



LINFIELD, HUNTER & JUNIUS, INC.

PROFESSIONAL ENGINEERS,
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June 16, 2021

Mr. David deGeneres
Assistant Director of Wastewater
St. Charles Parish
Department of Public Works and Wastewater
100 River Oaks Drive
Destrehan, LA 70047

**RE: West Bank Sewer Master Plan –
Luling Oxidation Pond System
Phase II – Infiltration and Inflow (I&I) Analysis
Our File #: 20-101(c)**

Dear Mr. deGeneres:

Thank you for asking us to provide this Proposal to provide professional engineering services for Phase II of the referenced project. Phase II consists of the analysis of infiltration and inflow (I&I) in the existing sewerage system that is contributory to the Luling Oxidation Pond. A Scope of Work detailing our proposed services and Task and Manhour Breakdown for these services are attached.

We propose to provide these services for a lump sum fee of \$91,425.00 in accordance with the terms of our existing Engineering Services Agreement dated July 7, 2020.

If this proposal is acceptable, we request that an Amendment to our existing Engineering Services Agreement be prepared.

Please do not hesitate to call should you have any questions or require additional information.

Yours very truly,

LINFIELD, HUNTER & JUNIUS, INC.

Robert E. Nockton, P.E.
Vice President
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Attachments

St. Charles Parish
Westbank Sewerage Master Plan – Luling Oxidation Pond
Scope of Services – Phase II

PHASE II: INFILTRATION AND INFLOW (I&I) ANALYSIS

Scope of Work

Work under Phase II of the project consists of the analysis of infiltration and inflow (I&I) in the existing sewerage system based upon monitoring information gathered over a defined period at select lift stations within the existing St. Charles Parish sewerage system contributory to the Luling Oxidation Pond.

This work will be accomplished in the following primary tasks.

Task 1 – Data Collection and Review

The purpose of Task 1 is to clearly define the objectives of monitoring and the specific monitoring information needed to perform the I&I analysis. In this task, the Engineer will:

- Attend a Phase II Kick-off meeting with the Parish
- Assemble a list of lift station data including lift station monitoring services needed from the Parish
- Assemble available historical rainfall data
- Assemble available lift station data (pump run-times, metered flow data) from the Parish and lift station data (pump run-times, metered flow data) obtained through lift station monitoring services
- Overlay available historical rainfall data over lift station data to identify correlations between lift station pump flow volumes and run times with rainfall events

Task 2 – Infiltration and Inflow (I&I) Analysis

The Engineer will analyze the data and overlays obtained and developed in Task 1 to gain an understanding of the sewerage system infiltration and inflow mechanics. In this task, the Engineer will:

- Estimate infiltration and inflow by area and by lift station where sufficient data is available to do so
- Review available smoke test and video inspection data to evaluate conditions of existing gravity sewer lines that were previously inspected to gain an understanding of the nature of defects in the lines that contribute to infiltration and inflow

Task 3 – Prioritize Areas for Smoke Testing and Video Inspection

The Engineer will develop a program for smoke testing and video inspection of existing sanitary sewerage for the identification of defects responsible for infiltration and inflow into the existing sewerage system. In this task, the Engineer will:

- Prioritize areas for smoke testing and video inspection based upon the I&I analysis conducted in Task 2
- Develop a program for smoke testing and video inspection to further assess the condition of the existing sewerage system so that repairs and/or improvements to the existing sewerage system can be identified

Task 4 – Develop Preliminary System Improvements and Program to Address I&I

The Engineer will identify and develop schematic improvements to address I&I. These schematic improvements will form the foundation of detailed evaluation in subsequent phases of the project. A preliminary maintenance program will also be developed to address I&I on an ongoing basis. In this task, the Engineer will:

- Meet with Parish personnel to identify repairs or improvements that have previously been made to the sewerage system to address I&I
- Identify schematic improvements to the sewerage system to further address I&I
- Develop a phased maintenance program to address I&I with budgets

Task 5 – Technical Memorandum

The Engineer will prepare a Technical Memorandum summarizing the findings of Phase II with recommendations for smoke testing and video inspection and the scope of services for subsequent phases.

Fee – Phase II: \$91,425.00 (Lump Sum)

ST. CHARLES PARISH				
WEST BANK SEWER MASTER PLAN (LULING OXIDATION POND SYSTEM)				
TASK AND MANHOUR BREAKDOWN				
PHASE II - INFILTRATION AND INFLOW (I&I) ANALYSIS				
Task	Supervisor-Engineer	Senior Engineer	Pre-Professional	CAD Technician
Task 1 - Data Collection and Review				
Phase II Kick-Off Meeting	3.0	3.0	3.0	
Assemble List of Data and Lift Station Monitoring Needed from Parish	1.0	2.0	4.0	
Assemble Available Rainfall Data (12 Gages)	1.0	4.0	36.0	
Assemble Available Lift Station Data (12 Lift Stations)	2.0	8.0	72.0	
Overlay Rainfall Data on Lift Station Data	1.0	4.0	36.0	
Task 2 - Infiltration & Inflow (I&I) Analysis				
Estimate Infiltration and Inflow by Area and Lift Station (12 Lift Stations)	1.0	8.0	48.0	
Review Available Smoke Test and Video Inspection Data	1.0	8.0	40.0	
Task 3 - Prioritize Areas For Smoke Testing and Video Inspection				
Prioritize Areas for Smoke Testing and Video Inspection	2.0	4.0	16.0	
Develop Program for Smoke Testing and Video Inspection with Budgets	2.0	8.0	32.0	
Task 4 - Develop Preliminary System Improvements to Address I&I				
Meet with Parish Personnel to Identify Previous Repairs and/or Improvements to Address I&I		8.0	8.0	
Identify Schematic Sewerage System Improvements to Address I&I	1.0	8.0	32.0	
Develop Phased Maintenance Program to Address I&I	1.0	8.0	16.0	
Task 5 - Technical Memorandum				
Draft Write-Up	2.0	8.0	40.0	
Draft Maps and Figures	1.0	8.0	24.0	24.0
Prepare Tables and Graphs	1.0	4.0	24.0	24.0
QA/QC	8.0	16.0		
Finalize Technical Memorandum	2.0	4.0	8.0	8.0
Total Hours	30.0	113.0	439.0	56.0
Rate	\$250.00	\$210.00	\$125.00	\$95.00
Cost	\$7,500.00	\$23,730.00	\$54,875.00	\$5,320.00
			Total Fee:	\$91,425.00