







July 20, 2017

Don Wilcox, Public Works Director
City of Soledad
P.O. Box 156
Soledad, CA 93960

**Subject: Scope and Fee to Prepare Emergency Design Drawings to the City of Soledad
Wastewater Treatment Plant (WWTP) Slope Repairs
Engineering Contract - Task #67**

Harris & Associates is pleased to submit this proposal to prepare emergency design drawings to repair the City of Soledad (City) WWTP Slope Bank. The proposed improvements are necessary to repair the toe and bank of the slope on the waterside due to erosion caused by the Salinas River during winter storms of 2016 and 2017. The slope provides protection to the City and to the City's WWTP. The slope has sustained several pockets of erosion that has left the slope vulnerable to a breach. A breach would cause significant impacts to the operations of the WWTP and this repair effort is a proactive approach to mitigate for those impacts. The drawings will present a mitigation effort to repair the slope and provide the necessary bank slope protection during highwater events.

Harris' team to deliver on the emergency design drawings will be Frank Lopez and Alex Yescas. Both are certified floodplain managers and have been involved in flood mitigation strategies in Monterey County. Alex has prepared design drawings and provided direction to several levee improvement projects including emergency repair projects across the state. The Harris team will deliver a design that will allow the City to determine the cost measures necessary to implement and determine the potential cost reimbursements from the United States Army Corps of Engineers (USACE), FEMA and/or Cal Office of Emergency Services (OES). Please note that the improvements to repair the slope are to prevent further erosion of the slope and not for levee accreditation by FEMA.

The following lists our scope for work for this assignment:

TASK 1: PROJECT MANAGEMENT

This task will include oversight of the project budget and schedule, and coordination with City staff. Harris will attend staff and council meetings as requested by the City. We will also manage the bid process.

Deliverable: Monthly Progress Reports and Meeting Agendas

TASK 2: DATA RESEARCH AND BASEMAPPING

This task involves researching the levee as-built drawings and Salinas River Hydraulic Models. Field assessments will take place to measure the length and width of the pockets of erosion. A Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS) backup data will be requested from FEMA to support the current 100-year base flood elevations shown on the FEMA Flood Insurance Rate Map. These models will be used to evaluate the highwater along the WWTP and determine the river velocity distribution along the levee bank. Basemapping will be developed based upon best available data from the City, including available topo survey information and geotechnical data from the City.

Deliverable: FEMA Hydraulics Models and Summary of Preliminary Findings

TASK 3: HYDRAULICS AND SCOUR ANALYSIS

Harris will evaluate the Salinas River hydraulics using the Hydraulic Engineering Center's River Analysis System version 5.0 (HEC-RAS) for the 100-year storm event. We will evaluate the shear stresses and velocities along the levee bank to compare to the recommendation of improvements that are in-line with the study Permissible Shear and Velocity for Selected Lining Materials, in Stability Thresholds for Stream Restoration Materials, EMRRP Technical Notes developed by the USACE Research and Development Center in 2001. The scour evaluation will be reviewed along with recommendations from the California Bank and Shore Rock Slope Protection Design (October 2000) and the USACE Design and Construction of Levee Engineering Manual 1110-2-1913. No new hydrology will be developed for this analysis.

Deliverable: Hydraulics and scour countermeasures recommendations

TASK 4: FINAL DESIGN


Harris will prepare the final design and bid set following approval of the selected recommendation under task 3. The bid set will include the final drawings, specifications, and opinion of probable costs. We estimate up to five drawing sheets will be developed. This task also includes budget for the necessary survey needed to prepare the design.

Deliverable: Final Bid Set


Our proposed fee for this effort is shown in Exhibit A, which will be provided on an "hourly not-to-exceed" basis. Additional efforts unforeseen at the authoring of this task order will be provided under a subsequent authorization.

We look forward to working with the City on this important task. Please feel free to call me directly should you have any questions.

Regards,
HARRIS & ASSOCIATES, Inc.


Frank S. Lopez, PE, QSD, CFM
Director, Engineering Services

Accepted:


By: City of Soledad

9/3/17

Date



EXHIBIT A

**City of Soledad Wastewater Treatment Plant Slope Repairs
Cost of Services Worksheet**



Harris & Associates.

Project Schedule	2017	
	Aug	Sep
Calendar days	31	30
Work days	23	21
Hrs	184	168
Project Management		
Data Research and Basemapping		
Hydraulics and Scour Analysis		
Final Design		

Staffing	
Project Director	\$210
Project Engineer	\$135

Task	Hours		Total Fee
	Aug	Sep	
Task 1: Project Management			
Project Director	12	24	\$7,560.00
Task 1 Subtotal			\$7,560.00
Task 2: Data Research and Basemapping			
Project Director	8		\$1,680.00
Project Engineer	40		\$5,400.00
Task 2 Subtotal			\$7,080.00
Task 3: Hydraulics and Scour Analysis			
Project Director	16		\$3,360.00
Project Engineer	40		\$5,400.00
Task 3 Subtotal			\$8,760.00
Task 4: Final Design			
Project Director	12	8	\$4,200.00
Project Engineer	120		\$16,200.00
Survey (Sub)			\$15,000.00
Sub markup (7.5%)			\$1,125.00
Task 4 Subtotal			\$36,525.00
TOTAL HOURS =	248	32	
Total Fee (includes Sub) =			\$59,925.00