ST. CHARLES PARISH
LOUISIANA

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PUBLIC WORKS

MATTHEW JEWELL
PARISH PRESIDENT

MILES BINGHAM, P.E.
DIRECTOR

September 29, 2021

Henry M. Picard, III
Senior Vice President
Burk-Kleinpeter, Inc.
4176 Canal Street
New Orleans, LA 70119

RE: Task Order P080905-11D
West Bank Hurricane Levee Phase IV – Tidal Protection in Des Allemands South
Sunset Drainage Pumping Station Modifications
Parish Project No. P080905-11D

Dear Henry:

Enclosed for execution is **Task Order P080905-11D West Bank Hurricane Levee Phase IV – Tidal Protection in Des Allemands South – Sunset Drainage Pumping Station Modifications**. Please have the document signed and return the original to our office.

Please consider this letter as your authorization to proceed with the Task Order Design Memorandum (Preliminary Design) step of the Engineering Services Contract, dated October 21, 2008 for Parish Project No. **P080905-11D - West Bank Hurricane Levee Phase IV – Tidal Protection in Des Allemands South – Sunset Drainage Pumping Station Modifications**. As outlined in the Engineering Services Contract, there are several deliverable dates to be met by your engineering firm throughout the Engineering Services Contract. They are as follows:

1. Task Order Pump Station Assessment Study and Report: The Pump Station Assessment Report must be submitted to SCP within **90** days, or other agreed to time, from the date of this letter of authorization. The delivery date for the Task Order Pump Station Assessment Study and Report is 12/30/21. The Conceptual report will include options utilizing existing data developed previously for the Pump Station, as well as data obtained from investigative research for the mechanical, electrical, and structural assessment of the existing pump station and prepare

100 River Oaks Drive, Destrehan LA 70047 • Phone: (985) 783-5102 • Fax: (985) 725-2250 • stcharlesparish-la.gov

recommendations for pump station modifications. Schematic layout of the proposed pump station modifications will be included in the study and report.

2. *Task Order Conceptual Design*: The Conceptual Design Report must be submitted to SCP within an agreed to time determined after the completion of the Pump Station Assessment Study and Report, from the date of this letter of authorization, as per Section 2.2.8 of the Engineering Services Contract. The delivery date for the Task Order Conceptual Design Report is 12/30/21. The Conceptual report will include options utilizing existing Geophysical and Engineering data developed previously for the Pump Station, as well as data obtained from investigative research for the drainage requirements of the area.

3. *Task Order Design Memorandum*: After written approval of the Conceptual Design Report and the authorization to proceed with Task Order Design Memorandum Report, the Design Memorandum Report must be submitted to SCP within an agreed to time, from the date of the letter of authorization for the Task Order Design Memorandum, as per Section 2.3.5 of the Engineering Services Contract.

4. *Task Order Final Design*: After written approval of the Design Memorandum Report and authorization to proceed with Task Order Final Design, the final project design shall be submitted to SCP within an agreed to time, from the date of your letter of authorization for the Task Order Final Design, as per Section 2.4.5 of the Engineering Services Contract.

5. *Task Order Construction*: After written approval of the Final Design, the completed Bidding Process and Award of the Construction Contract, the effective date of the Notice to Proceed will begin the Construction Phase of the Project for the duration of the Construction activities. A letter of authorization for Task Order Construction will be issued and Engineering Services provided as per Section 2.6 of the Engineering Services Contract.

6. *Task Order Closeout and Operation*: Closeout deliverables, which include shop drawings and record drawings, shall be submitted within 45 days after the Substantial Completion Date, as per Sections 2.7.3, 2.7.4, 2.7.7, and 2.7.9.

7. *Task Order Resident Engineering and Inspection*: After the construction duration is determined during the Bidding Process and Award of the Construction Contract, fee proposal for resident project representation (Resident Inspection) will be negotiated for the duration of the construction project closeout. Services to be provided per Section 2.8 of the Engineering Services Contract and compensation shall be determined per Paragraph 4.1.2 of the Engineering Services Contract.

Should you have any questions, please feel free to call me at (985) 783-5102.

Sincerely,

Sam Scholle

Senior Projects manager

St. Charles Public Works and Wastewater

CC: Matthew Jewel – President St. Charles Parish
Michael Palamone – Chief Administrative Officer St. Charles Parish
Project File P080905-11D

TASK ORDER

ST.CHARLES PHASED DELIVERY TYPE CONTRACT

Is hereby attached to and is part of the
CONTRACT FOR ENGINEERING SERVICES BETWEEN
ST. CHARLES PARISH AND BURK-KLEINPETER, INC.

as described in Ordinance No. 08-10-7

TASK ORDER No. P080905-11D

TASK ORDER DESCRIPTION

Provide pump station assessment study and report, design, bidding, construction, resident inspection, and closeout services to construct modifications at the Sunset Drainage Pumping Station under Project No **P080905-11D –West Bank Hurricane Levee Phase IV – Tidal Surge Protection in Des Allemands South**. This task order will complete the pump station assessment study and report, design, bidding, construction, and closeout phases for new modifications at the Sunset Drainage Pumping Station, resulting in an effective and operable facility to provide proper flood protection and drainage for residents within the Sunset Drainage Basin.

SCOPE OF SERVICES

Engineering and Construction Services

Section 2.2 – 2.4

Conceptual Design – Develop initial design concepts or alternatives to implement project. The Conceptual Design Report is to include, as a minimum, the following:

- Project background
- Review Engineering and Geophysical data and use that data to develop Conceptual Design alternatives to provide flood protection and drainage
- Utilize drainage data obtained from investigative research to develop Conceptual Design alternatives
- Layouts, Sketches and Photos
- Conceptual Design Criteria
- Special Material Specifications
- Preliminary Cost Estimate for each alternative
- Engineering conceptual opinion of probable costs for selected alternative
- Project Master Schedule
- Task Order Project Schedule
- Permits needed and timing to acquire

- Surveying needed and Land owner authorizations/servitudes needed

Submit two (2) copies of the Conceptual Design Report for review. Once review is complete, submit two (2) copies of the revised report and one (1) electronic copy in PDF format.

Design Memorandum – Revise the Conceptual Design and begin Preliminary Design. Preliminary Design Report is to include, as a minimum, the following:

- Determine what servitudes are required for the construction and operation of the Levee and Structures, temporary road, demolition and construction areas.
- Determine what permits are required.
- Determine what additional services (surveying) are required.
- Preliminary drawings 11x17 min size.
- Revise opinion of probable cost.
- Submit estimate to acquire permits within 15 days after Design Memorandum authorization.
- Submit estimate or requirements of additional services needed within 15 days after Design Memorandum authorization.

Submit two (2) copies of the Preliminary Design (Design Memorandum) Report for review. Once review is complete, submit two (2) copies of the revised report and one (1) electronic copy in PDF format.

Final Design – Complete design incorporating comments from review of the Preliminary Design. Final Design to include, as a minimum, the following:

- Revised probable cost estimate.
- Preparing the contract/bid document that includes St. Charles Parish's Standardized Construction Contract files and the added engineer's specifications for review and approval by the Owner.

Submit three (3) copies of the contract/bid document for review. Once the contract/bid document has been finalized, submit six (6) stamped copies of the revised document plus one (1) electronic file copy in PDF format. Submit three (3) copies of the drawings – D Size for review. Once the drawing review is complete, submit six (6) stamped copies of the revised drawings plus one (1) electronic file copy of each drawing in AutoCADD format (release 2000 or later) and in PDF format.

Section 2.5 – 2.8 Bidding, Construction/Close Out, Resident Engineer/Inspection – Provide bidding, construction/close out, and inspection according to sections 2.5-2.8 of the contract.

Training, Manuals, and Drawings

6 sets of equipment O&M manuals

6 sets of shop drawings

1 final set of printed drawings, with AutoCADD format (release 2000 or later) and PDF format final drawing files, plus red line drawing set, per section 2.7.7

Section 5.0

Additional Services – Provide engineering services as determined during the design process in conformance with Section 5.0 of the Engineering Services Contract.

Sunset Drainage Pumping Station Assessment Study and Report – Develop recommendations and alternatives to implement project and determine the assessment of the existing Sunset Pump Station. The Sunset Drainage Pumping Station Assessment Study and Report is to include, as a minimum, the following evaluations:

- Engine Replacement
- Pump Rehabilitation
- Discharge Piping
- Station Automation
- Gear Replacement
- Existing Pump Station Structure
- Existing Pump Station Electrical

COMPENSATION

Engineering Services

Compensation will be based on Curve A Exhibit C page 21 and section 4.1 of the contract and is based on a Total Construction Cost of $TBD. This Construction Cost will be revised based upon the results of the Hydrologic & Hydraulic Study.

Estimated Construction Cost	Total Fee $TBD
ASCE Curve A	TBD%
Calculated Fee	$TBD
Conceptual Design 10%	$TBD
Preliminary & Final Design 60%	$TBD
Bidding, Construction, Close Out 30%	$TBD
Resident Engineer/ Inspection – NTE*	TBD
Total	$TBD

*Resident Engineer / Inspection will be bill on an hourly basis with a not to exceed amount that will determined based on the construction duration established as part of the final design.

Additional Services
Reference Section 4.2 of the contract for any compensation.

Survey and Geotechnical Investigations – No Surveying (topographic, property boundary, hydrographic, etc.) or Geotechnical Engineering (borings, geotechnical analysis, etc.) are part of this Task Order. These services will be provided by the Owner.

Pump Station Assessment Study and Report – $149,137.64 See attached proposal.

If you agree with the Scope of Services and Compensation as outlined herein, please indicate your acceptance by signing on the line provided below, dating and returning a copy to our office.

BURK-KLEINPETER, INC.

Henry M Picard, III
Senior Vice President
09/30/21
Date

ST CHARLES PARISH

Sam Scholle
Senior Projects Manager
9-29-2021
Date

SUNSET DRAINAGE PUMP STATION (CRAWFORD CANAL) ASSESSMENT STUDY AND REPORT

SCOPE OF WORK

This assessment report intends to examine the existing pump station to determine its reliability. The report will investigate the cost of modifying the station to incorporate future flood protection systems and the effect of those flood protection modifications on pumping capacity. It will examine the options available to alleviate current pump train shortfalls and use that analysis as a decision-making process when considering the construction of a replacement station. The report will also produce budgetary estimates for the automation of the existing pump station to allow control through the Parish's SCADA system.

REPORT CONSIDERATIONS

1) Engine Replacement
    a) An analysis of the engine age, operating hours, rebuilds and the availability of replacement parts will be used to determine if the assessment report will recommend engine replacement. The age and design of the engine makes automation nearly impossible, and this would go far in making the decision to replace them. If the engine is to be replaced, the following topics will be explored:
        1) The least intrusive method to replace the existing engines is to match the speed of the current pump system. This will allow the existing gear to be reused. However, slow speed engines can be very limited and therefore expensive. A comparison of the 1100 RPM engine replacement and using higher speed engines with a gear replacement will be examined. Selecting the highest speed engine available that will allow the existing gear to be replaced with another single reduction gear may be less expensive than simply replacing the 1100 RPM engine and reusing the existing gear.
        2) With the replacement of the engine, and possibly the gear, an analysis of changing pump speeds would be prudent. If the pump speed can be increased, the pump train will produce higher heads which could overcome the future additional system hydraulic losses. Otherwise, the extension of the discharge tubes for flood protection construction, will result in a reduction of capacity. Likewise, an analysis of the pumping capabilities at hurricane heads is needed. Although additional head and flow can be realized through increased speed, there are limitations. If project hurricane standing water levels exceed the capability of the pump at any increased operating speed the modification of the existing pump is futile.
        3) The existing pump train limits the static head available for priming the discharge piping system. An analysis of the cost to produce a system that allows the invert of the discharge to be raised will pair well with the desire to automate this station. With higher inverts on the discharge piping comes less concern about nuisance tidal events causing backflow. However, this static increase in priming head may be more than the pump can produce.
        4) A new engine/gear can be used to increase capacity and produce much better flow conditions for discharge tube siphon priming. This will become more valuable with the extension of the discharge piping for placement of a future flood protection structure.

5) An analysis of the engine radiator cooling shall also be explored to determine alternatives to the skid mounted, engine driven radiator so that radiator ducting is not blocking interior access to the other engines.

2) Pump Rehabilitation
   a) Visual inspections of the pumps will have to be performed to determine if pump components require rehabilitation to extend their useful lives. The pump discharge will not allow accurate flow measurements due to the lack of straight line flow, therefore, it may be prudent to check pump shaft torques and relate the pump horsepower to the original pump curve. Should the field measured torque readings produce the pump horsepower predicted by the pump curve, it gives confidence that the pump is producing a similar discharge rate since the loading of the propeller matches the original model performance.
   b) Existing pump columns and elbows should be ultrasonically measured for metal thicknesses to determine its predictable life span.
   c) If engines are to be replaced and higher pump capacities/heads can be achieved, an analysis of the pump shafting must be performed to determine if the existing shafting is capable of operating under higher torques.
   d) A vibration analysis of the pump will be performed to determine if any harmful vibrations present can reduce the pumps useful life. The analysis will provide some insight into bearing and shaft condition.
3) Discharge Piping
   a) If the report recommends the replacement of engines, gears and if pumps are modified to produce higher heads and capacities, recommendations will be made to coordinate future designs that require flood protection discharge piping extensions. The coordination of the selection of new pump train equipment is critical to prevent loss in pump capacity for these future piping modifications.
   b) The extension of the discharge piping for future flood protection projects can only be performed if modifications to the existing operating floor is performed. Although this expense is a cost of the flood protection work, it will have bearing on the decision making process presented in this assessment.
4) Station Automation
   a) The assessment of this station will investigate requirements for automation of the station through the Parish's SCADA system. The station operation will be reviewed, and cost will be developed to provide remote operation capability for all critical systems.
   b) One of the critical systems is the supply of natural gas to the engines. Currently the operator can manually select either the normally used pipeline gas supply or switch to the Atmos commercial gas supply should issues arise with the pipeline supply. Costs shall be developed to automate the selection of supply based on available pressures.
   c) Should a decision be made to incorporate electrically powered radiators for each pump drive, the station will now require enough emergency backup power to supply the radiator motors during a loss in commercial power. Location, cost, and electrical system adaptation would have to be studied.
5) Gear Replacement
   a) Should the economic analysis indicate the replacement of the gear is the recommended path forward for the existing pump train, this analysis shall explore using the existing pump and

gear support for support of the proposed gear. This will require producing methods to retrofit the support that will provide the proper alignment needed for the pump's rotating assembly clearances.

b) This report shall also provide recommendations regarding cooling of the replacement gear by looking at continuing to use a gear supplied air cooled system, providing a separate air cooled heat exchanger, or using cooling water circuits through potable water cooling or raw water cooling.

6) Structure
   a) The station structure will be examined to determine what cost will be required to extend the life of the building and its structural components.
   b) The assessment report will review new equipment operating heat loads and its effect on the existing system louvers and ventilator system.
   c) Selection of new engine and pump drive components will be done with floor plan spacing in mind. If new faster engines can be economically installed, its footprint will be much smaller than that of the existing area. This will create more space for system maintenance. Should this alternative be recommended a new floor plan layout will be provided so a better understanding of space utilization can be realized.
   d) Currently, the location of the existing compressed air storage receivers causes conflict with removal of the engine PTO/Clutch. Providing a smaller engine footprint will allow the engine to be separated from these receivers or allow additional floor space that would permit placement of vertical air receivers that are not in conflict with the clutch maintenance.
   e) The current access between each pump engine requires entrance through the discharge side door since there is no cross walk within the building. The selection of an engine with a smaller footprint may open the passage that will not require the operator to exit the building to achieve access to the opposite side of the adjacent engine. This will also require a remote mounted vertical electric or hydraulically powered radiator so that radiator ductwork is not blocking the crosswalk area.

7) Station Electrical
   a) An analysis of the station electrical system shall also be explored in this report. Should a recommendation be made to utilize remote motor driven radiator fans for engine cooling, the electrical system shall be evaluated for normal and emergency backup power of those added electrical loads.
   b) Adding automation to the system will require electrical input and an analysis of the system will be explored.

ST CHARLES PARISH
SUNSET DRAINAGE PUMP STATION (CRAWFORD CANAL) ASSESSMENT

Burk-Kleinpeter, Inc.
Fee Proposal

MANHOUR ESTIMATES

SCOPE ITEM	DESCRIPTION	SHEETS	0001 PRINC.	0002 VICE PRES.	0003 SEN. P.M.	0004 SEN. E	0005 CIVIL E.	0006 STR. E.	0007 ENV. E.	0008 MECH. E	0009 ELEC. E.	00010 SR CADD TECH.	00011 CADD TECH.	00012 CLERICAL	00013 RES INSP	TOTAL
			$286.00	$237.00	$209.00	$175.00	$142.00	$142.00	$145.00	$138.75	$142.00	$130.00	$97.00	$59.25	$82.00	
A	**MISCELLANEOUS**															
1	Review of Parish Furnished Items		0	2	9	0	0	0	0	0	0	0	0	0	0	2,355.00
2	Initial Site Investigation		0	0	36	0	0	0	0	0	0	0	0	0	0	7,524.00
3	Additional Field Investigations and Documentation		0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
4	Project Meetings with the Parish		0	3	9	0	0	0	0	0	0	0	0	0	0	2,592.00
	TOTAL HOURS		0	5	54	0	0	0	0	0	0	0	0	0	0	59
	COST		$0.00	$1,185.00	$11,286.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$12,471.00
B	**ENGINE REPLACEMENT EVALUATION**															
1	Develop Speed Curves		0	1	12	0	0	0	0	0	0	0	0	0	0	2,745.00
2	Prepare Engine Replacement Cost Estimate		0	0	6	0	0	0	0	0	0	0	0	0	0	1,254.00
3	Prepare Operating Floor Plan		0	4	36	0	0	0	0	0	0	0	0	0	0	8,472.00
4	Determine Radiator and Fan Type		0	2	18	0	0	0	0	0	0	0	0	0	0	4,236.00
5	Rewiew Operating Floor Plan versus Existing Equipment		0	0	4	0	0	0	0	0	0	0	0	0	0	836.00
6	Review Station Ventilation versus Heat Load		0	1	6	0	0	0	0	0	0	0	0	0	0	1,491.00
	TOTAL HOURS		0	8	82	0	0	0	0	0	0	0	0	0	0	90
	COST		$0.00	$1,896.00	$17,138.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$19,034.00
C	**PUMP REHABILITATION EVALUATION**															
1	Prepare Priming Head Analysis		0	1	6	0	0	0	0	0	0	0	0	0	0	1,491.00
2	Evaluate Need For Vacuum Assist		0	1	12	0	0	0	0	0	0	0	0	0	0	2,745.00
3	Analyze Flow and Head Loss for Existing Condition		0	1	6	0	0	0	0	0	0	0	0	0	0	1,491.00
	Analyze Flow and Head Loss for Hurricane Condition		0	1	12	0	0	0	0	0	0	0	0	0	0	2,745.00
4	Determine Optimum Pump Operating Speed		0	3	24	0	0	0	0	0	0	0	0	0	0	5,727.00
5	Analyze Pump & Bowl Shaft Sizing		0	1	8	0	0	0	0	0	0	0	0	0	0	1,909.00
6	Analyze Pump Vibration Data for Reliability		0	0	6	0	0	0	0	0	0	0	0	0	0	1,254.00
7	Analyze Pump Torque Data for Reliability		0	1	8	0	0	0	0	0	0	0	0	0	0	1,909.00
8	Analyze Ultrasonic Metal Readings for Reliability		0	1	6	0	0	0	0	0	0	0	0	0	0	1,491.00
9	Prepare Pump Modification/Replacement		0	3	24	0	0	0	0	0	0	0	0	0	0	5,727.00
	TOTAL HOURS		0	13	112	0	0	0	0	0	0	0	0	0	0	125
	COST		$0.00	$3,081.00	$23,408.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$26,489.00
D	**DISCHARGE PIPING EVALUATION**															
1	Analyze flow and Head Loss for Future Condition		0	1	6	0	0	0	0	0	0	0	0	0	0	1,491.00
	TOTAL HOURS	0	0	1	6	0	0	0	0	0	0	0	0	0	0	7
	COST		$0.00	$237.00	$1,254.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$1,491.00

ST CHARLES PARISH
SUNSET DRAINAGE PUMP STATION (CRAWFORD CANAL) ASSESSMENT

Burk-Kleinpeter, Inc.
Fee Proposal

MANHOUR ESTIMATES

SCOPE ITEM	DESCRIPTION	SHEETS	0001 PRINC.	0002 VICE PRES.	0003 SEN. P.M.	0004 SEN. E	0005 CIVIL E.	0006 STR. E.	0007 ENV. E.	0008 MECH. E	0009 ELEC. E.	00010 SR CADD TECH.	00011 CADD TECH.	00012 CLERICAL	00013 RES INSP	TOTAL
			$286.00	$237.00	$209.00	$175.00	$142.00	$142.00	$145.00	$138.75	$142.00	$130.00	$97.00	$59.25	$82.00	
E	**STATION AUTOMATION EVALUATION**															
1	Prepare List of Equipment to be on SCADA		0	1	12	0	0	0	0	0	0	0	0	0	0	2,745.00
2	Provide Recomendation of SCADA Fuel Controls		0	1	12	0	0	0	0	0	0	0	0	0	0	2,745.00
3	Provide Recomendation SCADA Tower		0	1	8	0	0	0	0	0	0	0	0	0	0	1,909.00
	TOTAL HOURS		0	3	32	0	0	0	0	0	0	0	0	0	0	35
	COST		$0.00	$711.00	$6,688.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$7,399.00
F	**GEAR REPLACEMENT EVALUATION**															
1	Analyze Grear Reduction Requirements		0	1	4	0	0	0	0	0	0	0	0	0	0	1,073.00
2	Analyze Existing Gear Support		0	2	18	0	0	0	0	0	0	0	0	0	0	4,236.00
	TOTAL HOURS		0	3	22	0	0	0	0	0	0	0	0	0	0	25
	COST		$0.00	$711.00	$4,598.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$5,309.00
G	**STRUCTURE EVALUATION**															
1	Evaluate Existing Building with Recommendations		0	3	40	0	0	0	0	0	0	0	0	0	0	9,071.00
2	Analyze Existing Floor Beam Modifications		0	2	24	0	0	0	0	0	0	0	0	0	0	5,490.00
3	Analyze Potential Building Expansion		0	4	32	0	0	0	0	0	0	0	0	0	0	7,636.00
	TOTAL HOURS		0	9	96	0	0	0	0	0	0	0	0	0	0	105
	COST		$0.00	$2,133.00	$20,064.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$22,197.00
H	**STATION ELECTRICAL EVALUATION**															
1	Analyze Existing Electrical System		0	4	32	0	0	0	0	0	0	0	0	0	0	7,636.00
2	Determine Additional Power Loads Incudeding SCADA		0	2	16	0	0	0	0	0	0	0	0	0	0	3,818.00
3	Review Generator Capacity and ATS		0	1	8	0	0	0	0	0	0	0	0	0	0	1,909.00
4	Prepare Recommendation For Generator and ATS		0	2	16	0	0	0	0	0	0	0	0	0	0	3,818.00
5	Coordinate SCADA and Telemetry Requirements		0	1	8	0	0	0	0	0	0	0	0	0	0	1,909.00
	TOTAL HOURS		0	10	80	0	0	0	0	0	0	0	0	0	0	90
	COST		$0.00	$2,370.00	$16,720.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$19,090.00

ST CHARLES PARISH
SUNSET DRAINAGE PUMP STATION (CRAWFORD CANAL) ASSESSMENT

Burk-Kleinpeter, Inc.
Fee Proposal

MANHOUR ESTIMATES

SCOPE ITEM	DESCRIPTION	SHEETS	0001 PRINC.	0002 VICE PRES.	0003 SEN. P.M.	0004 SEN. E	0005 CIVIL E.	0006 STR. E.	0007 ENV. E.	0008 MECH. E	0009 ELEC. E.	00010 SR CADD TECH.	00011 CADD TECH.	00012 CLERICAL	00013 RES INSP	TOTAL
			$286.00	$237.00	$209.00	$175.00	$142.00	$142.00	$145.00	$138.75	$142.00	$130.00	$97.00	$59.25	$82.00	
I	**REPORT PREPARATION**															
1	Prepare DRAFT Report		0	9	88	0	0	0	0	0	0	0	0	0	0	20,525.00
2	Incorporate Owner's Comments		0	3	32	0	0	0	0	0	0	0	0	0	0	7,399.00
3	Prepare FINAL Report		0	3	32	0	0	0	0	0	0	0	0	0	0	7,399.00
	TOTAL HOURS		0	15	152	0	0	0	0	0	0	0	0	0	0	167
	COST		$0.00	$3,555.00	$31,768.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$35,323.00
	TOTAL HOURS		0	67	636	0	0	0	0	0	0	0	0	0	0	703
	TOTAL COST		$0.00	$15,879.00	$132,924.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$148,803.00

Other Direct Costs	$334.64
Subtotal Basic Services	$149,137.64
For Geotechnical Engineering and Related Items	$0.00
For Topographic Survey	$0.00
Total Lump Sum Fee	**$149,137.64**

OTHER DIRECT COSTS

SCOPE ITEM	DESCRIPTION		MILEAGE (PER MILE)	VELLUMS (PER SF)	MYLARS (PER SF)	BLUELINES (PER SF)	8 1/2 X 11 COPIES (EACH)	11 x 17 COPIES (EACH)	ELECT. MEDIA	TOTAL
			$0.51	$0.75	$1.50	$0.20	$0.10	$0.20	$25.00	
1	DRAFT Report		264				750	125		$234.64
2	FINAL Report		0				750	125		$100.00
3										$0.00
4										$0.00
5										$0.00
6										$0.00
7										$0.00
8										$0.00
9										$0.00
	TOTAL UNITS		264	0	0	0	1500	250	0	
	TOTAL OTHER DIRECT COSTS		$134.64	$0.00	$0.00	$0.00	$150.00	$50.00	$0.00	$334.64