.00	\$82,080.00	50%	50%	\$41,040.00	\$41,040.00
38.02	Timber piles, HW dewatering needle storage rack	LF	270	\$48.00	\$82,080.00	100%	0%	\$82,080.00	\$0.00
39	Asphaltic Pavement	LS	1	\$2,434,996	\$2,434,996	28%	72%	\$670,477.00	\$1,764,519.00
	River Road Bypass (Hwy 44)								
39.01	2" superpave Asphaltic Concrete Wearing Course	SY	456	\$28.00	\$12,768.00	75%	25%	\$9,576.00	\$3,192.00
39.02	12" Superpave Asphaltic Concrete Base Course (Level 2)	SY	2,736	\$95.00	\$259,920.00	75%	25%	\$194,940.00	\$64,980.00
39.03	Mill and Overlay River Road, Hwy 44 (Phase IV)	SY	500	\$7.00	\$3,500.00	75%	25%	\$2,625.00	\$875.00
39.04	2" Cold Planing & Superpave Asphaltic Concrete Wearing Course (Level 2F)	TONS	225	\$0.00	\$0.00	75%	25%	\$0.00	\$0.00
39.05	2" superpave Asphaltic Concrete Leveling Course (Level 2)	TONS	225	\$0.00	\$0.00	75%	25%	\$0.00	\$0.00
	Reconstruct River Road (Hwy 44)								
39.06	2" Superpave Asphaltic Concrete Wearing Course (Level 2F)	SY	96	\$28.00	\$2,688.00	75%	25%	\$2,016.00	\$672.00
39.07	12" Superpave Asphaltic Concrete Base Course (Level 2)	SY	576	\$95.00	\$54,720.00	75%	25%	\$41,040.00	\$13,680.00
	Airline Highway Road Raise								
39.08	Class II Base Course (8" Thick) (Crushed stone or recycled PCC)	SY	316	\$65.00	\$20,540.00	20%	80%	\$4,108.00	\$16,432.00
39.09	Class II Base Course (12" Thick) (Crushed stone or recycled PCC)	SY	20,196	\$40.00	\$807,840.00	20%	80%	\$161,568.00	\$646,272.00
39.10	Asphalt Concrete	TONS	12,054	\$105.00	\$1,265,670.00	20%	80%	\$253,134.00	\$1,012,536.00
39.11	Asphalt Concrete for Drives, turnouts, misc	TONS	35	\$210.00	\$7,350.00	20%	80%	\$1,470.00	\$5,880.00
				Sub-total =	\$2,434,996.00				
40	Nonplastic Embankment Sand	CY	1,785	\$62.25	\$111,116	20%	80%	\$22,223.25	\$88,893.00
40.01	Airline Highway Road Raise (Sand, 12" Min thick)	CY	1,785	\$62.25	\$111,116.25	20%	80%	\$22,223.25	\$88,893.00
41	Crushed Stone Surfacing	TONS	26,927	\$37.00	\$996,313	100%	0%	\$996,312.77	\$0.00
41.01	Permanent Access Ramp (HW, Phase I, East side)	SY	738	\$37.00	\$27,319.28	100%	0%	\$27,319.28	\$0.00
41.02	Access Road west side (SedBasin, Sta. 16+49 to Sta. 18+12.26), add 3 CY for turns	SY	100	\$37.00	\$3,710.52	100%	0%	\$3,710.52	\$0.00
41.03	Access Road east side (SedBasin, Sta. 15+99.44 to Sta. 18+12.26), add 3 CY for turns	SY	129	\$37.00	\$4,785.85	100%	0%	\$4,785.85	\$0.00
41.04	Levee crown at sedimentation basin (18+12.26 to sta. 26+79.05	SY	1,111	\$37.00	\$41,099.24	100%	0%	\$41,099.24	\$0.00
41.05	Convey Channel: Sedimentation Basin to CN RR	SY	1,061	\$37.00	\$39,242.59	100%	0%	\$39,242.59	\$0.00
41.06	Convey Channel: CN RR to KCS RR	SY	4,621	\$37.00	\$170,985.58	100%	0%	\$170,985.58	\$0.00
41.07	Convey Channel: KCS RR to Airline Hwy	SY	1,439	\$37.00	\$53,257.80	100%	0%	\$53,257.80	\$0.00
41.08	Convey Channel: Airline to WSLP Pump Station	SY	1,970	\$37.00	\$72,879.10	100%	0%	\$72,879.10	\$0.00
41.09	Convey Channel: Pump Station to End of Maurepas Project	SY	15,758	\$37.00	\$583,032.80	100%	0%	\$583,032.80	\$0.00
42	Temporary Access Roads (6" Crushed Stone with Geogrid)	SY	154,099	\$37.00	\$5,701,658	83%	17%	\$4,723,008.00	\$978,650.00
42.01	Temporary Access Ramp at Headworks (Phase I & II)	SY	517	\$37.00	\$19,137.22	100%	0%	\$19,137.22	\$0.00
42.02	Surfacing for Cofferdam Crown (HW)	SY	384	\$37.00	\$14,222.73	100%	0%	\$14,222.73	\$0.00
42.03	Temporary Access ramp west side (Phase V, HW)	SY	144	\$37.00	\$5,332.39	100%	0%	\$5,332.39	\$0.00
42.04	Temporary Access ramp east side (Phase V, HW)	SY	153	\$37.00	\$5,665.66	100%	0%	\$5,665.66	\$0.00
42.05	Temporary Access Road CN to KCS	SY	33,000	\$37.00	\$1,221,000.00	50%	50%	\$610,500.00	\$610,500.00
42.06	Temporary Access Road KCS to Airline	SY	8,600	\$37.00	\$318,200.00	50%	50%	\$159,100.00	\$159,100.00



RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
42.07	Temporary Access Road Airline to Pump Station	SY	11,300	\$37.00	\$418,100.00	50%	50%	\$209,050.00	\$209,050.00
42.08	Temporary Access Pump Station to End of Project	SY	100,000	\$37.00	\$3,700,000.00	100%	0%	\$3,700,000.00	\$0.00
43	Pavement Markings	LS	1	\$39,918.45	\$39,918	44%	56%	\$17,515.41	\$22,403.04
	River Road Bypass (Hwy 44)								
43.01	Pavement Striping (2 sides)	LF	2,052	\$2.60	\$5,335.20	75%	25%	\$4,001.40	\$1,333.80
43.02	Pavement Striping and Reflectorized Markers	LF	1,026	\$3.50	\$3,591.00	75%	25%	\$2,693.25	\$897.75
	River Road Bypass (Hwy 44) - Phase IV								
43.03	Pavement Striping, 2 sides (Phase IV)	LF	1,500	\$2.60	\$3,900.00	75%	25%	\$2,925.00	\$975.00
43.04	Pavement Striping and Reflectorized Markers (Phase IV)	LF	750	\$3.50	\$2,625.00	75%	25%	\$1,968.75	\$656.25
	Reconstruct River Road (Hwy 44)				\$0.00				
43.05	Pavement Striping (2 sides)	LF	432	\$2.60	\$1,123.20	75%	25%	\$842.40	\$280.80
43.06	Pavement Striping and Reflectorized Markers	LF	216	\$3.50	\$756.00	75%	25%	\$567.00	\$189.00
	Airline Hwy (US 61) Permanent markings								
43.07	Plastic pavement striping (8" width, thermoplastic 125 mil)	LF	175	\$2.60	\$455.00	20%	80%	\$91.00	\$364.00
43.08	Plastic pavement striping (Dotted line) (8" width, 2'L, thermoplastic 125 mil)	LF	241	\$2.60	\$626.60	20%	80%	\$125.32	\$501.28
43.09	Plastic pavement striping (4" width, thermoplastic 90 mil)	MILE	1.7	\$5,798.00	\$9,914.58	20%	80%	\$1,982.92	\$7,931.66
43.10	Plastic pavement striping (Broken line) (4" width, thermoplastic 90 mil)	MILE	0.9	\$5,798.00	\$4,986.28	20%	80%	\$997.26	\$3,989.02
43.11	Plastic pavement legends and symbols (arrow - right turn)	EA	2	\$167.50	\$335.00	20%	80%	\$67.00	\$268.00
43.12	Reflectorized Raised Pavement Markers	EA	123	\$10.33	\$1,270.59	20%	80%	\$254.12	\$1,016.47
43.13	Miscellaneous pavement markings	LS	1	\$5,000.00	\$5,000.00	20%	80%	\$1,000.00	\$4,000.00
				Sub-total =	\$39,918.45				
44	Miscellaneous Roadwork Items	LS	1	\$16,670	\$16,670	20%	80%	\$3,334.04	\$13,336.16
	Airline Highway Road Raise								
44.01	U-Channel Post	EA	6	\$112.20	\$673.20	20%	80%	\$134.64	\$538.56
44.02	Hydro-Seeding	ACRE	5.5	\$2,400.00	\$13,200.00	20%	80%	\$2,640.00	\$10,560.00
44.03	SIGN (TYPE A)	SF	25	\$21.80	\$545.00	20%	80%	\$109.00	\$436.00
44.04	SIGN (TYPE B)	SF	32	\$23.50	\$752.00	20%	80%	\$150.40	\$601.60
44.05	Construction Layout	LS	1	\$1,500.00	\$1,500.00	20%	80%	\$300.00	\$1,200.00
				Sub-total =	\$16,670.20				
45	Precast Concrete Platform	LS	1	\$68,610	\$68,610	100%	0%	\$68,609.64	\$0.00
45.01	Precast Concrete Platform at Headworks	SF	360	190.63	\$68,609.64	100%	0%	\$68,609.64	\$0.00
46	Chain Link Fence and Gate	LF	1,016	\$62.46	\$63,464	100%	0%	\$63,463.60	\$0.00
	Chainlink fence and gate at Headworks Site								
46.01	7' High chainlink fence	LF	128	\$60.00	\$7,680.00	100%	0%	\$7,680.00	\$0.00
46.02	Double swing gate (18')	EA	1	\$2,500.00	\$2,500.00	100%	0%	\$2,500.00	\$0.00
46.03	Fencing (visual buffer at residential areas close to HW) Sta. 26+78.99 to Sta. 35+67.05	LF	888	\$60.00	\$53,283.60	100%	0%	\$53,283.60	\$0.00
				Unit price =	\$62.46				



RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
47	Turf Establishment and Maintenance	AC	157	\$5,000.00	\$787,350	74%	26%	\$580,800.00	\$206,550.00
47.01	Turf Establishment, Maurepas Diversion (assumes 60% of the Maurepas clear & grub acreage)	ACRE	116.2	\$5,000.00	\$580,800.00	100%	0%	\$580,800.00	\$0.00
47.02	Turf Establishment, WSLP (assumes 90% of the WSLP clear & grub acreage)	ACRE	41.3	\$5,000.00	\$206,550.00	0%	100%	\$0.00	\$206,550.00
48	Modifications to Existing Utilities	LS	1	\$13,046,200	\$13,046,200	50%	50%	\$6,523,100	\$6,523,100
48.01	EnLink Midstream (Ascension Pipeline)								
	1 ea, 12" Natural Gas (4' deep)	LF	600	\$450.00	\$270,000.00	50%	50%	\$135,000.00	\$135,000.00
48.02	Air Liquide								
	1ea, 12" CS Pipe- Oxygen (36" Dp) between I-10 and Airline Hwy US-61	LF	400	\$450.00	\$180,000.00	50%	50%	\$90,000.00	\$90,000.00
	1ea, 12" CS Pipe- Nitrogen (48-72" Dp) between I-10 and Airline Hwy US-61	LF	400	\$450.00	\$180,000.00	50%	50%	\$90,000.00	\$90,000.00
48.02	Air Products								
	1 ea, 12" CS Pipe - Hydrogen (36" Dp)	LF	400	\$450.00	\$180,000.00	50%	50%	\$90,000.00	\$90,000.00
48.03	Gulf South								
	1ea, 24" Natural Gas (high pressure) (5' deep)	LF	600	\$1,090.50	\$654,300.00	50%	50%	\$327,150.00	\$327,150.00
48.04	Marathon								
	1ea, 20" pipe	LF	600	\$939.00	\$563,400.00	50%	50%	\$281,700.00	\$281,700.00
	1ea, 30" pipe	LF	600	\$1,237.50	\$742,500.00	50%	50%	\$371,250.00	\$371,250.00
48.05	Shell (Bengal & Colonial)								
	1ea, 24" pipe	LF	600	\$1,090.50	\$654,300.00	50%	50%	\$327,150.00	\$327,150.00
	1ea, 24" pipe	LF	600	\$1,090.50	\$654,300.00	50%	50%	\$327,150.00	\$327,150.00
	1ea, 12" pipe	LF	600	\$450.00	\$270,000.00	50%	50%	\$135,000.00	\$135,000.00
48.06	Enterprise (Acadian)								
	1 ea, 4" Natural Gas	LF	400	\$78.00	\$31,200.00	50%	50%	\$15,600.00	\$15,600.00
	1 ea, 6" pipe	LF	400	\$126.00					
	1ea, 12" pipe	LF	600	\$450.00	\$270,000.00	50%	50%	\$135,000.00	\$135,000.00
48.06	Chevron/Texaco								
	1ea, 20" natural gas	LF	400	\$939.00	\$375,600.00	50%	50%	\$187,800.00	\$187,800.00
	2ea, 6" HVL Propane, propylene, butane	LF	800	\$126.00	\$100,800.00	50%	50%	\$50,400.00	\$50,400.00
	1ea, 8" pipe	LF	600	\$183.00	\$109,800.00	50%	50%	\$54,900.00	\$54,900.00
48.07	Reserve Communication								
	2ea, above ground lines on Entergy poles	LS	1	\$100,000.00	\$100,000.00	50%	50%	\$50,000.00	\$50,000.00
48.08	Comcast								
	Size unknown	LS	1	\$100,000.00	\$100,000.00	50%	50%	\$50,000.00	\$50,000.00
48.09	St. John Parish								
	1 ea, water line (size unknown)	LF	400	\$700.00	\$280,000.00	50%	50%	\$140,000.00	\$140,000.00
	1 ea, sewer line (size unknown)	LF	400	\$700.00	\$280,000.00	50%	50%	\$140,000.00	\$140,000.00
48.10	Entergy Transmission								
	Install two high mast poles and reinstall wires	LS	1	\$650,000.00	\$650,000.00	50%	50%	\$325,000.00	\$325,000.00
48.11	Entergy Distribution								
	3 ea lines, 6 ea. Poles	LS	1	\$200,000.00	\$200,000.00	50%	50%	\$100,000.00	\$100,000.00
48.11	Atmos Energy								



RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
	Pipe size unknown	LS	1	\$100,000.00	\$100,000.00	50%	50%	\$50,000.00	\$50,000.00
48.12	AT&T Fiberoptic								
	1 line underground, size unknown	LS	1	\$100,000.00	\$100,000.00	50%	50%	\$50,000.00	\$50,000.00
48.13	Level 3 (Wittel) Fiberoptic								
	1 line underground, size unknown	LS	1	\$100,000.00	\$100,000.00	50%	50%	\$50,000.00	\$50,000.00
48.14	MCI Fiberoptic								
	1 line underground, size unknown	LS	1	\$100,000.00	\$100,000.00	50%	50%	\$50,000.00	\$50,000.00
48.15	Utility Outage Costs (assume \$200k ea major utility (20) and \$50k ea minor utility(10))	LS	1	\$4,800,000.00	\$4,800,000.00	50%	50%	\$2,400,000.00	\$2,400,000.00
48.16	Unknown Utilities (orig. utilities locations were tabulated in 2011 - assume 4 add'l)	EA	4	\$250,000.00	\$1,000,000.00	50%	50%	\$500,000.00	\$500,000.00
				Sub-total =	\$13,046,200.00				
49	Storm Drain Pipes	LF	428	\$101.41	\$43,404	100%	0%	\$43,404.00	\$0.00
49.01	24" Storm RCP Drain Pipes (HW, Phase I), Temporary	LF	124	\$93.00	\$11,532.00	100%	0%	\$11,532.00	\$0.00
49.02	24" Storm RCP Drain Pipes (HW, Phase I), at permanent access ramps	LF	256	\$93.00	\$23,808.00	100%	0%	\$23,808.00	\$0.00
49.03	36" Storm RCP Drain Pipes (HW, Phase III), Temporary	LF	48	\$168.00	\$8,064.00	100%	0%	\$8,064.00	\$0.00
		Sub-total =	428.00	Unit price =	\$101.41				
50	Precast Concrete Box Culverts for New Drainage Ditches	LS	1	\$1,566,438	\$1,566,438	36%	64%	\$560,141.40	\$1,006,296.60
	West Drainage Ditch								
50.01	CN RR Crossing, 5'w x 5'h precast box	LF	117	\$957.00	\$111,969.00	10%	90%	\$11,196.90	\$100,772.10
50.02	KCS RR Crossing, 10'w x 5'h precast box	LF	96	\$1,575.00	\$151,200.00	10%	90%	\$15,120.00	\$136,080.00
50.03	Airline Highway Crossing, 10'w x 5'h precast box	LF	187	\$1,575.00	\$294,525.00	10%	90%	\$29,452.50	\$265,072.50
	East Drainage Ditch								
50.04	CN RR Crossing, 5'w x 5'h precast box	LF	167	\$957.00	\$159,819.00	50%	50%	\$79,909.50	\$79,909.50
50.05	KCS RR Crossing, 10'w x 5'h precast box	LF	95	\$1,575.00	\$149,625.00	50%	50%	\$74,812.50	\$74,812.50
50.06	Airline Highway Crossing, 10'w x 5'h precast box	LF	444	\$1,575.00	\$699,300.00	50%	50%	\$349,650.00	\$349,650.00
				Sub-total =	\$1,566,438.00				
51	Elastomeric Check Valves, 42" Dia. w/44"x55" Elliptical Cuff	EA	16	\$42,870.00	\$685,920	100%	0%	\$685,920.00	\$0.00
51.01	Elastomeric Check Valves, 42" Dia. w/44"x55" Elliptical Cuff	EA	16	\$42,870.00	\$685,920.00	100%	0%	\$685,920.00	\$0.00
52	Elastomeric Check Valves, 36" Diameter	EA	8	\$33,442.00	\$267,536	100%	0%	\$267,536.00	\$0.00
52.01	Elastomeric Check Valves, 36" Dia.	EA	8	\$33,442.00	\$267,536.00	100%	0%	\$267,536.00	\$0.00
53	Drainage Ditch Headwalls	EA	12	\$22,300.00	\$267,600	25%	75%	\$66,900.00	\$200,700.00
53.01	Assume 2 each side of Drainage pipe	EA	12	\$22,300.00	\$267,600.00	25%	75%	\$66,900.00	\$200,700.00
54	Railroad Falsework at KCS Railroad	LS	1	\$250,000	\$250,000	50%	50%	\$125,000.00	\$125,000.00
54.01	Railroad Falsework at KCS Railroad	LS	1	\$250,000.00	\$250,000	50%	50%	\$125,000.00	\$125,000.00
55	Railroad Flagman at KCS Railroad	LS	1	\$216,000	\$216,000	50%	50%	\$108,000.00	\$108,000.00



RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
57.01	Railroad flagmen (assume 2 flagmen for 180 days)	HR	2,880	\$75.00	\$216,000.00	50%	50%	\$108,000.00	\$108,000.00
56	Railroad Flagman at CN Railroad	LS	1	\$216,000	\$216,000	50%	50%	\$108,000.00	\$108,000.00
58.01	Railroad flagmen (assume 2 flagmen for 180 days)	HR	2,880	\$75.00	\$216,000.00	50%	50%	\$108,000.00	\$108,000.00
57	Railroad Insurance for KCS Railroad	LS	1	\$84,186	\$84,186	50%	50%	\$42,092.91	\$42,092.91
59.01	Contractor's Public Liability and Property Damage Liability		1%	\$2,806,193.72	\$28,061.94	50%	50%	\$14,030.97	\$14,030.97
59.02	Contractor's Protective Public Liability and Property Damage Liability		1%	\$2,806,193.72	\$28,061.94	50%	50%	\$14,030.97	\$14,030.97
59.03	Railroad's Protective Public Liability and Property Damage Liability		1%	\$2,806,193.72	\$28,061.94	50%	50%	\$14,030.97	\$14,030.97
58	Railroad Insurance for CN Railroad	LS	1	\$241,786	\$241,786	50%	50%	\$120,893.10	\$120,893.10
60.01	Contractor's Public Liability and Property Damage Liability		1%	\$8,059,540.18	\$80,595.40	50%	50%	\$40,297.70	\$40,297.70
60.02	Contractor's Protective Public Liability and Property Damage Liability		1%	\$8,059,540.18	\$80,595.40	50%	50%	\$40,297.70	\$40,297.70
60.03	Railroad's Protective Public Liability and Property Damage Liability		1%	\$8,059,540.18	\$80,595.40	50%	50%	\$40,297.70	\$40,297.70
59	Demolition of Existing KCS Railroad Tracks	LS	1	\$182,627	\$182,627	80%	20%	\$146,101.79	\$36,525.45
61.01	Track work Removal (Begin Station 6+50.00 to End Station 24+23.08)	TFT	1,773	\$103.00	\$182,627.24	80%	20%	\$146,101.79	\$36,525.45
60	Demolition of Existing CN Railroad Tracks	LS	1	\$276,040	\$276,040	50%	50%	\$138,020.00	\$138,020.00
62.01	Demolition of Track	TFT	2,680	\$103.00	\$276,040.00	50%	50%	\$138,020.00	\$138,020.00
61	New KCS Railroad Tracks	TFT	1,773	\$1,338.67	\$2,373,566	90%	10%	\$2,139,710	\$233,856
63.01	Track Work (Rails, Ties, Ballast), Begin Station 6+50.00 to End Station 24+23.08	TFT	1,773	\$250.39	\$443,961.50	80%	20%	\$355,169.20	\$88,792.30
63.02	24" Diameter Steel Pipe Pile	LF	2,520	\$380.00	\$957,600.00	100%	0%	\$957,600.00	\$0.00
63.03	Coal Tar Epoxy Paint	SF	2,290	\$1.31	\$2,999.90	100%	0%	\$2,999.90	\$0.00
63.04	Precast Pile Caps and Wing Walls	LF	96	\$779.33	\$74,815.68	100%	0%	\$74,815.68	\$0.00
63.05	Precast Concrete Bridge - Concrete Volume	LF	2,000	\$238.29	\$476,580.00	100%	0%	\$476,580.00	\$0.00
63.06	Handrails, Length =(100.17+3)*2 =206.3'; No. of posts = 52	LF	413	\$189.00	\$77,981.40	100%	0%	\$77,981.40	\$0.00
63.07	PZ27 Sheet Pile	SF	300	\$45.00	\$13,500.00	100%	0%	\$13,500.00	\$0.00
63.09	Backfill	CY	2,000	\$30.00	\$60,000.00	80%	20%	\$48,000.00	\$12,000.00
63.10	Masonry Closure Wall	SF	768	\$21.00	\$16,128.00	50%	50%	\$8,064.00	\$8,064.00
63.11	Removal of falsework	LS	1	\$50,000.00	\$50,000.00	50%	50%	\$25,000.00	\$25,000.00
63.12	Tie to existing tracks	EA	4	\$50,000.00	\$200,000.00	50%	50%	\$100,000.00	\$100,000.00
				Unit price =	\$1,338.67				
62	New CN Railroad Tracks	TFT	1,375	\$4,024.02	\$5,533,028	75%	25%	\$4,123,731.88	\$1,409,296.10
64.08	Track Work (Rails, Ties and Ballast)	TFT	1,375	\$250.39	\$344,286.25	50%	50%	\$172,143.13	\$172,143.13
64.01	Prestressed, Pre-cast Concrete Piles	LF	31,548	\$86.00	\$2,713,128.00	80%	20%	\$2,170,502.40	\$542,625.60
64.02	Concrete for Culvert (includes reinforcing steel, formwork, and expansion joints)	CY	1,716	\$511.00	\$876,876.00	80%	20%	\$701,500.80	\$175,375.20
64.03	Concrete for Culvert Slab (includes reinforcing steel, formwork, and expansion joints)	CY	1,234	\$511.00	\$630,574.00	80%	20%	\$504,459.20	\$126,114.80
64.04	Concrete Stabilization Slab (includes reinforcing steel, formwork, and expansion joints)	CY	185	\$511.00	\$94,535.00	80%	20%	\$75,628.00	\$18,907.00



RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
64.05	Excavation	CY	14,925	\$14.00	\$208,946.63	80%	20%	\$167,157.30	\$41,789.33
64.06	Backfill	CY	12,452	\$30.00	\$373,554.10	50%	50%	\$186,777.05	\$186,777.05
64.07	Masonry Closure Wall	SF	768	\$21.00	\$16,128.00	50%	50%	\$8,064.00	\$8,064.00
64.09	Removal of falsework	LS	1	\$75,000.00	\$75,000.00	50%	50%	\$37,500.00	\$37,500.00
64.10	Tie to existing tracks	EA	4	\$50,000.00	\$200,000.00	50%	50%	\$100,000.00	\$100,000.00
				Unit price =	\$4,024.02				
63	Shoofly at CN Railroad	LS	1	\$2,250,472	\$2,250,472	50%	50%	\$1,125,236.10	\$1,125,236.10
65.01	Rails, Ties, and Ballast	TF	5,630	\$250.39	\$1,409,695.70	50%	50%	\$704,847.85	\$704,847.85
65.02	Turnout	EA	5	\$31,157.50	\$155,787.50	50%	50%	\$77,893.75	\$77,893.75
65.03	Signalization	EA	1	\$6,439.00	\$6,439.00	50%	50%	\$3,219.50	\$3,219.50
65.04	Infrastructure/Controls	EA	1	\$40,000.00	\$40,000.00	50%	50%	\$20,000.00	\$20,000.00
65.05	Track Fill Material	LCY	21,285	\$30.00	\$638,550.00	50%	50%	\$319,275.00	\$319,275.00
				Sub-total =	\$2,250,472.20				
64	Sluice Gates and Hydraulic Operated Valve Actuators	EA	3	\$804,166.67	\$2,412,500	100%	0%	\$2,412,500.00	\$0.00
66.01	Sluice Gates	EA	3	\$287,500.00	\$862,500.00	100%	0%	\$862,500.00	\$0.00
66.02	Hydraulic power unit	EA	3	\$500,000.00	\$1,500,000.00	100%	0%	\$1,500,000.00	\$0.00
66.03	Hydraulic piping	LS	1	\$50,000.00	\$50,000.00	100%	0%	\$50,000.00	\$0.00
				Unit price=	\$804,166.67				
65	Sluice Gates - Dewatering, Manual Operation	EA	6	\$150,000.00	\$900,000	100%	0%	\$900,000.00	\$0.00
67.01	Sluice gates (10'x10'), Riverside end of Headworks C-1	EA	3	\$150,000.00	\$450,000.00	100%	0%	\$450,000.00	\$0.00
67.02	Sluice gates (10'x10'), Channel end of Headworks C-1	EA	3	\$150,000.00	\$450,000.00	100%	0%	\$450,000.00	\$0.00
66	Lateral Release Valve Assemblies	EA	8	\$89,749.53	\$717,996	100%	0%	\$717,996.26	\$0.00
68.01	24" Gate Valves	EA	8	\$25,000.00	\$200,000.00	100%	0%	\$200,000.00	\$0.00
68.02	Valve Box	EA	8	\$500.00	\$4,000.00	100%	0%	\$4,000.00	\$0.00
68.03	Crushed stone, compacted (for valve box)	TONS	31.0	\$30.00	\$931.30	100%	0%	\$931.30	\$0.00
68.04	Excavation for valve box	CY	228	\$14.00	\$3,194.96	100%	0%	\$3,194.96	\$0.00
68.05	4'x4' Grating for valve box (Type W-19-4 (1x3/16) Galvanized)	EA	8	\$40.00	\$320.00	100%	0%	\$320.00	\$0.00
68.06	1' thk. Headwall for pipe on conveyance channel side	EA	8	\$2,500.00	\$20,000.00	100%	0%	\$20,000.00	\$0.00
68.07	Concrete slab (3'x3'x4")	CY	1	\$350.00	\$350.00	100%	0%	\$350.00	\$0.00
68.08	24" steel discharge pipe	LF	560	\$545.00	\$305,200.00	100%	0%	\$305,200.00	\$0.00
68.09	Utility penetration through sheet pile	EA	8	\$5,000.00	\$40,000.00	100%	0%	\$40,000.00	\$0.00
68.10	Sheetpile (PZ-22)	SF	3,200	\$45.00	\$144,000.00	100%	0%	\$144,000.00	\$0.00
				Unit price =	\$89,749.53				
67	Stone Bedding	CY	506	\$43.50	\$21,992	100%	0%	\$21,991.67	\$0.00
69.01	12" bedding material at HW (Phase VII)	CY	506	\$43.50	\$21,991.67	100%	0%	\$21,991.67	\$0.00



RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK REDUCTION PROJECT
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price	% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
68	Concrete Slope Pavement (6" thick)	SY	3,666	\$115.00	\$421,627	15%	85%	\$62,596.80	\$359,030.00
70.01	Concrete Slope Pavement (Phase VI at HW)	SY	544	\$115.00	\$62,596.80	100%	0%	\$62,596.80	\$0.00
70.02	WSLP River Road Crossing	SY	677	\$115.00	\$77,855.00	0%	100%	\$0.00	\$77,855.00
70.03	WSLP CN RR Crossing	SY	889	\$115.00	\$102,235.00	0%	100%	\$0.00	\$102,235.00
70.04	WSLP KCS RR Crossing	SY	1,556	\$115.00	\$178,940.00	0%	100%	\$0.00	\$178,940.00
69	Diesel-Generator Set Standby	EA	1	\$30,288.00	\$30,288	100%	0%	\$30,288.00	\$0.00
71.01	Diesel Generator set standby	EA	1	\$30,288.00	\$30,288.00	100%	0%	\$30,288.00	\$0.00
70	Flow Measuring Equipment System	LS	1	\$50,000	\$50,000	100%	0%	\$50,000.00	\$0.00
72.01	Flow measure and water quality equipment	LS	1	50,000	\$50,000.00	100%	0%	\$50,000.00	\$0.00
71	Boat Launch and Dock	LS	1	\$128,011	\$128,011	50%	50%	\$64,005.66	\$64,005.66
73.01	Concrete Ramp Planks	CY	8	\$1,045.00	\$8,592.22	50%	50%	\$4,296.11	\$4,296.11
73.02	Crushed Stone Surfacing	TONS	56.3	\$37.00	\$2,082.96	50%	50%	\$1,041.48	\$1,041.48
73.03	Floating Dock	EA	1	\$35,000.00	\$35,000.00	50%	50%	\$17,500.00	\$17,500.00
73.04	Rip-Rap	TONS	103.2	\$71.10	\$7,336.14	50%	50%	\$3,668.07	\$3,668.07
73.05	Marine grade wood retaining wall	LS	1	\$75,000.00	\$75,000.00	50%	50%	\$37,500.00	\$37,500.00
				Sub-Total =	\$128,011.32				
						% Maurepas Proj Cost	% WSLP Proj Cost	MAUREPAS PRICE	WSLP PRICE
		Subtotal			\$155,735,981	70%	30%	\$108,695,758	\$47,040,223
		Project Escalation 2.9%/yr =		5.90%	\$9,188,423	70%	30%	\$6,413,050	\$2,775,373
		Subtotal			\$164,924,404	70%	30%	\$115,108,808	\$49,815,596
		Estimate Uncertainty Contingency =		35%	\$57,723,541	70%	30%	\$40,288,083	\$17,435,459
		Total Construction Cost =			\$222,647,946	70%	30%	\$155,396,891	\$67,251,055
		Changes & Claims =		5%	\$11,132,397	70%	30%	\$7,769,845	\$3,362,553
		Resident Inspect, Testing, etc. =		4%	\$8,905,918	70%	30%	\$6,215,876	\$2,690,042
		Engr Svcs During Const.=		2%	\$4,452,959	70%	30%	\$3,107,938	\$1,345,021
				Grand Total =	\$247,139,220	70%	30%	\$172,490,549	\$74,648,671



RIVER REINTRODUCTION INTO MAUREPAS SWAMP - PHASE 1 CONTRACT REACH
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price
1	Mobilization and Demobilization	LS	1	\$3,135,439	\$3,135,439
1.01	Mobilization		\$31,354,391.72	6%	\$1,881,263.50
1.02	Demobilization		\$31,354,391.72	4%	\$1,254,175.67
2	Temporary Retaining Structures	LS	0	\$11,990,371	\$0
3	Traffic Control and Coordination	LS	1	\$52,520	\$52,520
	<i>Airline Hwy (US 61), main access point to construction site</i>				
3.23	End Road Work (G20-2, 48"X24")	SF	32	\$34.00	\$1,088.00
3.24	Road Work Ahead (W20-1, 48"X48")	SF	4	\$34.00	\$136.00
3.25	Speed Limit 55 MPH (W3-5, 48"X48")	SF	64	\$34.00	\$2,176.00
3.26	Speed Limit 55 MPH (R2-1, 36"X48")	SF	48	\$34.00	\$1,632.00
3.27	Lane shift ahead (W20-1, 48"x48")	SF	64	\$34.00	\$2,176.00
3.28	Lane shift arrow (W1-4bR, 48"x48")	SF	48	\$34.00	\$1,632.00
3.29	Type III Road Closed Barricade (R11-2, 48"X30")	EA	2	\$500.00	\$1,000.00
3.34	Flagmen (assume 4 men @ 8hrs/day, 20 days)	HR	640	\$12.00	\$7,680.00
3.35	Misc. Traffic Control for mob/demob, other activities off of Airline Highway	LS	1	\$35,000.00	\$35,000.00
				<u>Sub-total =</u>	<u>\$52,520.00</u>
4	Silt Fences	LF	72,832	\$3.50	\$254,912
4.02	Silt Fence (2 sides of ROW, STA 132+00 to end of Convey. Channel, includes 1 replacement)	LF	67,832	\$3.50	\$237,412.00
4.03	Miscellaneous location (add 5, 000 LF)	LF	5,000	\$3.50	\$17,500.00
		Sub-Total =	<u>72,832</u>		
5	Turbidity Curtain	LF	0	\$10.00	\$0
6	Truck Wash Down Racks	LS	2	\$127,831	\$255,663
6.01	3" Asphalt Pavement (Grade 1)	TONS	106.9	\$140.00	\$14,962.50
6.02	Prime Coat (Type MC-30)	SY	633	\$0.30	\$190.00
6.03	12" Crushed Stone Surfacing	SY	928	\$37.00	\$34,321.57
6.04	Geotextile Fabric	SY	967	\$4.00	\$3,866.67
6.05	Floor Grating (60'L x 20'W)	SF	1,200	\$1.00	\$1,200.00
6.05	Maintenance (power washing equipment, water supplied by tankers, labor, etc)	LS	1	\$150,000.00	\$150,000.00
				<u>Sub-total =</u>	<u>\$127,831.47</u>
7	Demolition	LS	0	\$0	\$0
8	Concrete for Minor Structures	LS	1	\$175,000	\$175,000
8.01	Lateral Release Valves north end of Conveyance Channel	CY	500	\$350.00	\$175,000.00



RIVER REINTRODUCTION INTO MAUREPAS SWAMP - PHASE 1 CONTRACT REACH
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price
9	Structural Concrete	CY	0	\$650.00	\$0
10	Stabilization Slab Concrete	CY	0	\$450.00	\$0
11	Structural Steel	LS	0	\$327,000	\$0
12	Miscellaneous Metalwork	LS	0	\$60,560	\$0
13	Metal Railings	LS	0	\$27,000	\$0
14	Steel Doors and Frames	LS	0	\$8,000	\$0
15	Paints and Coatings	SF	0	\$3.55	\$0
16	Painting: Coal Tar Epoxy System	SF	0	\$5.00	\$0
17	Project Signage at Road Crossings	EA	2	\$500.00	\$1,000
17.01	Assume 2 Project Signs at Airline Hwy, including installation costs	EA	2	\$500.00	\$1,000.00
18	Foundation Instrumentation	LS	0	\$0	\$0
19	Electrical Work at Head Works	LS	0	\$108,313	\$0
20	Separator Geotextile	SY	49,378	\$4.00	\$197,513
20.01	Geotextile fabric (under access roads through swamp construction areas)	SY	49,000.00	\$4.00	\$196,000.00
20.02	Geotextile fabric (discharge box for lateral release valves)	SY	77.38	\$4.00	\$309.51
20.03	Geotextile fabric (weirs)	SY	300.83	\$4.00	\$1,203.33
21	Geogrid Soil Reinforcement	SY	49,000	\$1.70	\$83,300
21.05	Convey Channel: Airline to WSLP Pump Station	SY	7,600	\$1.70	\$12,920.00
21.06	Convey Channel: Pump Station to End of Maurepas Project	SY	41,400	\$1.70	\$70,380.00
22	Clearing and Grubbing	LS	1	\$6,462,400	\$6,462,400
22.01	Clearing and Grubbing, Maurepas Diversion (300' ROW)				
	Airline Hwy Crossing to WSLP-114 Pump Station (all wooded, unit price doubled)	ACRE	11.80	\$20,000.00	\$236,000.00
	WSLP-114 Pump Station to end of Convey. Channel (all wooded, unit price doubled)	ACRE	117.00	\$20,000.00	\$2,340,000.00
22.04	Tree Stump Removal and Backfill voids w/ excavated material (assume 20% of the area)	ACRE	25.76	\$15,000.00	\$386,400.00
22.05	Disposal of trees, stumps and debris offsite, access allowance (assumes 70% of total Project cost)	LS	1.00	\$3,500,000.00	\$3,500,000.00
				Sub-Total =	\$6,462,400.00



RIVER REINTRODUCTION INTO MAUREPAS SWAMP - PHASE 1 CONTRACT REACH
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price
23	Excavation	CY	509,777	\$14.00	\$7,136,883
23.12	Convey Channel: Pump Station to End of Maurepas Project	CY	500,000	\$14.00	\$7,000,000.00
23.14	Embankment cuts	CY	4,777	\$14.00	\$66,882.76
23.17	Miscellaneous	CY	5,000	\$14.00	\$70,000.00
24	Dewatering	LS	0	\$0	\$0
25	Embankment, Compacted Fill	CY	269,000	\$30.00	\$8,070,000
25.11	Pump Station to End of Maurepas Project (increased 60% to account for settlement losses)	CY	264,000	\$30.00	\$7,920,000.00
25.13	Miscellaneous Fill	CY	5,000	\$30.00	\$150,000.00
26	Fiber Mulch	CY	0	\$194.00	\$0
27	Riprap (Class 30 lb)	CY	0	\$110.00	\$0
28	Riprap (Class 55 lb)	CY	0	\$150.00	\$0
29	Riprap (Class 130 lb)	CY	247	\$168.00	\$41,469
29.01	Riprap for Weirs at Bayou Secret and Bourgeois Canal	CY	247	\$168.00	\$41,469.12
30	Riprap (Class 250 lb)	CY	0	\$200.00	\$0
31	Grouted Riprap	SY	0	\$207.00	\$0
32	Steel Sheet Piling, Type PZ-22	SF	0	\$45.00	\$0
33	Prestressed Concrete Piles, Type 24"x24"	LF	0	\$160.00	\$0
34	Pile Load Tests	LS	0	\$0	\$0
35	Steel H-Piles, HP 14 x 73	LF	0	\$89.00	\$0
36	Steel H-Piles, HP 14 x 89	LF	0	\$102.00	\$0
37	Steel H-Piles, HP 16 x 101	LF	0	\$130.00	\$0
38	Timber Piles, 12" Diameter	LF	0	\$48.00	\$0
39	Asphaltic Pavement	LS	0	\$2,434,996	\$0



RIVER REINTRODUCTION INTO MAUREPAS SWAMP - PHASE 1 CONTRACT REACH
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price
40	Nonplastic Embankment Sand	CY	0	\$62.25	\$0
41	Crushed Stone Surfacing	TONS	20,485	\$37.00	\$757,960
41.09	Convey Channel: Pump Station to End of Maurepas Project (increased 30% for losses in swamp)	SY	20,485	\$37.00	\$757,959.80
42	Temporary Access Roads (6" Crushed Stone with Geogrid)	SY	133,560	\$37.00	\$4,941,720
42.07	Temporary Access Road Airline to Pump Station (increased 20% for losses in swamp)	SY	13,560	\$37.00	\$501,720.00
42.08	Temporary Access Pump Station to End of Project (increased 20% for losses in swamp)	SY	120,000	\$37.00	\$4,440,000.00
43	Pavement Markings	LS	0	\$39,918.45	\$0
44	Miscellaneous Roadwork Items	LS	0	\$16,670	\$0
45	Precast Concrete Platform	LS	0	\$191	\$0
46	Chain Link Fence and Gate	LF	0	\$0.00	\$0
47	Turf Establishment and Maintenance	AC	77	\$5,000.00	\$386,400
47.01	Turf Establishment, Maurepas Diversion (assumes 60% of the Maurepas clear & grub acreage)	ACRE	77.3	\$5,000.00	\$386,400.00
48	Modifications to Existing Utilities	LS	1	\$866,200	\$866,200
48.02	<i>Air Products</i>				
	1 ea, 12" CS Pipe - Hydrogen (36" Dp)	LF	400	\$450.00	\$180,000.00
48.06	<i>Chevron/Texaco</i>				
	1ea, 20" natural gas	LF	400	\$939.00	\$375,600.00
	2ea, 6" HVL Propane, propylene, butane	LF	800	\$126.00	\$100,800.00
	1ea, 8" pipe	LF	600	\$183.00	\$109,800.00
48.12	<i>AT&T Fiberoptic</i>				
	1 line underground, size unknown	LS	1	\$100,000.00	\$100,000.00
				Sub-total =	\$866,200.00
49	Storm Drain Pipes	LF	0	\$101.41	\$0
50	Precast Concrete Box Culverts for New Drainage Ditches	LS	0	\$0	\$0
51	Elastomeric Check Valves, 42" Dia. w/44"x55" Elliptical Cuff	EA	16	\$42,870.00	\$685,920
51.01	Elastomeric Check Valves, 42" Dia. w/44"x55" Elliptical Cuff	EA	16	\$42,870.00	\$685,920.00
52	Elastomeric Check Valves, 36" Diameter	EA	8	\$33,442.00	\$267,536
52.01	Elastomeric Check Valves, 36" Dia.	EA	8	\$33,442.00	\$267,536.00



RIVER REINTRODUCTION INTO MAUREPAS SWAMP - PHASE 1 CONTRACT REACH
15% Construction Cost Estimate



Item No.	Item Description	Unit of Measure	Quantity	Unit Price	Total Price
53	Drainage Ditch Headwalls	EA	0	\$22,300.00	\$0
54	Railroad Falsework at KCS Railroad	LS	0	\$250,000	\$0
55	Railroad Flagman at KCS Railroad	LS	0	\$216,000	\$0
56	Railroad Flagman at CN Railroad	LS	0	\$216,000	\$0
57	Railroad Insurance for KCS Railroad	LS	0	\$0	\$0
58	Railroad Insurance for CN Railroad	LS	0	\$0	\$0
59	Demolition of Existing KCS Railroad Tracks	LS	0	\$182,627	\$0
60	Demolition of Existing CN Railroad Tracks	LS	0	\$276,040	\$0
61	New KCS Railroad Tracks	TFT	0	\$0.00	\$0
62	New CN Railroad Tracks	TFT	0	\$4,024.02	\$0
63	Shoofly at CN Railroad	LS	0	\$2,250,472	\$0
64	Sluice Gates and Hydraulic Operated Valve Actuators	EA	0	\$804,166.67	\$0
65	Sluice Gates - Dewatering, Manual Operation	EA	0	\$150,000.00	\$0
66	Lateral Release Valve Assemblies	EA	8	\$89,749.53	\$717,996
68.01	24" Gate Valves	EA	8	\$25,000.00	\$200,000.00
68.02	Valve Box	EA	8	\$500.00	\$4,000.00
68.03	Crushed stone, compacted (for valve box)	TONS	31.0	\$30.00	\$931.30
68.04	Excavation for valve box	CY	228	\$14.00	\$3,194.96
68.05	4'x4' Grating for valve box (Type W-19-4 (1x3/16) Galvanized)	EA	8	\$40.00	\$320.00
68.06	1' thk. Headwall for pipe on conveyance channel side	EA	8	\$2,500.00	\$20,000.00
68.07	Concrete slab (3'x3'x4")	CY	1	\$350.00	\$350.00
68.08	24" steel discharge pipe	LF	560	\$545.00	\$305,200.00
68.09	Utility penetration through sheet pile	EA	8	\$5,000.00	\$40,000.00
68.10	Sheetpile (PZ-22)	SF	3,200	\$45.00	\$144,000.00
				Unit price =	\$89,749.53
67	Stone Bedding	CY	0	\$43.50	\$0



RIVER REINTRODUCTION INTO MAUREPAS SWAMP - PHASE 1 CONTRACT REACH
15% Construction Cost Estimate

[illegible]

**STATE OF LOUISIANA
COASTAL PROTECTION AND RESTORATION AUTHORITY**

**RIVER REINTRODUCTION INTO MAUREPAS SWAMP
AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK
REDUCTION PROJECT PO-0029
STATE PROJECT No. PO-0062
LaGOV NO. 4400019214**

**BASIS OF DESIGN REPORT
15% DESIGN**

**APPENDIX G
UTILITY DISPOSITION REPORT**

**STATE OF LOUISIANA
COASTAL PROTECTION AND RESTORATION
AUTHORITY**

**RIVER REINTRODUCTION INTO MAUREPAS SWAMP
AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK
REDUCTION PROJECT PO-0029
STATE PROJECT No. PO-0062
LaGOV NO. 4400019214**

**UTILITIES DISPOSITION REPORT
15% DESIGN**

For



Prepared By:
AECOM Technical Services
7389 Florida Blvd.
Suite 300
Baton Rouge, LA 70806

December , 2020

Rev	Date	Description
0	2020	Draft Submittal

River Reintroduction into Maurepas Swamp And West Shore Lake Pontchartrain Flood Risk Reduction Project Po-0029

UTILITIES DISPOSITION REPORT

1. Introduction

The proposed alignment for the Maurepas freshwater diversion channel stretches 5 ½ miles from the Mississippi River to deep within the Maurepas Swamp. Parallel and immediately adjacent to the Maurepas Diversion is the WSLP flood protections features, consisting of an earthen tie-in to the Mississippi River levee, a gated crossing at River Road, a combination of levees and structural floodwalls throughout the alignment, gated crossings at both the CN and KCS railroads, a raised crossing of Airline Highway, and a tie-in to the levee at WSLP Reach 110. Due to the length of the proposed construction, the project intersects numerous utility and industrial product pipeline rights-of-way. In order to construct the project, these utilities and other infrastructure components must be relocated to positions that will not adversely affect the construction process.

2. Coordination

During the Preliminary Design of the Maurepas Diversion/WSLP, the Project Team issued requests to each of the utility companies with services in the area of the proposed diversion and flood protection to provide the means by which they preferred their utilities to be relocated. The options included:

- To be relocated by Owner before construction
- To be relocated by Owner during construction
- To be relocated by Contractor before construction
- To be relocated by Contractor during construction

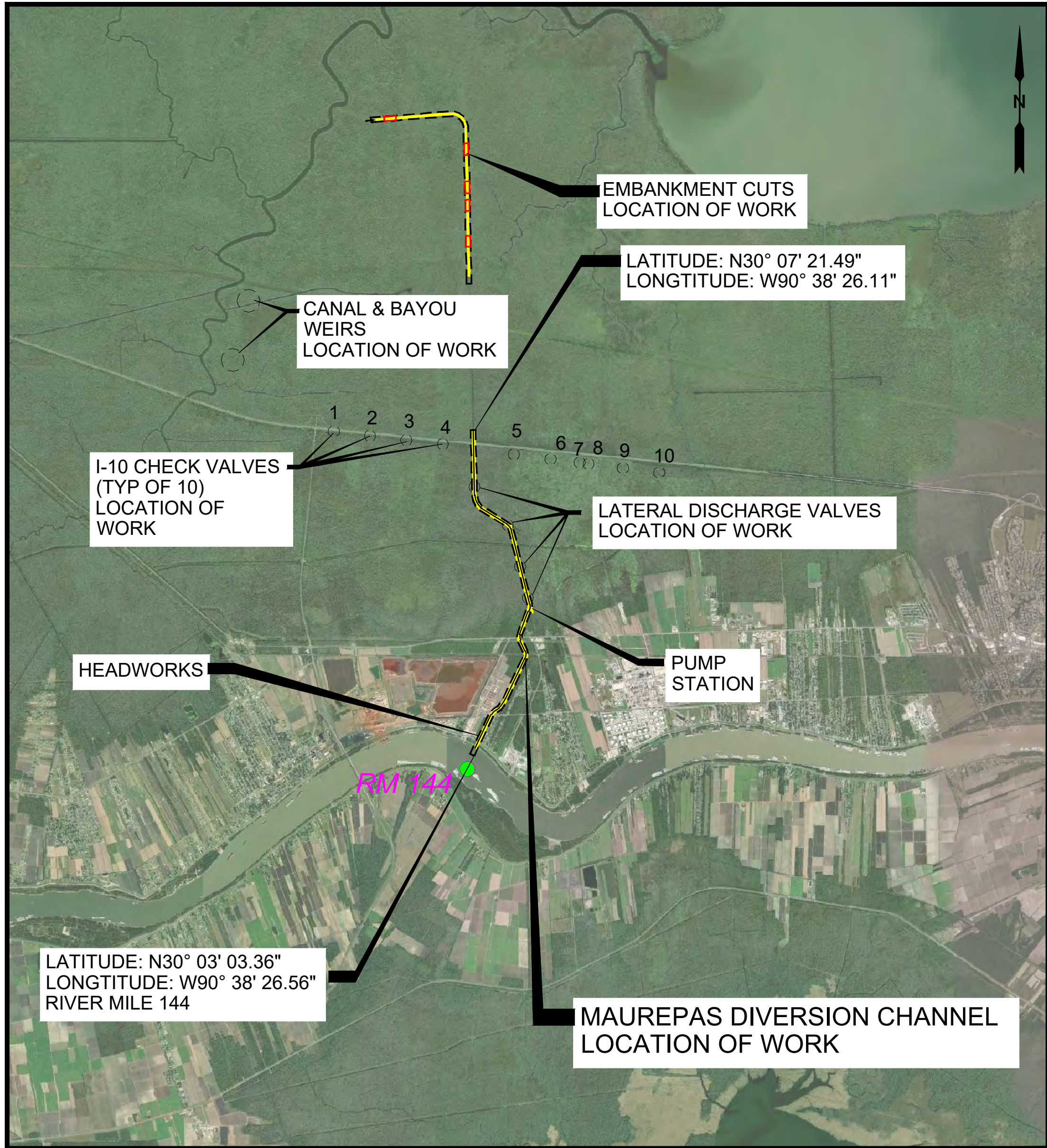
The utilities were identified from field reconnaissance, historical surveys, maps, and records, as well as information provided direction from the utility companies. A list of the companies as well as their relocation disposition is included in Appendix X.

There are multiple key locations along the proposed channel and levee that have numerous utilities and/or product lines which intersect the proposed alignment. These locations include, but are not limited to, LA 44, Canadian National Railroad, Kansas City Southern Railroad, US 61 and I-10. In addition, there are also 2 major pipeline corridors, one just South of US 61 and the other between US 61 and I-10. Refer to the 15% Design drawings for the locations of the utilities (Sheets UD-1.00 through UD-1.08).

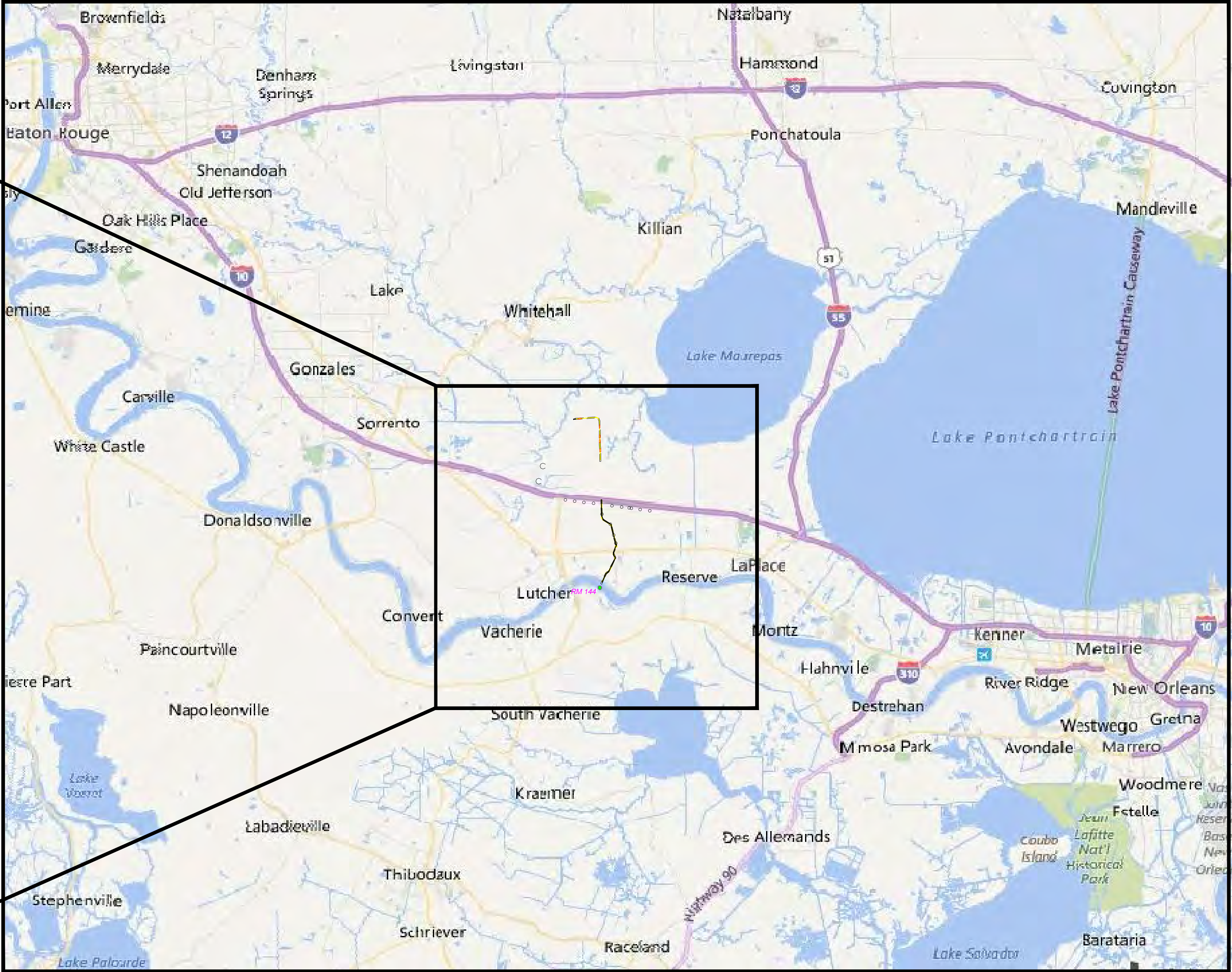
The Project Team attempted to contact all companies with identified utilities or product lines in the proposed alignment right-of-way via telephone on several occasions. At the time of this writing, a point of contact (POC) has not been established for all utility companies. The POC for these companies is designated as TBD and their utilities disposition is assumed at this time. For the companies with an established POC, an email describing the project with drawings depicting the utility in conflict was sent requesting them to review the plans, confirm ownership of their utilities, provide information on about the utilities, and confirm disposition of the relocation efforts.

UTILITY OWNER	UTILITY ID	UTILITY DESCRIPTION	DISPOSITION	POINT OF CONTACT	PHONE	EMAIL
AT&T	F9	Underground Fiber Optic	To be relocated by Owner during Construction	Steve Degrave	770-331-3868	sd218b@att.com
Bengal Gas	G5	Gas Pipeline	To be relocated by Owner prior to Construction	Young Yim		young.yim@shell.com
EnLink Midstream, LLC (Ascension)	G10	Gas Pipeline	To be relocated by Owner prior to Construction	James Reynolds	337-354-1718	James.Reynolds@enlink.com
Entergy Transmission	P1-P32	Power Pole	To be relocated by Owner prior to Construction	Jimmy Sholar	504-615-5540	jsholar@entergy.com
	E3-E5	Overhead 115kV and 230kV				
Entergy Distribution	E1-E4, E6-E7	Overhead 13.7kV 3 Phase line	To be relocated by Owner prior to Construction	Winda Christophe	504-840-2594	wgibson@entergy.com
Enterprise Products	G7	Gas Pipeline Marker	To be relocated by Owner prior to Construction	Mark Dickey	225-675-2510	mwdickey@eprod.com
	G8	Gas Pipeline				
Enterprise (Acadian)	G1	4" Natural Gas Pipeline	To be relocated by Owner prior to Construction	Rory Hebert		
	G2	Gas Warning Sign				
Reserve Communication	C2	Overhead line on Entergy Poles	To be relocated by Owner prior to Construction	Barry Firmin	985-966-3476	bfirmin@reservetele.com
St. John the Baptist Parish	S1, S3-S4	Underground Sewer Line	To be relocated by Contractor during Construction	Reed Alexander	Office: 985-651-6800 Cell: 504-457-1219	r.alexander@stjohn-la.gov
	SMH1, S6	Sewer Manhole				
	S5	Sewer Clean Out				
	W1-W3, W5-W6	Underground Water Line				
	W4, W7-W8	Fire Hydrant				
	W9-W10	Water Meter				
Air Products	G12	Gas Pipeline	To be relocated by Owner prior to Construction	Bubba	225-571-5692	leblanwc@airproducts.com

UTILITY OWNER	UTILITY ID	UTILITY DESCRIPTION	DISPOSITION	POINT OF CONTACT	PHONE	EMAIL
AT&T Distribution	F1	Underground Fiber Optic	To be relocated by Owner during Construction	TBD		
	T1-T2	Telephone Pole				
	T3-T4, T6	Overhead Telephone Line				
	F2	Underground Fiber Optic				
	T5	Telephone Pedestal				
Chevron/Texaco	G9, G11-G12	Gas Pipeline	To be relocated by Owner prior to Construction	TBD		
	G10	Gas Pipeline Marker				
Comcast	C1	Overhead line on Entergy Poles	To be relocated by Owner during Construction	TBD		
Gulf South	G3-G5	Gas Pipeline Marker	To be relocated by Owner prior to Construction	TBD		
	G6	Gas Pipeline				
Marathon	G6-G7	Gas Pipeline	To be relocated by Owner prior to Construction	TBD		
MCI	F4	Underground Fiber Optic	To be relocated by Owner during Construction	TBD		
	F5	Fiber Optic Hand Hole				
Wiltel	F5	Underground Fiber Optic	To be relocated by Owner during Construction	TBD		
	F6-F7	Fiber Optic Sign				
	F8	Fiber Optic Pole				



PROJECT LOCATION MAP
SCALE: NTS

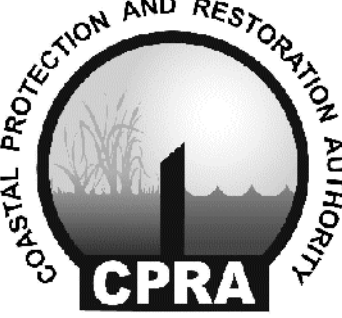


VICINITY MAP
SCALE: NTS

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PHILLIP OLIVIER ENGINEER OF RECORD	CIVIL DISCIPLINE				
LA STATE LICENSE NO. 36348	SEPTEMBER 2020 DATE	REV.	DATE	DESCRIPTION	BY

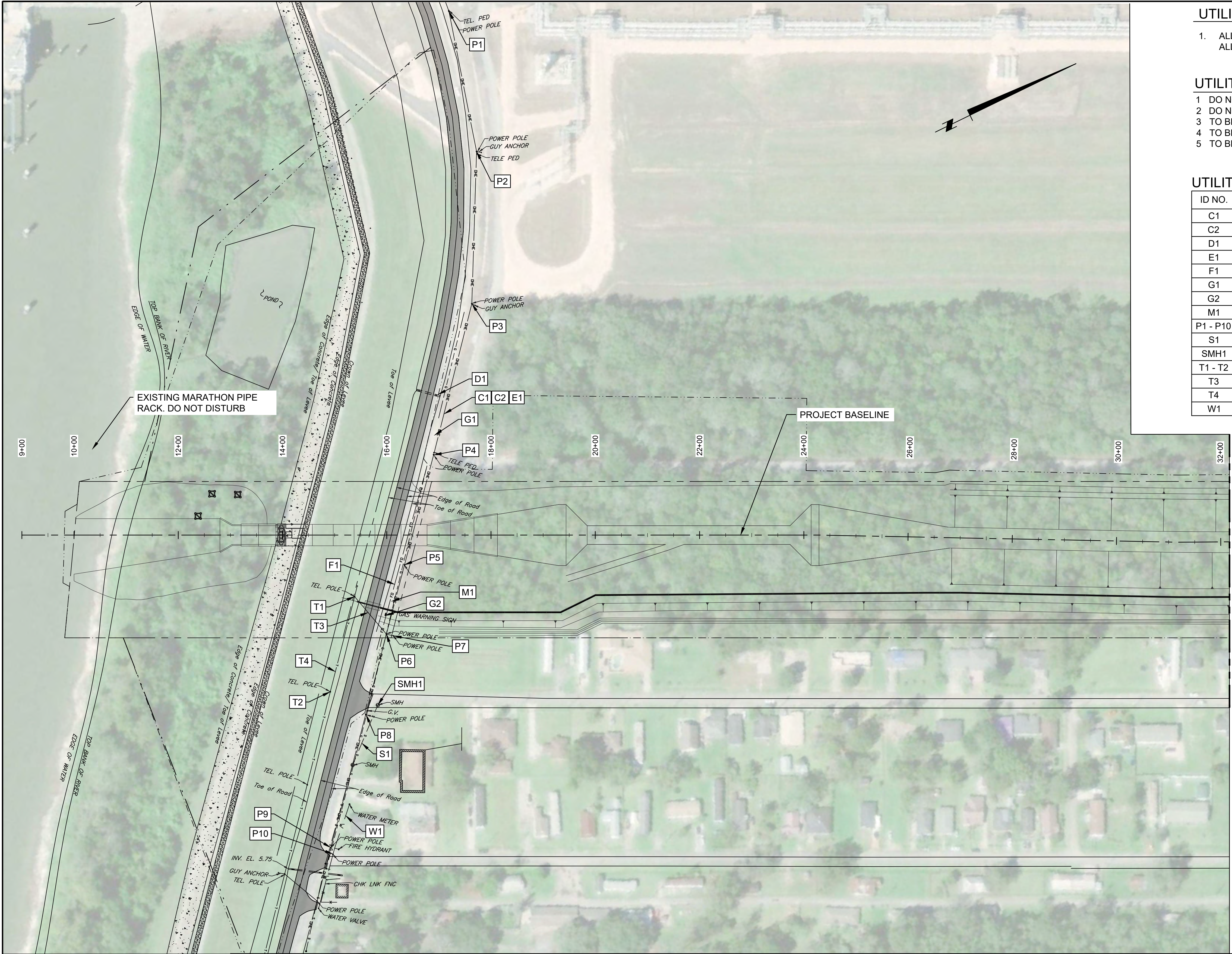
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SUITE 2700
NEW ORLEANS, LA 70112



LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY COASTAL ENGINEERING DIVISION 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802		RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHATRIN FLOOD RISK REINTRODUCTION	VICINITY AND LOCATION MAPS
DRAWN BY:		CPRA PROJECT NUMBER: PO-0029	
DESIGNED BY:		AECOM PROJECT NUMBER: 60632162	
APPROVED BY:			DATE: SEPTEMBER 2020
			SHEET AG-2.00

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UTILITY NOTES:

- ALL UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD LOCATED ALL UTILITY FOR VERIFICATION.

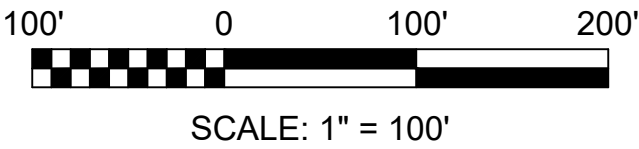
UTILITY DISPOSITION LEGEND:

- DO NOT DISTURB
- DO NOT DISTURB-ACCESS ONLY
- TO BE RELOCATED BY OWNER PRIOR TO CONSTRUCTION
- TO BE RELOCATED BY OWNER CONCURRENT WITH CONSTRUCTION
- TO BE RELOCATED BY CONTRACTOR DURING CONSTRUCTION

UTILITY DISPOSITION TABLE:

ID NO.	OWNER	DESCRIPTION	DISPOSITION
C1	COMCAST (TIME WARNER)	OVERHEAD LINE ON ENTERGY POLES	1
C2	RESERVE COMMUNICATION	OVERHEAD CABLE ON ENTERGY POLES	1
D1	LADOTD ?	DRAINAGE PIPE	1
E1	ENTERGY DISTRIBUTION	OVERHEAD 13.7kv 3 PHASE LINE	1
F1	AT&T	UNDERGROUND FIBER OPTIC	1
G1	ENTERPRISE (ACADIAN)	4" NATURAL GAS PIPELINE	1
G2	ENTERPRISE (ACADIAN)	GAS WARNING SIGN	1
M1	MARATHON	PLANT ENTRANCE SIGN	3
P1 - P10	ENTERGY	POWER POLE	1
S1	ST. JOHN THE BAPTIST PARISH	UNDERGROUND SEWER LINE	1
SMH1	ST. JOHN THE BAPTIST PARISH	SEWER MANHOLE	1
T1 - T2	AT&T ?	TELEPHONE POLE	1
T3	AT&T ?	OVERHEAD TELEPHONE LINE	1
T4	AT&T ?	OVERHEAD TELEPHONE LINE	1
W1	ST. JOHN THE BAPTIST PARISH	UNDERGROUND WATER LINE	1

* AECOM TO COORDINATE WITH MARATHON



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PHILLIP OLIVIER
ENGINEER OF RECORD
LA STATE LICENSE NO. 36348
CIVIL DISCIPLINE
SEPTEMBER 2020
DATE

REV.	DATE	DESCRIPTION	BY



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NEW ORLEANS, LA 70112



LOUISIANA COASTAL PROTECTION AND RESTORATION
AUTHORITY
COASTAL ENGINEERING DIVISION

150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

DRAWN BY:

DESIGNED BY:

RIVER REINTRODUCTION INTO MAUREPAS
SWAMP AND WEST SHORE LAKE PONTCHATRAIN
FLOOD RISK REINTRODUCTION

CPRA PROJECT NUMBER: PO-0029

AECOM PROJECT NUMBER: 60632162

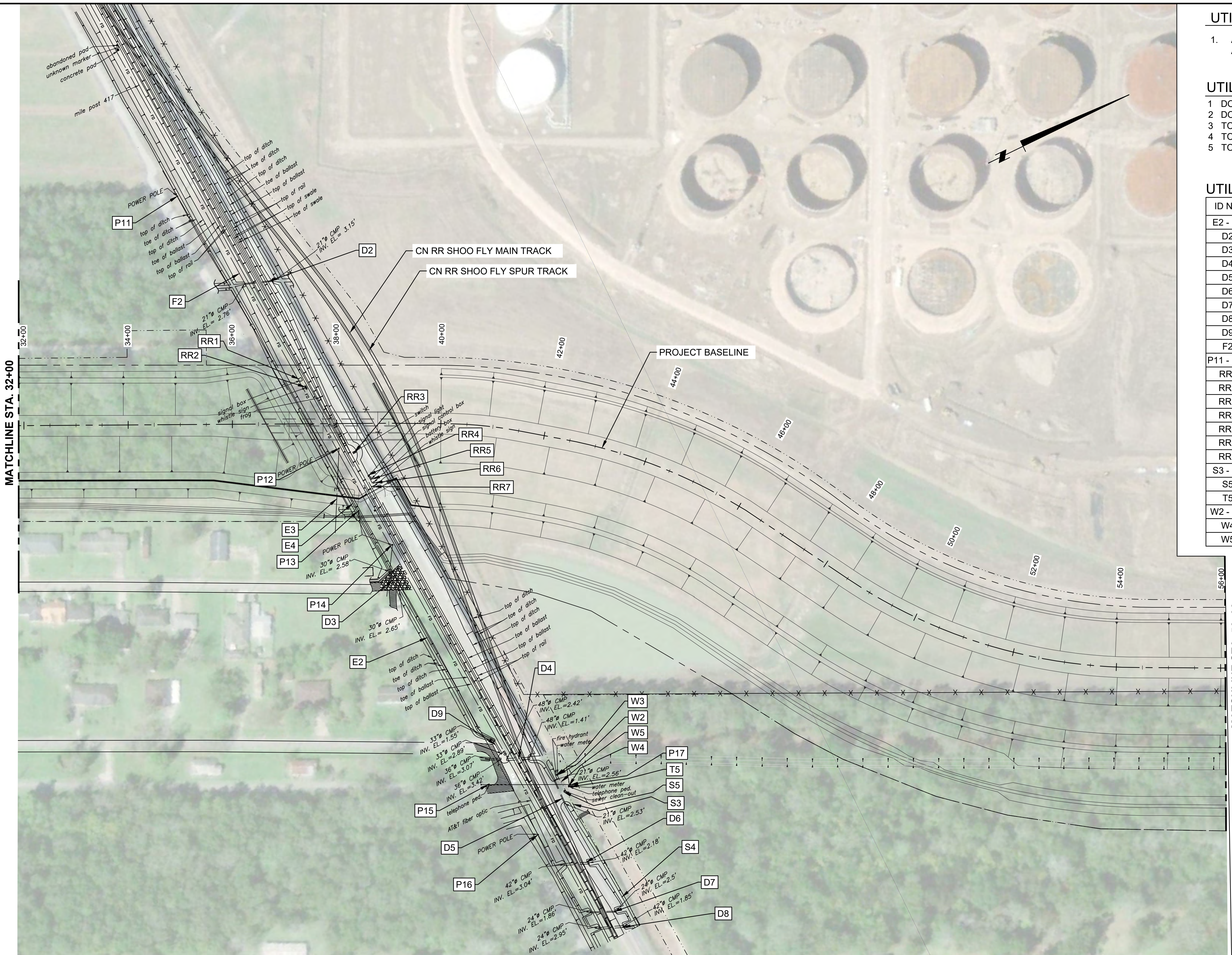
APPROVED BY:

UTILITY PLANS
STA 9+00 TO STA 32+00

DATE: SEPTEMBER 2020

SHEET CC-3.01

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UTILITY NOTES:

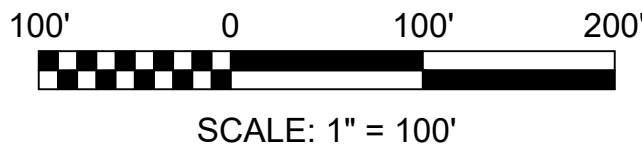
1. ALL UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD LOCATED ALL UTILITY FOR VERIFICATION.

UTILITY DISPOSITION LEGEND:

- 1 DO NOT DISTURB
- 2 DO NOT DISTURB-ACCESS ONLY
- 3 TO BE RELOCATED BY OWNER PRIOR TO CONSTRUCTION
- 4 TO BE RELOCATED BY OWNER CONCURRENT WITH CONSTRUCTION
- 5 TO BE RELOCATED BY CONTRACTOR DURING CONSTRUCTION

UTILITY DISPOSITION TABLE:

ID NO.	OWNER	DESCRIPTION	DISPOSITION
E2 - E4	ENTERGY DISTRIBUTION	OVERHEAD 13.7kv 3 PHASE LINE	1
D2	CN RR	21" CMP	1
D3	CN RR	30" CMP	1
D4	CN RR	48" CMP	1
D5	CN RR	21" CMP	1
D6	CN RR	42" CMP	1
D7	CN RR	24" CMP	1
D8	CN RR	42" CMP	1
D9	CN RR	33" CMP	1
F2	AT&T	FIBER OPTIC UNDERGROUND CABLE	1
P11 - P17	ENTERGY	POWER POLE	1
RR1	CN RR	SIGNAL BOX	1
RR2	CN RR	WHISTLE SIGN	1
RR3	CN RR	SWITCH	TBD
RR4	CN RR	SIGNAL LIGHT (417.2 MILE MARK)	TBD
RR5	CN RR	SIGNAL CONTROL BOX	TBD
RR6	CN RR	BATTERY BOX	TBD
RR7	CN RR	WHISTLE SIGN	TBD
S3 - S4	ST. JOHN THE BAPTIST PARISH	UNDERGROUND SEWER LINE	1
S5	ST. JOHN THE BAPTIST PARISH	SEWER CLEAN OUT	1
T5	AT&T	TELEPHONE PEDESTAL	1
W2 - W3	ST. JOHN THE BAPTIST PARISH	UNDERGROUND WATER METER	1
W4	ST. JOHN THE BAPTIST PARISH	FIRE HYDRANT	1
W5	ST. JOHN THE BAPTIST PARISH	UNDERGROUND WATER LINE	1



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CONSTRUCTION

PHILLIP OLIVIER
ENGINEER OF RECORD
LA STATE LICENSE NO. 36348
CIVIL DISCIPLINE
SEPTEMBER 2020
DATE

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SUITE 2700
NEW ORLEANS, LA 70112



LOUISIANA COASTAL PROTECTION AND RESTORATION
AUTHORITY
COASTAL ENGINEERING DIVISION

150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

DRAWN BY:

DESIGNED BY:

RIVER REINTRODUCTION INTO MAUREPAS
SWAMP AND WEST SHORE LAKE PONTCHATRAIN
FLOOD RISK REINTRODUCTION

CPRA PROJECT NUMBER: PO-0029

AECOM PROJECT NUMBER: 60632162

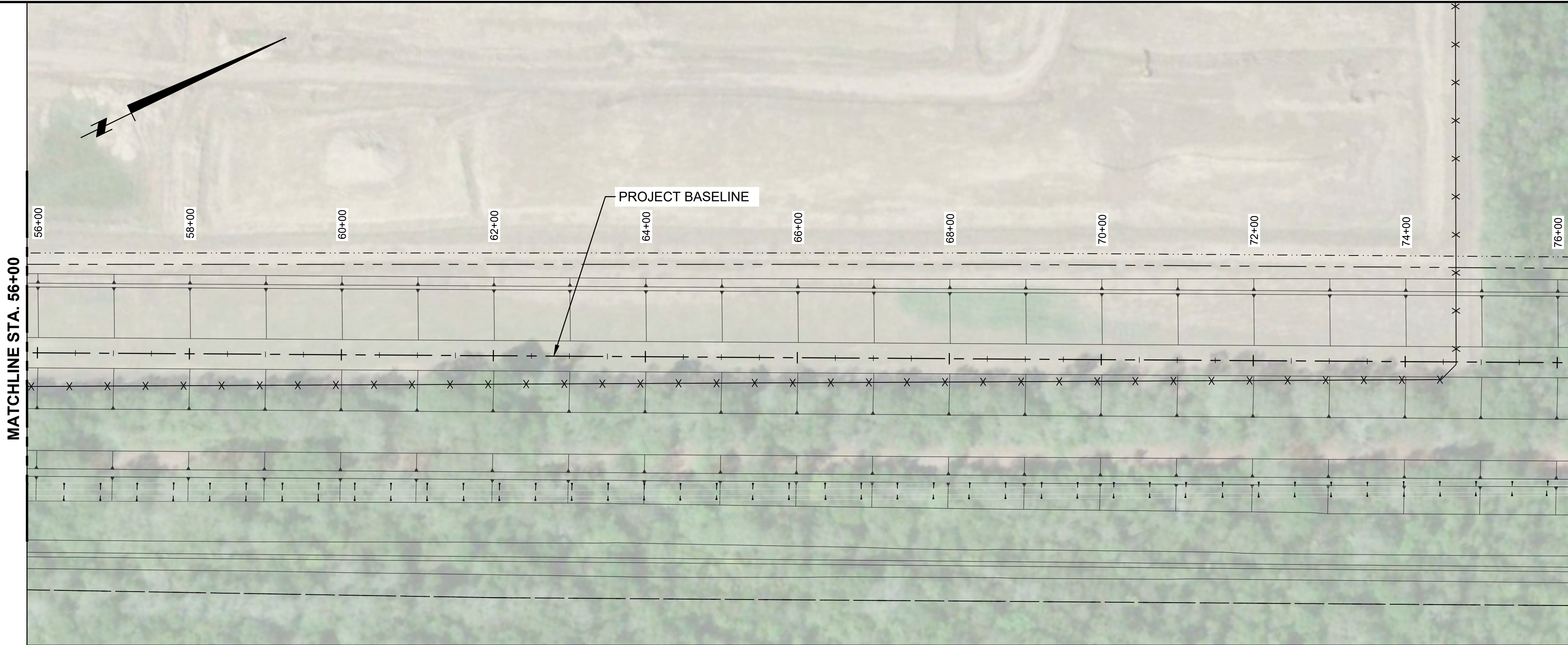
APPROVED BY:

UTILITY PLANS
STA 32+00 TO STA 56+00

DATE: SEPTEMBER 2020

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UTILITY NOTES:

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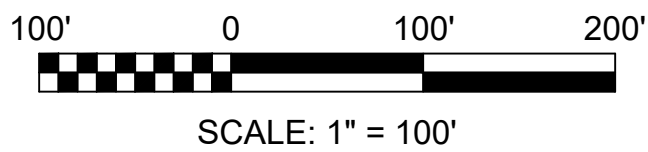
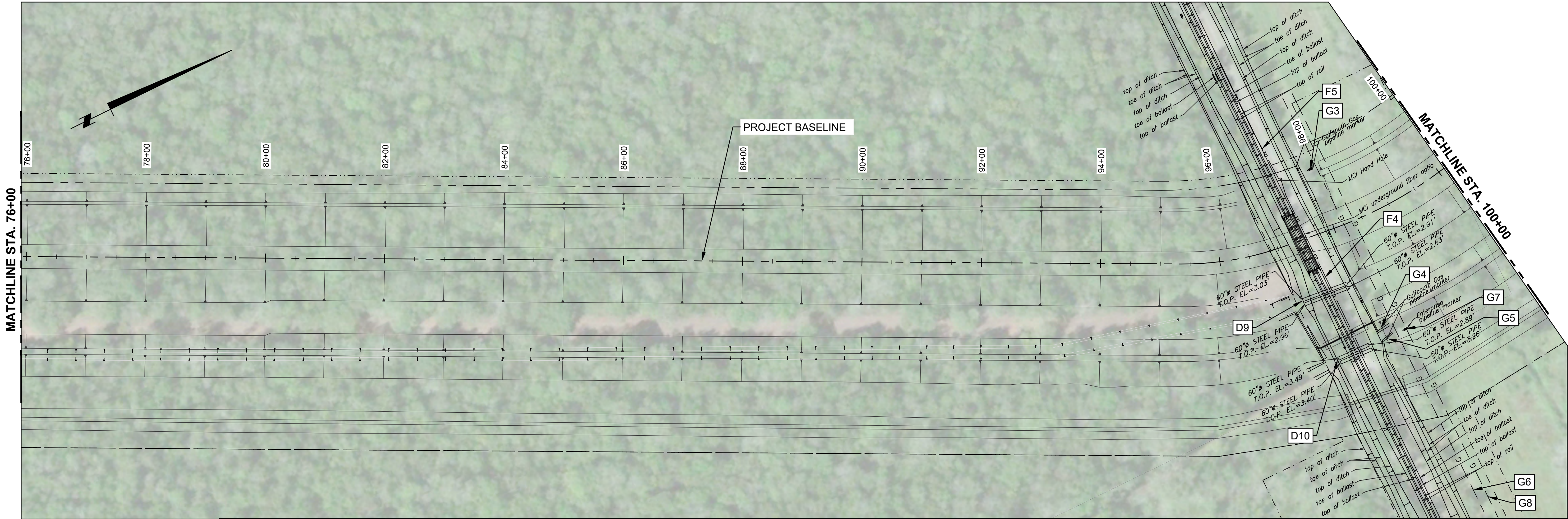
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UTILITY DISPOSITION TABLE:

ID NO.	OWNER	DESCRIPTION	DISPOSITION
D9	ST. JOHN THE BAPTIST PARISH	UNDERGROUND (2) 60"Ø STL DRAIN LINE	5
D10	ST. JOHN THE BAPTIST PARISH	UNDERGROUND (2) 60"Ø STL DRAIN LINE	5
F4	MCI	FIBER OPTIC UNDERGROUND CABLE	1
F5	MCI	FIBER OPTIC HAND HOLE	1
G3 - G5	GULFSOUTH (ACADIAN)	GAS PIPELINE MARKER	3
* G6	GULFSOUTH (ACADIAN)	GAS PIPELINE	1
G7	ENTEPPRISE	GAS PIPELINE MARKER	3
* G8	ENTEPPRISE	GAS PIPELINE	1

* VERIFY PIPELINE LOCATION



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CONSTRUCTION

PHILLIP OLIVIER
ENGINEER OF RECORD
LA STATE LICENSE NO. 36348
CIVIL DISCIPLINE
SEPTEMBER 2020
DATE

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NEW ORLEANS, LA 70112



LOUISIANA COASTAL PROTECTION AND RESTORATION
AUTHORITY
COASTAL ENGINEERING DIVISION

150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

DRAWN BY:

DESIGNED BY:

RIVER REINTRODUCTION INTO MAUREPAS
SWAMP AND WEST SHORE LAKE PONTCHATRIN
FLOOD RISK REINTRODUCTION

CPRA PROJECT NUMBER: PO-0029

AECOM PROJECT NUMBER: 60632162

APPROVED BY:

UTILITY PLANS
STA 56+00 TO STA 100+00

DATE: SEPTEMBER 2020

SHEET CC-3.03

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UTILITY DISPOSITION LEGEND:

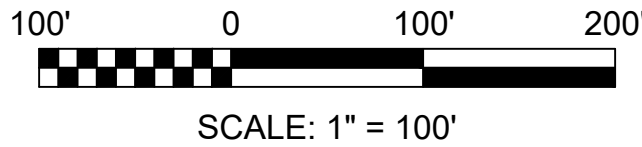
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UTILITY NOTES:

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UTILITY DISPOSITION TABLE:

ID NO.	OWNER	DESCRIPTION	DISPOSITION
E3-E5	ENTERGY TRANSMISSION	OVERHEAD 115KV AND 230KV	1
E6 - E7	ENTERGY DISTRIBUTION	OVERHEAD 13.7kv 3 PHASE LINE	1
F5	WILTEL	UNDERGROUND FIBER OPTIC CABLE	1
F6-F7	WILTEL	FIBER OPTIC SIGN	1
F8	WILTEL	FIBER OPTIC POWER POLE	1
G5	BENGAL GAS	GAS PIPELINE	1
G6	MARATHON GAS	GAS PIPELINE	1
G7	MARATHON GAS	GAS PIPELINE	1
G8	ENTERPRISE GAS	GAS PIPELINE	1
G9	TEXACO GAS	GAS PIPELINE	1
G10	ASCENSION	GAS PIPELINE	1
P18 - P30	ENTERGY	POWER POLE	1
P31 - P32	ENTERGY	POWER POLE	3
S5	ST. JOHN THE BAPTIST PARISH	UNDERGROUND SEWER LINE	1
S6	ST. JOHN THE BAPTIST PARISH	SEWER MANHOLE	1
T6	ATT?	OVERHEAD PHONE LINE	1
W6	ST. JOHN THE BAPTIST PARISH	UNDERGROUND WATER LINE	1
W7- W8	ST. JOHN THE BAPTIST PARISH	FIRE HYDRANT	1
W9 - W10	ST. JOHN THE BAPTIST PARISH	WATER METER	1



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PRELIMINARY - NOT FOR
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PHILLIP OLIVIER
ENGINEER OF RECORD
LA STATE LICENSE NO. 36348
CIVIL DISCIPLINE
SEPTEMBER 2020
DATE

REV.	DATE	DESCRIPTION	BY

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NEW ORLEANS, LA 70112



LOUISIANA COASTAL PROTECTION AND RESTORATION
AUTHORITY
COASTAL ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

DRAWN BY:

DESIGNED BY:

RIVER REINTRODUCTION INTO MAUREPAS
SWAMP AND WEST SHORE LAKE PONTCHATRIN
FLOOD RISK REINTRODUCTION

CPRA PROJECT NUMBER: PO-0029

AECOM PROJECT NUMBER: 60632162

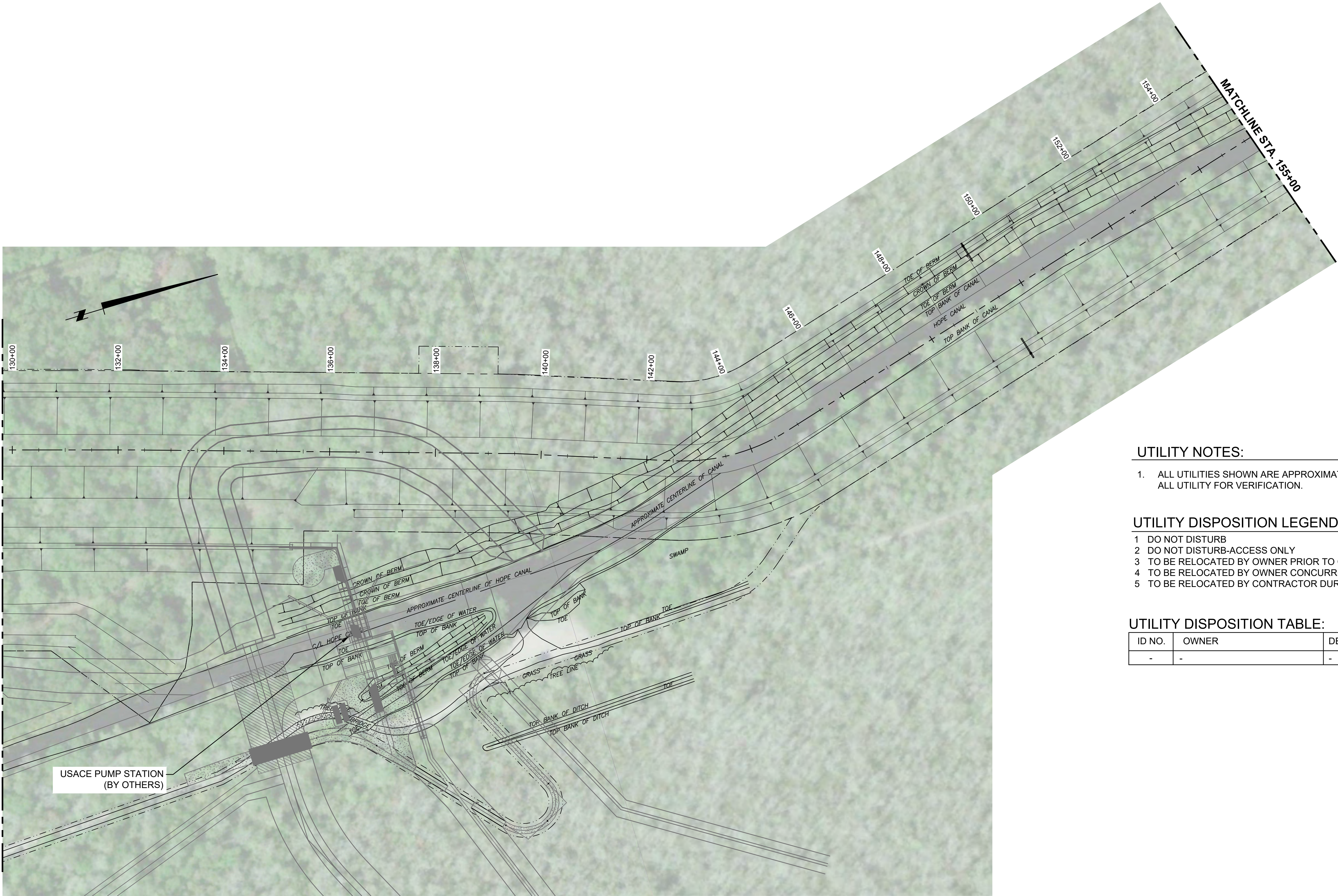
APPROVED BY:

UTILITY PLANS
STA 100+00 TO STA 130+00

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UTILITY NOTES:

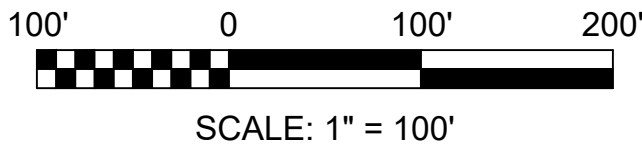
1. ALL UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD LOCATED ALL UTILITY FOR VERIFICATION.

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UTILITY DISPOSITION TABLE:

ID NO.	OWNER	DESCRIPTION	DISPOSITION
-	-	-	-



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PHILLIP OLIVIER
ENGINEER OF RECORD
LA STATE LICENSE NO. 36348
CIVIL DISCIPLINE
SEPTEMBER 2020
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LOUISIANA COASTAL PROTECTION AND RESTORATION
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150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

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RIVER REINTRODUCTION INTO MAUREPAS
SWAMP AND WEST SHORE LAKE PONTCHATRAIN
FLOOD RISK REINTRODUCTION

CPRA PROJECT NUMBER: PO-0029

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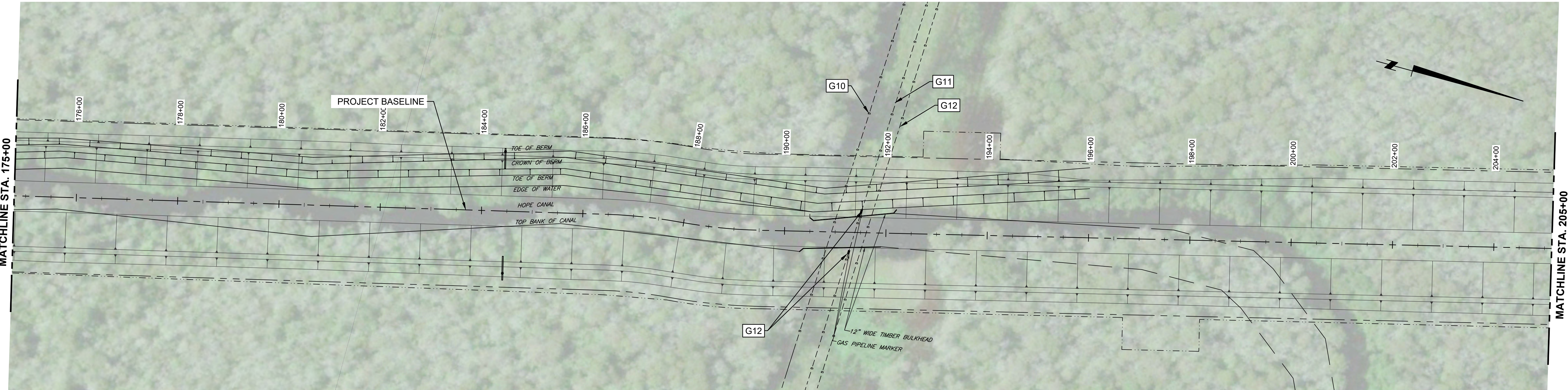
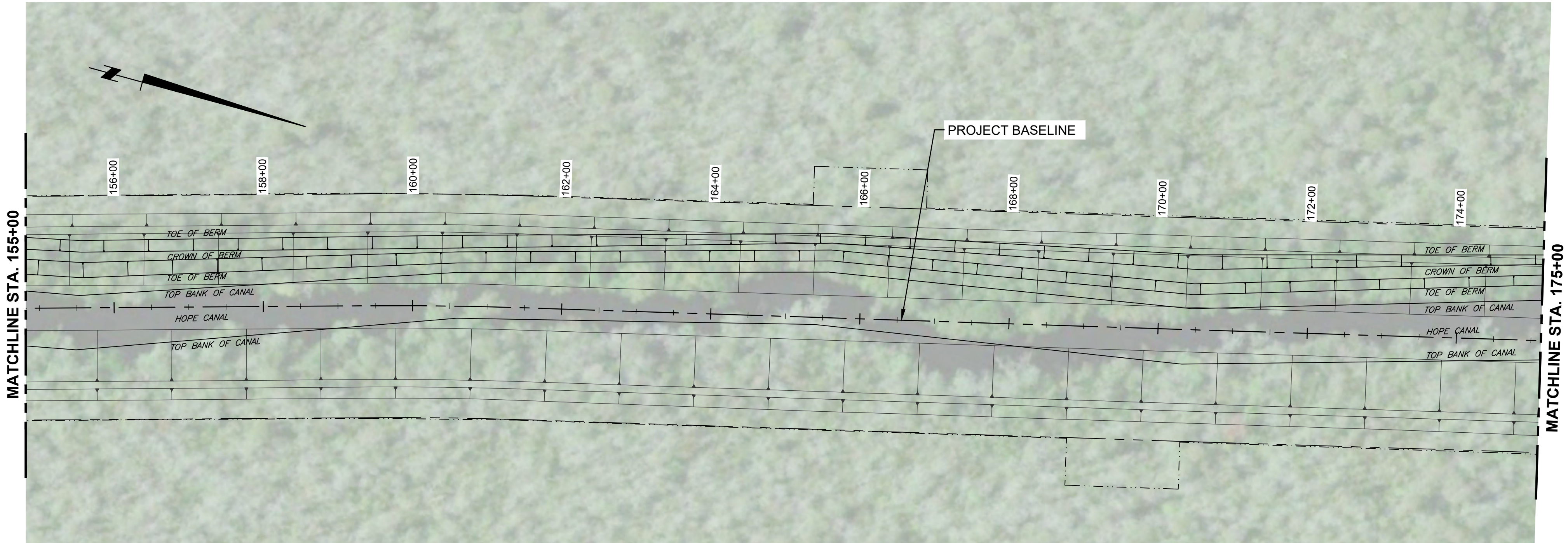
APPROVED BY:

UTILITY PLANS
STA 130+00 TO STA 155+00

DATE: SEPTEMBER 2020

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UTILITY NOTES:

- 1. ALL UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD LOCATED ALL UTILITY FOR VERIFICATION.

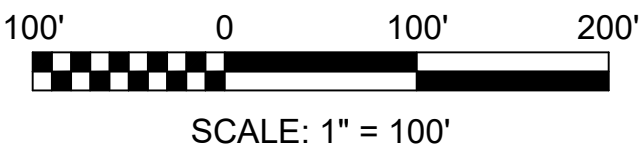
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- 5 TO BE RELOCATED BY CONTRACTOR DURING CONSTRUCTION

UTILITY DISPOSITION TABLE:

ID NO.	OWNER	DESCRIPTION	DISPOSITION
* G10	CHEVRON/TEXACO	GAS PIPELINE MARKER	1
* G11	CHEVRON/TEXACO	GAS PIPELINE	1
* G12	CHEVRON/TEXACO	GAS PIPELINE	TDB
* G12	AIR PRODUCTS	GAS PIPELINE	1

* VERIFY MARKER LOCATION



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RECORDATION,
CONVEYANCES OR SALES
PRELIMINARY - NOT FOR
CONSTRUCTION

PHILLIP OLIVIER
ENGINEER OF RECORD
LA STATE LICENSE NO. 38348
CIVIL DISCIPLINE
SEPTEMBER 2020
DATE

REV.	DATE	DESCRIPTION	BY



1515 POYDRAS ST
SUITE 2700
NEW ORLEANS, LA 70112



LOUISIANA COASTAL PROTECTION AND RESTORATION
AUTHORITY
COASTAL ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

DRAWN BY:

DESIGNED BY:

RIVER REINTRODUCTION INTO MAUREPAS
SWAMP AND WEST SHORE LAKE PONTCHATRAIN
FLOOD RISK REINTRODUCTION

CPRA PROJECT NUMBER: PO-0029

AECOM PROJECT NUMBER: 60632162

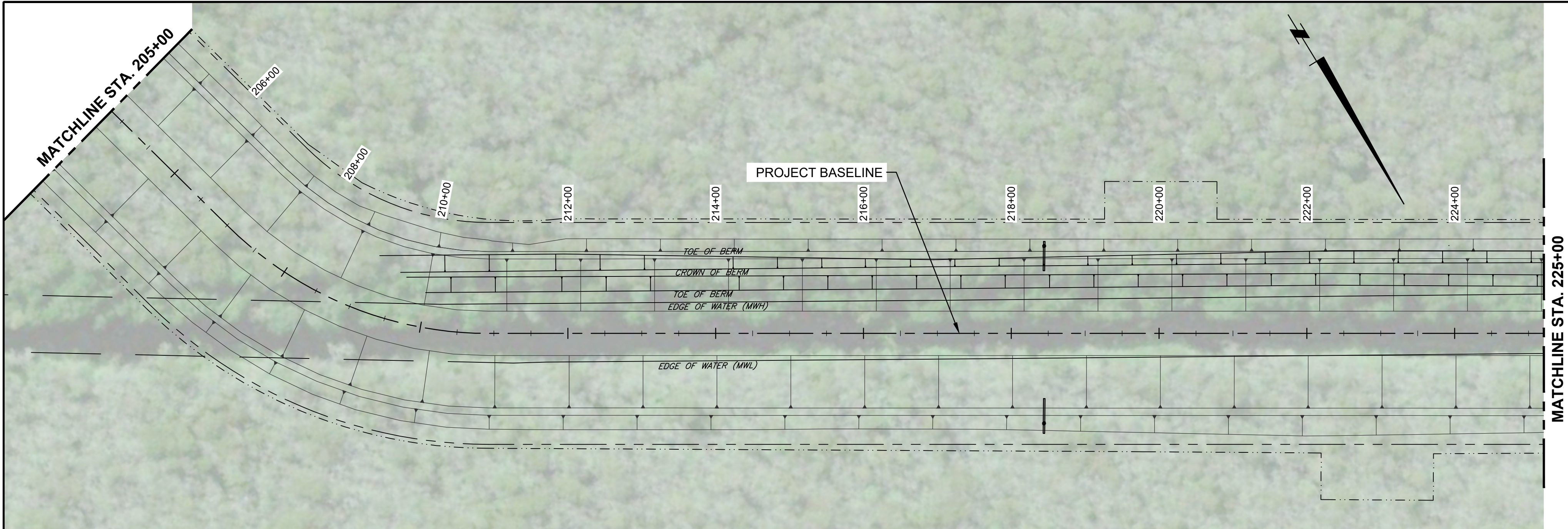
APPROVED BY:

UTILITY PLANS
STA 155+00 TO STA 205+00

DATE: SEPTEMBER 2020

SHEET CC-3.06

C:\pwworking\aecom_db20_na_2019\eric.waller@aecom.com\d0123067\Maurepas_CC-3.01 to CC-3.08.dwg, Sep 14, 2020 - 11:02:56AM, eric.waller



UTILITY NOTES:

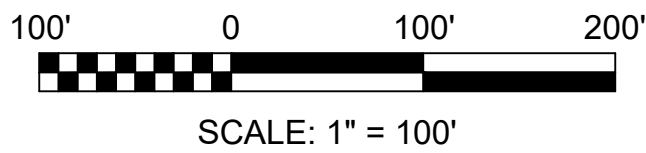
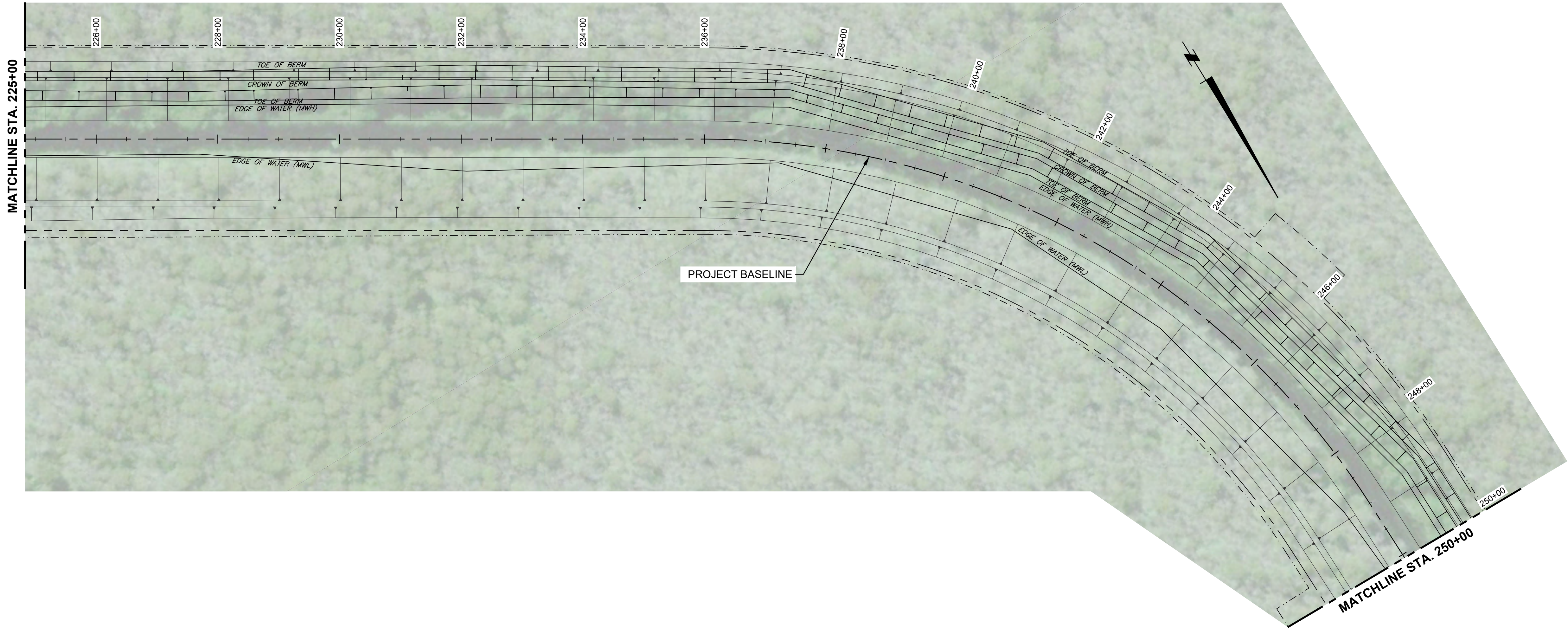
- ALL UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD LOCATED ALL UTILITY FOR VERIFICATION.

UTILITY DISPOSITION LEGEND:

- DO NOT DISTURB
- DO NOT DISTURB-ACCESS ONLY
- TO BE RELOCATED BY OWNER PRIOR TO CONSTRUCTION
- TO BE RELOCATED BY OWNER CONCURRENT WITH CONSTRUCTION
- TO BE RELOCATED BY CONTRACTOR DURING CONSTRUCTION

UTILITY DISPOSITION TABLE:

ID NO.	OWNER	DESCRIPTION	DISPOSITION
-	-	-	-



PRELIMINARY - NOT FOR
RECORDATION,
CONVEYANCES OR SALES
PRELIMINARY - NOT FOR
CONSTRUCTION

PHILLIP OLIVIER ENGINEER OF RECORD	CIVIL DISCIPLINE
LA STATE	36348 LICENSE NO.
SEPTEMBER 2020 DATE	

REV.	DATE	DESCRIPTION	BY

AECOM

1515 POYDRAS ST
SUITE 2700
NEW ORLEANS, LA 70112



LOUISIANA COASTAL PROTECTION AND RESTORATION
AUTHORITY
COASTAL ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

DRAWN BY:

DESIGNED BY:

RIVER REINTRODUCTION INTO MAUREPAS
SWAMP AND WEST SHORE LAKE PONTCHATRAIN
FLOOD RISK REINTRODUCTION

CPRA PROJECT NUMBER: PO-0029

AECOM PROJECT NUMBER: 60632162

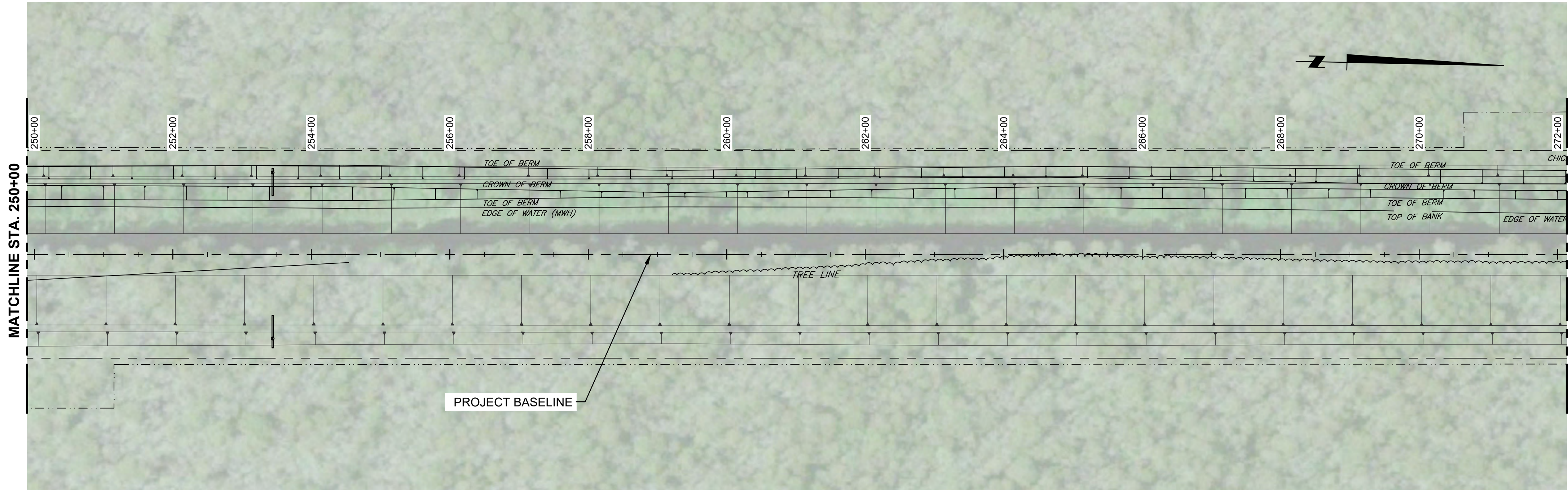
APPROVED BY:

UTILITY PLANS
STA 205+00 TO STA 250+00

DATE: SEPTEMBER 2020

SHEET CC-3.07

C:\pwworking\aecom_db20_na_2019\eric.waller@aecom.com\d0123067\Maurepas_CC-3.01 to CC-3.08.dwg, Sep 14, 2020 - 11:19:01AM, eric.waller



UTILITY NOTES:

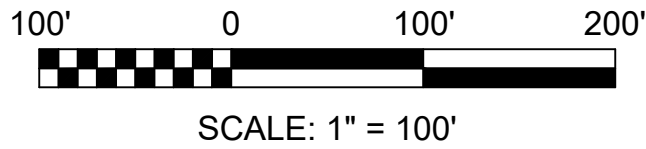
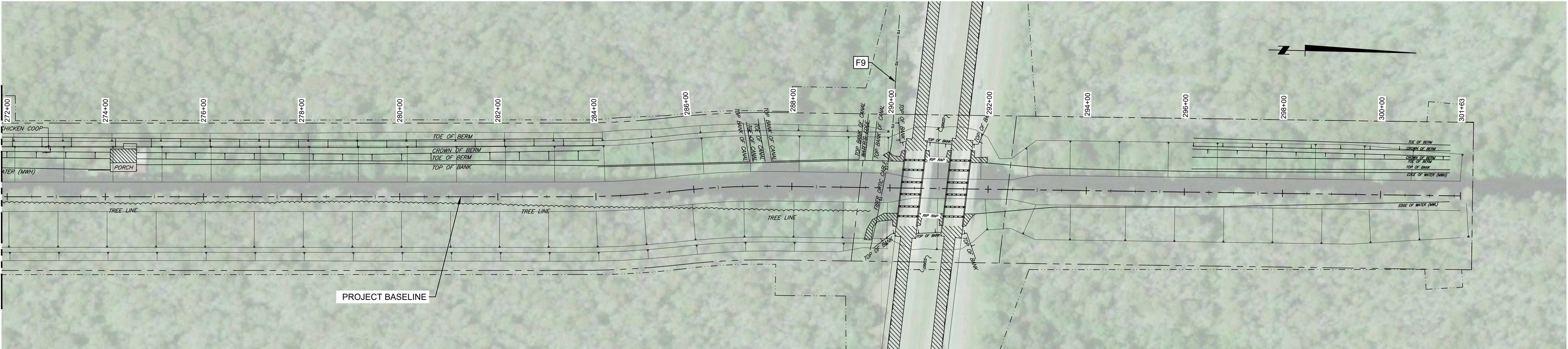
1. ALL UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD LOCATED ALL UTILITY FOR VERIFICATION.

UTILITY DISPOSITION LEGEND:

- 1 DO NOT DISTURB
- 2 DO NOT DISTURB-ACCESS ONLY
- 3 TO BE RELOCATED BY OWNER PRIOR TO CONSTRUCTION
- 4 TO BE RELOCATED BY OWNER CONCURRENT WITH CONSTRUCTION
- 5 TO BE RELOCATED BY CONTRACTOR DURING CONSTRUCTION

UTILITY DISPOSITION TABLE:

ID NO.	OWNER	DESCRIPTION	DISPOSITION
F9	AT&T	UNDERGROUND FIBER OPTIC CABLE	1



PRELIMINARY - NOT FOR
RECORDATION,
CONVEYANCES OR SALES
PRELIMINARY - NOT FOR
CONSTRUCTION

PHILLIP OLIVIER
ENGINEER OF RECORD
LA STATE LICENSE NO. 36348
CIVIL DISCIPLINE
SEPTEMBER 2020
DATE

REV.	DATE	DESCRIPTION	BY

AECOM

1515 POYDRAS ST
SUITE 2700
NEW ORLEANS, LA 70112



LOUISIANA COASTAL PROTECTION AND RESTORATION
AUTHORITY
COASTAL ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

DRAWN BY:

DESIGNED BY:

RIVER REINTRODUCTION INTO MAUREPAS
SWAMP AND WEST SHORE LAKE PONTCHATRAIN
FLOOD RISK REINTRODUCTION

CPRA PROJECT NUMBER: PO-0029

AECOM PROJECT NUMBER: 60632162

APPROVED BY:

UTILITY PLANS
STA 250+00 TO STA 301+66

DATE: SEPTEMBER 2020

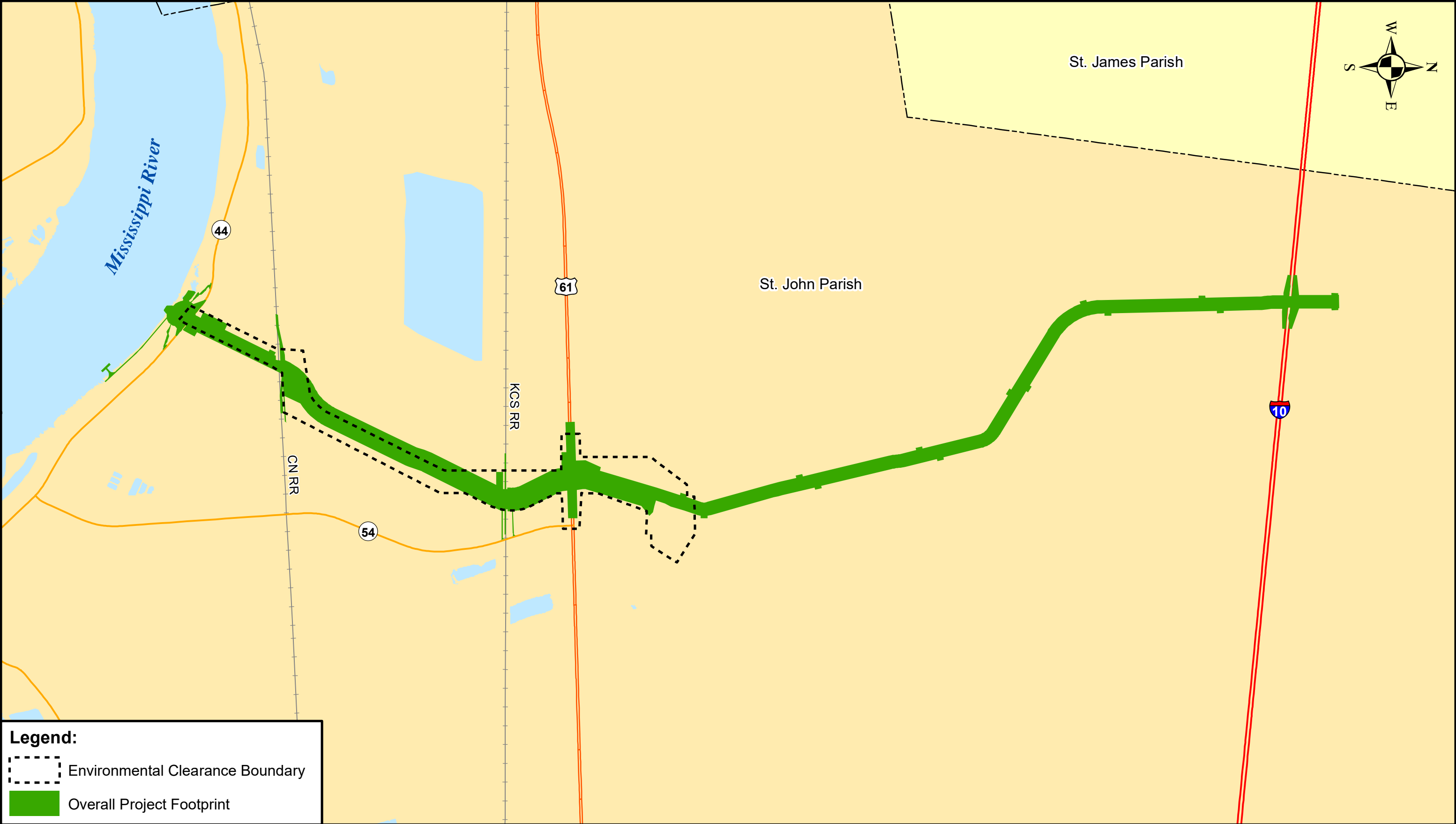
SHEET CC-3.08

**STATE OF LOUISIANA
COASTAL PROTECTION AND RESTORATION AUTHORITY**

**RIVER REINTRODUCTION INTO MAUREPAS SWAMP
AND WEST SHORE LAKE PONTCHARTRAIN FLOOD RISK
REDUCTION PROJECT PO-0029
STATE PROJECT No. PO-0062
LaGOV NO. 4400019214**

**BASIS OF DESIGN REPORT
15% DESIGN**

**APPENDIX H
SHAPEFILES SUPPLIED FOR WVA**



Legend:

Environmental Clearance Boundary

Overall Project Footprint

0 1,000 2,000 Feet

PRELIMINARY - NOT FOR RECORDATION,
CONVEYANCES OR SALES
PRELIMINARY - NOT FOR CONSTRUCTION

PHILLIP OLIVIER	CIVIL	
ENGINEER OF RECORD	DISCIPLINE	
LA	36348	NOVEMBER 2020
STATE	LICENSE NO.	DATE

REV.	DATE	DESCRIPTION	BY

AECOM

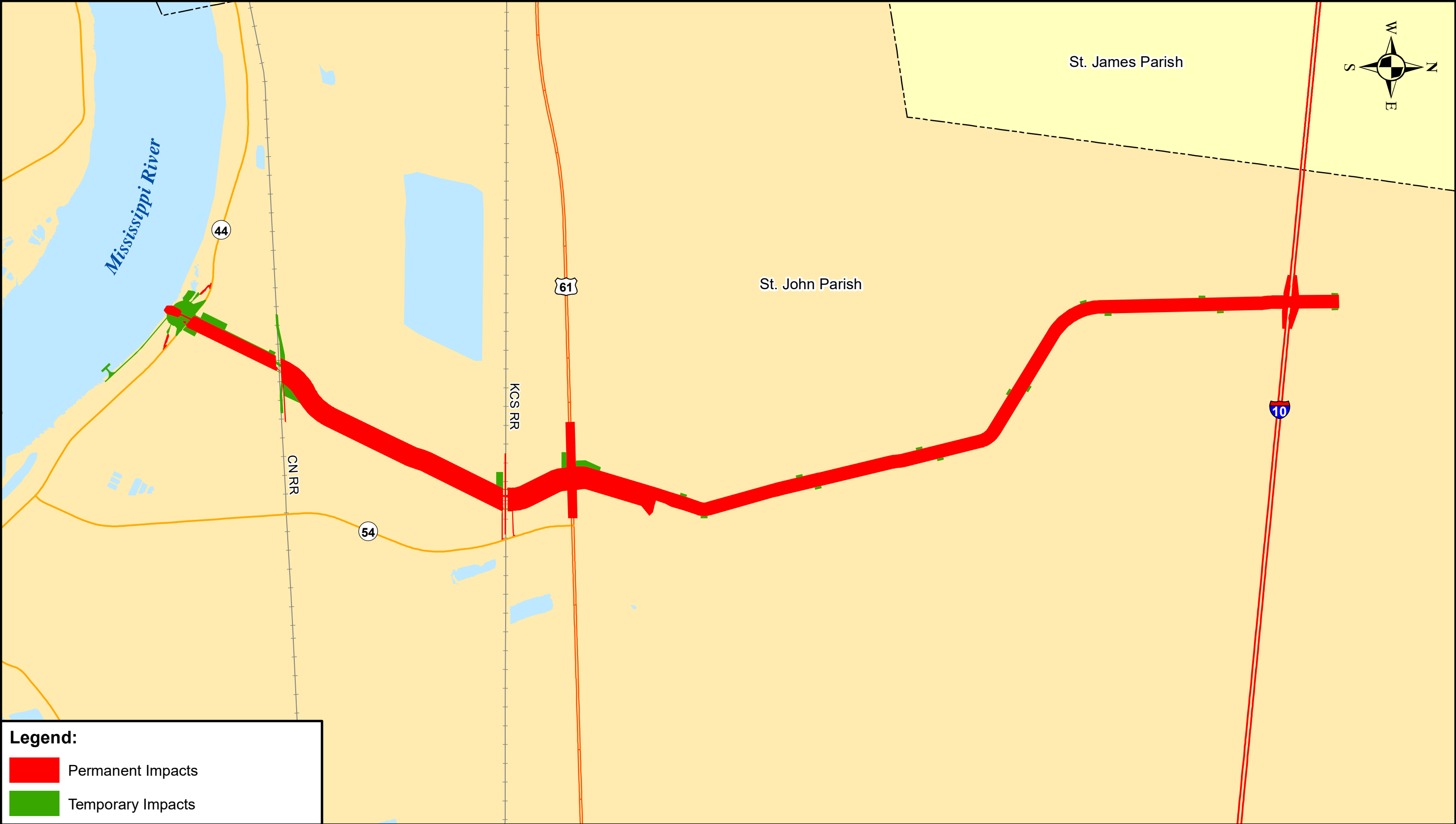
1555 POYDRAS ST
SUITE 1200
NEW ORLEANS, LA 70112

COASTAL PROTECTION AND RESTORATION AUTHORITY

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
COASTAL ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

DRAWN BY:	DESIGNED BY:
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RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHATRAIN FLOOD RISK REDUCTION PROJECT	MAUREPAS/WSLP PROJECT FOOTPRINT & ENV. CLEARANCE BOUNDARY
CPRA PROJECT NUMBER: PO-0029	
AECOM PROJECT NUMBER: 60632162	DATE: DECEMBER 2020
APPROVED BY:	APPENDIX E1



Legend:

Permanent Impacts

Temporary Impacts

0 1,000 2,000 Feet

PRELIMINARY - NOT FOR RECORDATION, CONVEYANCES OR SALES
PRELIMINARY - NOT FOR CONSTRUCTION

PHILLIP OLIVIER
ENGINEER OF RECORD

CIVIL
DISCIPLINE

LA
STATE

36348
LICENSE NO.

NOVEMBER 2020
DATE

REV.	DATE	DESCRIPTION	BY

AECOM
1555 POYDRAS ST
SUITE 1200
NEW ORLEANS, LA 70112

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY
COASTAL ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

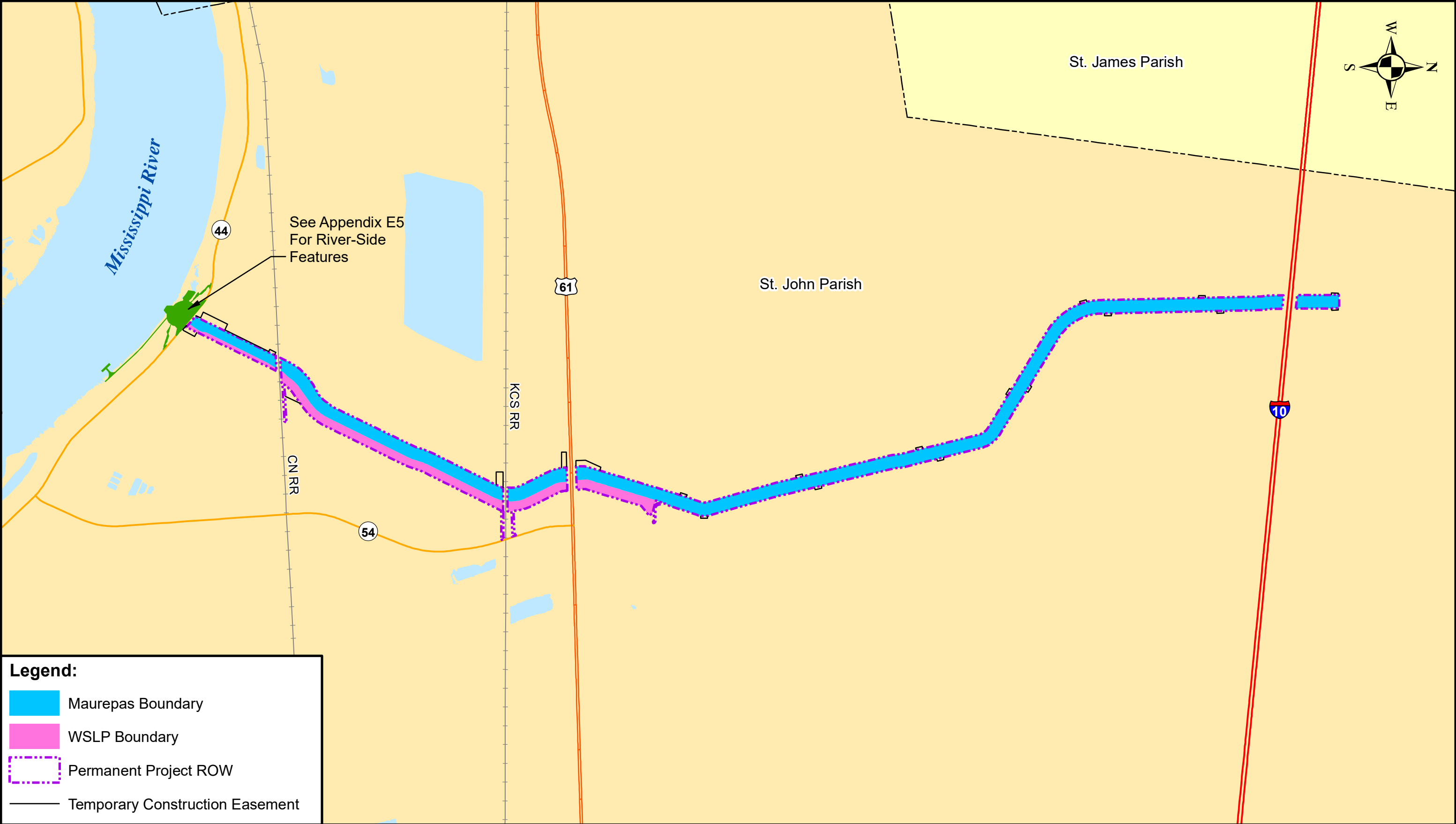
DRAWN BY:DESIGNED BY:

RIVER REINTRODUCTION INTO MAUREPAS SWAMP AND WEST SHORE LAKE PONTCHATRAIN FLOOD RISK REDUCTION PROJECT
CPRA PROJECT NUMBER: PO-0029
AECOM PROJECT NUMBER: 60632162

APPROVED BY:

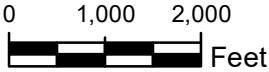
MAUREPAS/WSLP PERMANENT AND TEMPORARY IMPACTS
DATE: DECEMBER 2020
APPENDIX E2

DRAFT: 15% SUBMITTAL



Legend:

- Maurepas Boundary
- WSLP Boundary
- Permanent Project ROW
- Temporary Construction Easement



PRELIMINARY - NOT FOR
RECORDATION,
CONVEYANCES OR SALES
PRELIMINARY - NOT FOR
CONSTRUCTION

PHILLIP OLIVIER	CIVIL
ENGINEER OF RECORD	DISCIPLINE
LA	NOVEMBER 2020
STATE	DATE
36348	
LICENSE NO.	

REV.	DATE	DESCRIPTION	BY



1555 POYDRAS ST
SUITE 1200
NEW ORLEANS, LA 70112



LOUISIANA COASTAL PROTECTION AND RESTORATION
AUTHORITY
COASTAL ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

DRAWN BY:

DESIGNED BY:

RIVER REINTRODUCTION INTO MAUREPAS
SWAMP AND WEST SHORE LAKE PONTCHATRAIN
FLOOD RISK REDUCTION PROJECT

CPRA PROJECT NUMBER: PO-0029

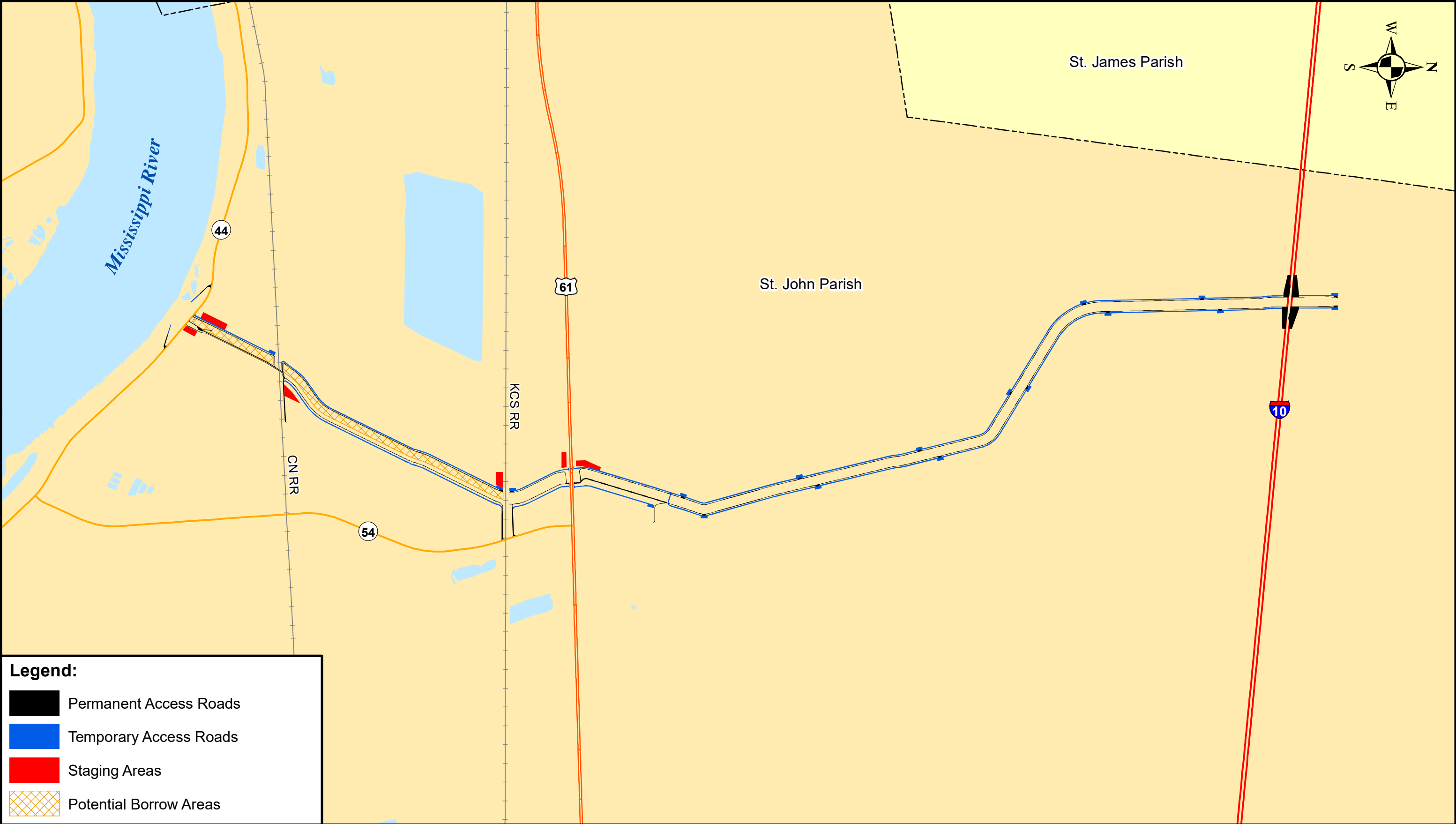
AECOM PROJECT NUMBER: 60632162

APPROVED BY:

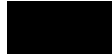



MAUREPAS/WSLP PROJECT
BOUNDARIES, ROW &
EASEMENTS

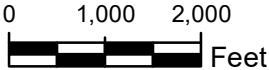
DATE: DECEMBER 2020

APPENDIX E3



Legend:

-  Permanent Access Roads
-  Temporary Access Roads
-  Staging Areas
-  Potential Borrow Areas



PRELIMINARY - NOT FOR
RECORDATION,
CONVEYANCES OR SALES
PRELIMINARY - NOT FOR
CONSTRUCTION

PHILLIP OLIVIER	CIVIL	
ENGINEER OF RECORD	DISCIPLINE	
LA	36348	NOVEMBER 2020
STATE	LICENSE NO.	DATE

REV.	DATE	DESCRIPTION	BY

AECOM

1555 POYDRAS ST
SUITE 1200
NEW ORLEANS, LA 70112



LOUISIANA COASTAL PROTECTION AND RESTORATION
AUTHORITY
COASTAL ENGINEERING DIVISION
150 TERRACE AVENUE
BATON ROUGE, LOUISIANA 70802

DRAWN BY:

DESIGNED BY:

RIVER REINTRODUCTION INTO MAUREPAS
SWAMP AND WEST SHORE LAKE PONTCHATRAIN
FLOOD RISK REDUCTION PROJECT

CPRA PROJECT NUMBER: PO-0029

AECOM PROJECT NUMBER: 60632162

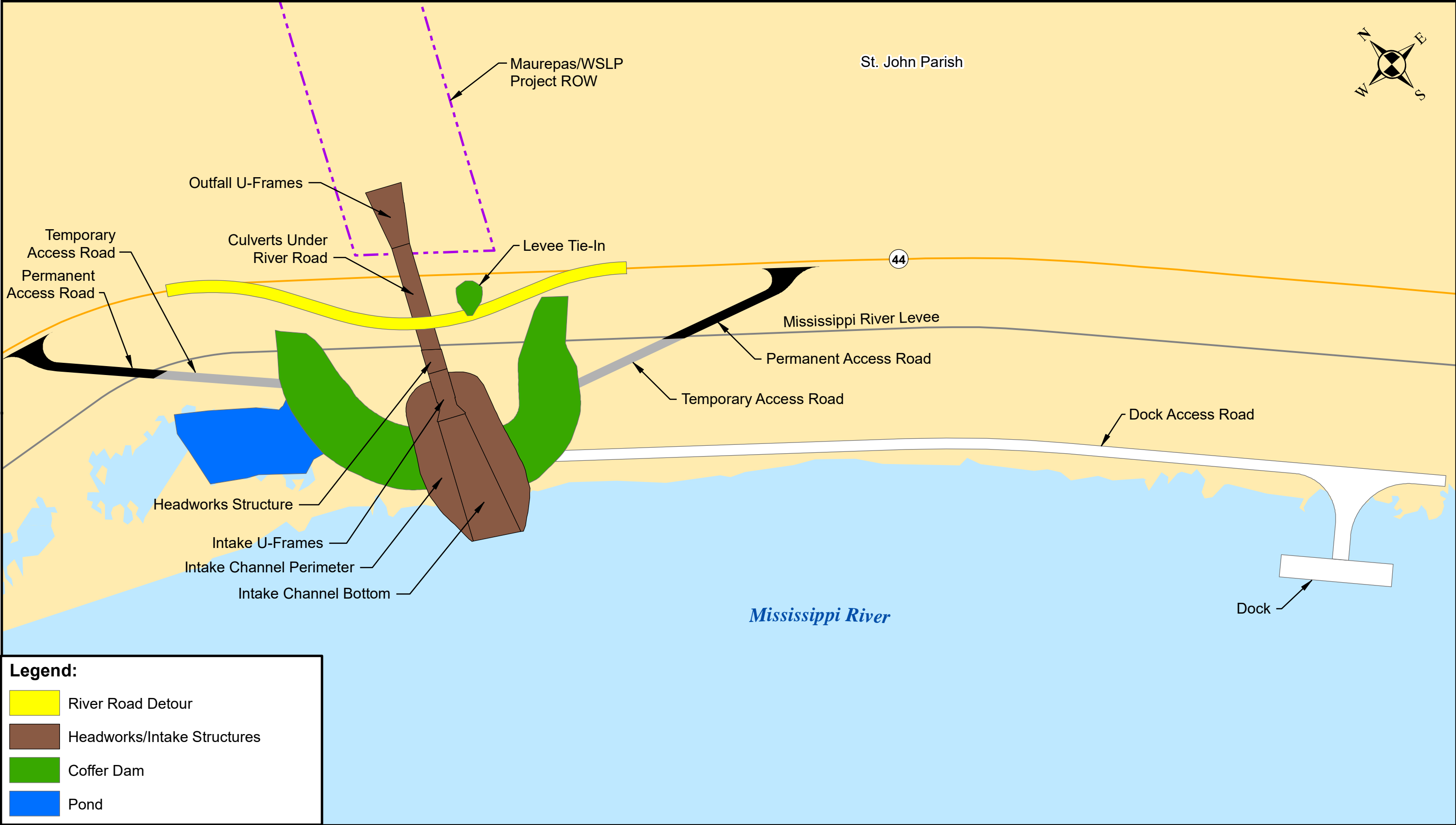
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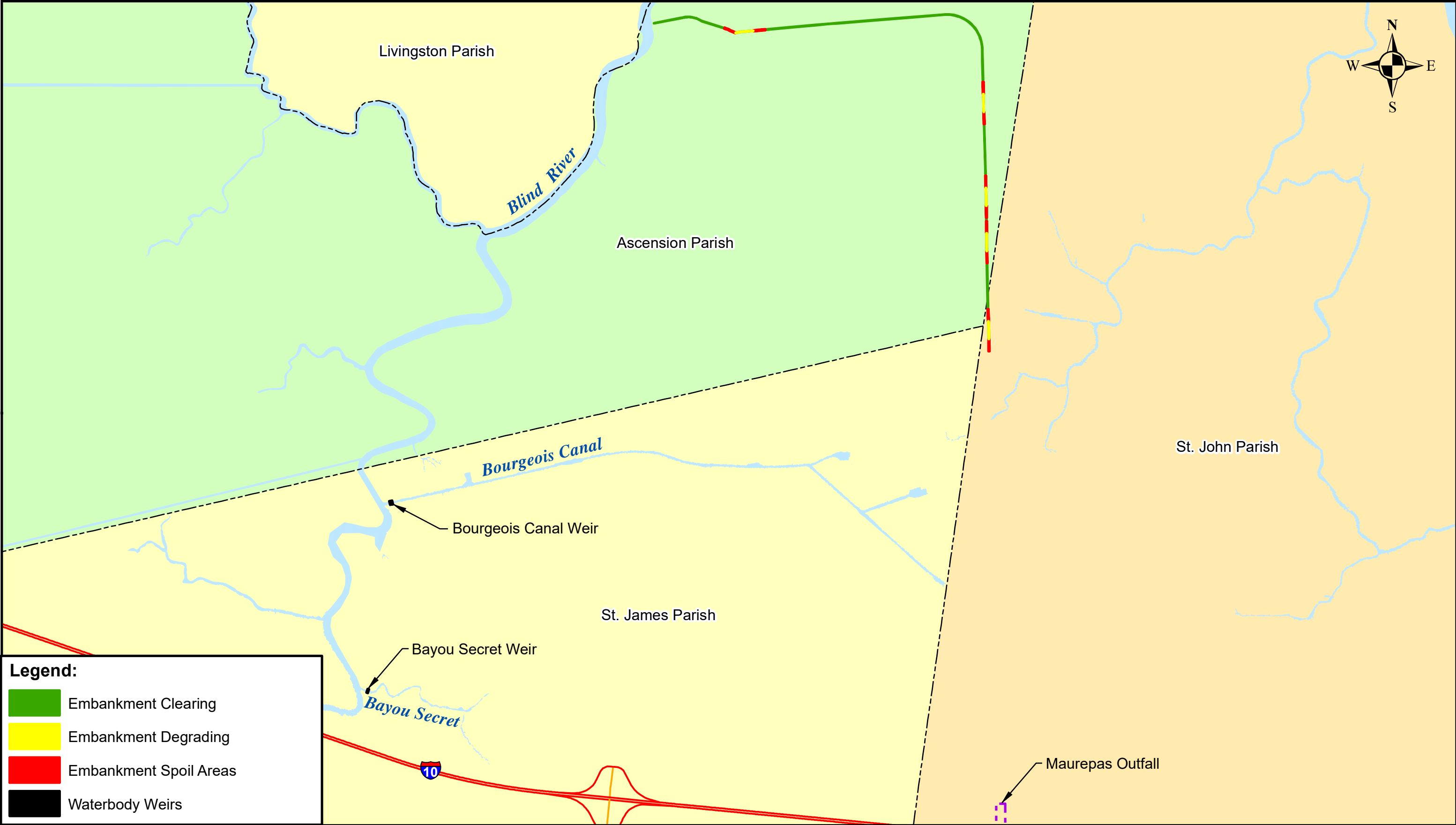
MAUREPAS/WSLP PROJECT
PERMANENT & TEMPORARY
ACCESS RDS, STAGING AREAS,
AND POTENTIAL BORROW AREAS

DATE: DECEMBER 2020

APPENDIX E4

DRAFT: 15% SUBMITTAL





Legend:

- Embankment Clearing
- Embankment Degrading
- Embankment Spoil Areas
- Waterbody Weirs

<div>01,5003,000</div> <div><div></div><div></div><div></div></div> <div>Feet</div>	<div>PRELIMINARY - NOT FOR RECORDATION, CONVEYANCES OR SALES PRELIMINARY - NOT FOR CONSTRUCTION</div> <div><div>PHILLIP OLIVIERENGINEER OF RECORDLA36348STATE</div><div>CIVILDISCIPLINE</div><div>NOVEMBER 2020DATE</div></div>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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