Google Earth image captured April 12, 2019. Note the temporary by-pass line highlighted in orange which passes on the east side of the plunge pool.

In order to keep rock from filling the proposed by-pass drain, we envision a simple, rugged system, perhaps using head gates, to allow the staff to divert the low flow water.

We may suggest moving the inlet upstream from the location shown in the sketch furnished in the RFP, to a point nearer the outlet headwall to better capture water leaving the Low Flow Conduit, but there may be permitting challenges with this idea.

Downhill, the manhole at the southeast corner of the plunge pool, can be modified or reconstructed perhaps including a large manual valve, if desired.

Besides the care required for designing the inlet structure for the 14-inch HDPE by-pass, the largest challenge could be the delicate profiling of the HDPE line through the rock slope

protection along the east edge of the plunge pool. We envision that these rocks will be salvaged and set aside for the pipeline work, then replaced.

View looking south along the approximate alignment for the proposed HDPE By-Pass Pipe. Note Rock Slope Protection which covers the ground here.

During construction, we suggest dewatering the plunge pool earlier in the construction year to "dry things up" before trenching here—but considering the volume of water we saw in June 2019, the pumping operation could require a fair cost.

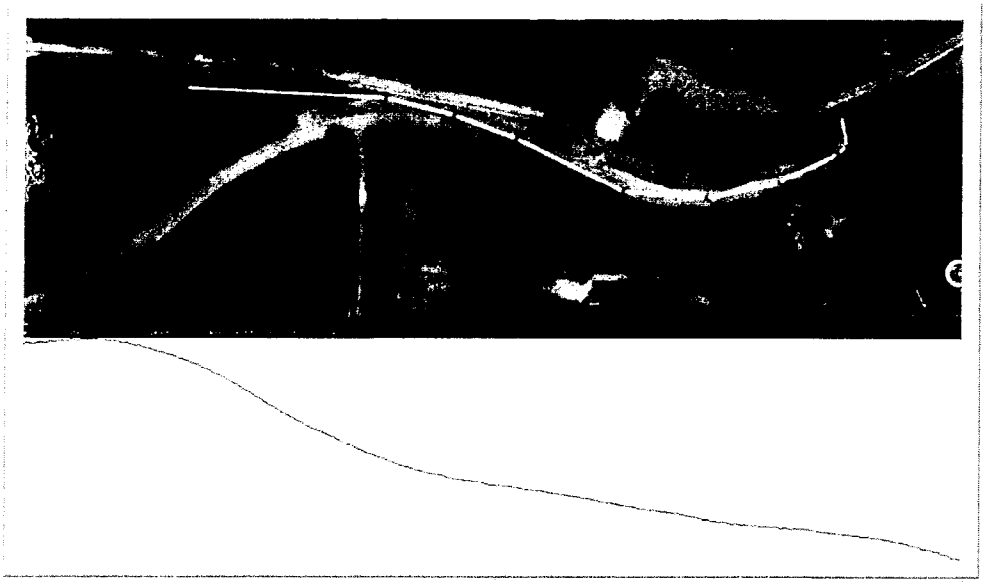
As an option, perhaps a diversion could be made further upstream, perhaps at the proposed "pressure manhole" to capture most of the water in the Low Flow Conduit to bypass the plunge pool, discharging through the west side of the channel.

Perhaps this diversion would be the permanent one. Although this run is longer, it could be easier to build. On the other hand, interflow in the old Creek, might make this concept infeasible.

Regardless of the option, Bengal will work with the District to evaluate the hydraulics of the system as needed As an option, perhaps a diversion could be made further upstream, perhaps at the

Concept plan and profile for a by-pass line placed on west side of channel.

North



Proposed "72-inch Pressure Manhole"

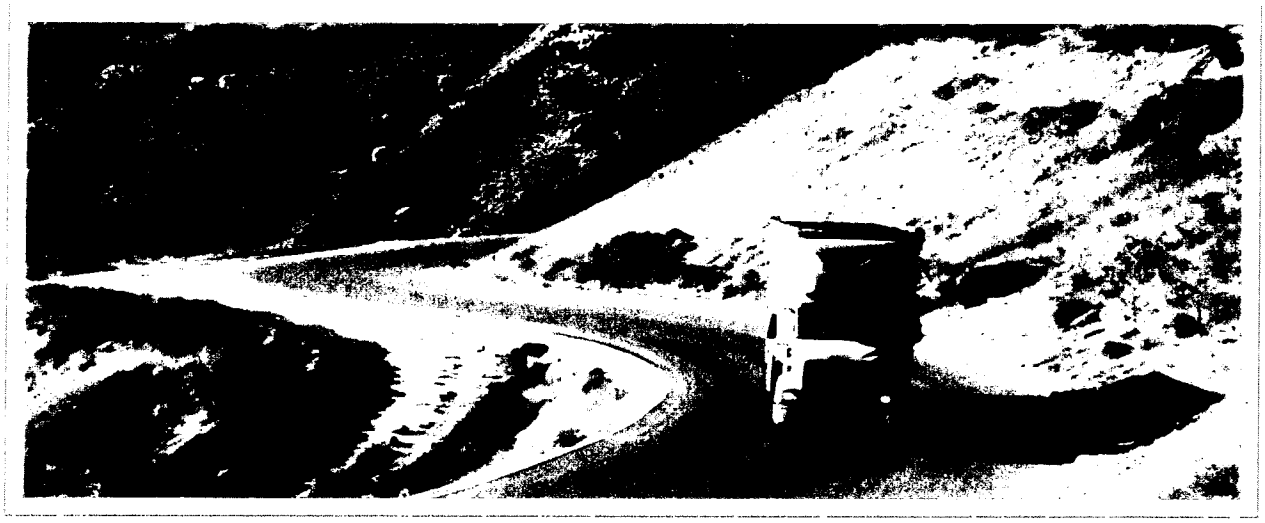
The District has requested a pressure manhole to allow inspection / cleaning of the Low Flow Conduit. The location selected provides access west of the channel. Considering the confined space, we wonder if it might be better to provide a larger say 6-foot wide x 10-foot long "chamber" to accommodate boring equipment and workers. We'd like to discuss this idea with the District before proceeding with design of this feature.

Paving/Roadway Improvements

Various roadway improvements are proposed including surfaces using gravel, asphalt, and concrete according to use and location. Bengal Engineering has designed County roads for heavy industrial use, including those within Tajiguas Landfill (shown above) and the South Coast Regional Transfer Station.

Bengal Engineering has a clear understanding of what the district needs for roadways in each location.

And Bengal is also thinking of cost-savings for the district. For instance, we would plan to "crunch-up" the existing spill way bridge and use the concrete in the super structure for base under the paved roadways.



Tajiguas Landfill: Bengal designed specialized roadways for heavy traffic in steep country.

Bengal's Experience with Applicable Design Guidelines:

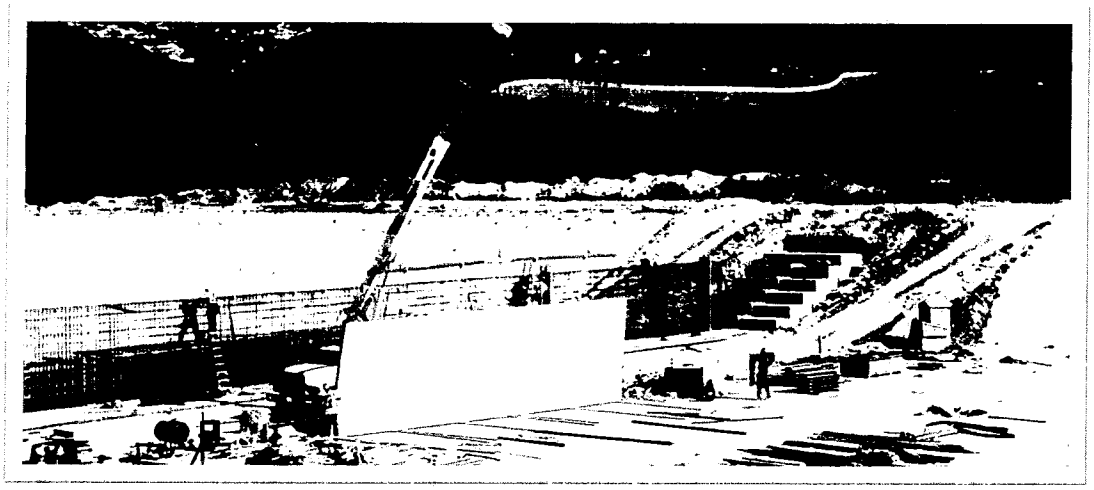
Bengal has many years of experience including many local projects using the following guidelines:

- California DWR, Division of Safety of Dams
- Natural Resources Conservation Service
- USACOE
- USBR / COMB
- Caltrans / FHWA

Some project examples using these various codes include:

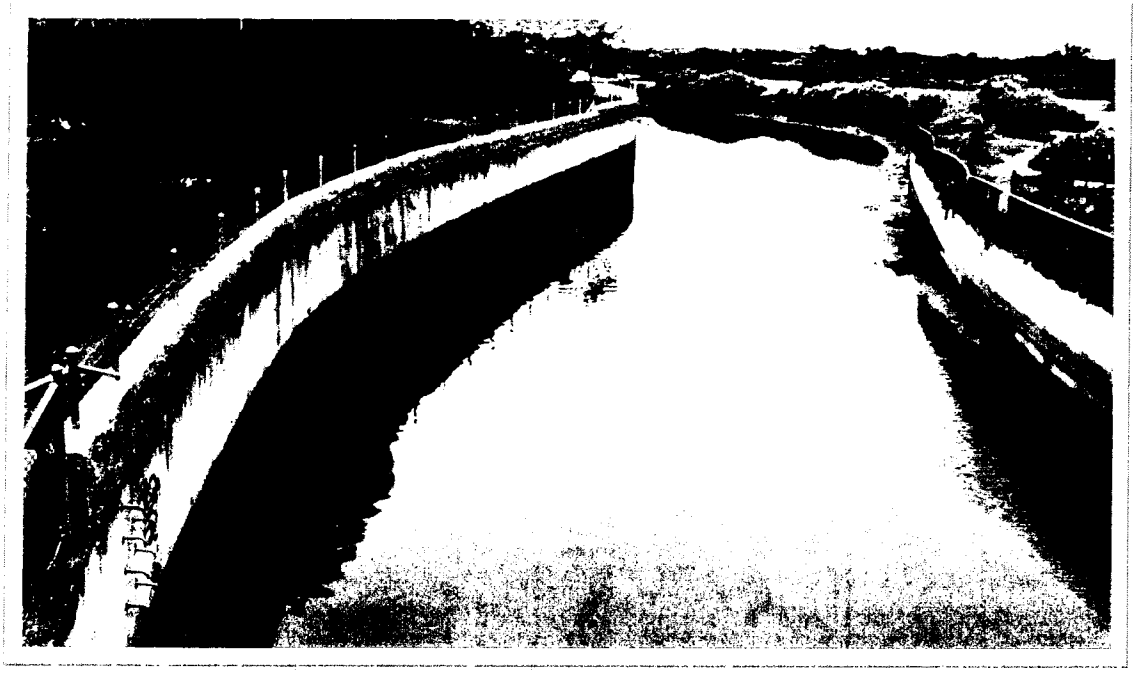
Underground Water Storage Tank at Rancho Monte Alegre

Bengal performed the geotechnical investigation and preliminary engineering analysis for this tank just a few hundred feet away from the Santa Monica Debris Basin.



Carpinteria Reservoir - Bengal Engineering prepared the Geotechnical Report and designed the structural components for the reservoir retrofit for Carpinteria Water Dstr.

Lake Piru Spillway Dam - Bengal designed the bridge retrofit for United Water Conservation District.



Channel Wall Extensions at Franklin Creek - Bengal designed this project for SBCFCD.

More local flood control project which Bengal designed:

San Jose Creek Capacity Improvements

Carpinteria Salt Marsh Flood Wall

Lower Mission Creek, Reach 1B

4. SCOPE OF WORK: PERFORMANCE WORK STATEMENT

Bengal Engineering will prepare "bid ready" documents, including the plans, specifications, and engineer's estimate, and become the Engineer of Record for the Project. This section outlines the detailed scope of work, Bengal's understanding of the deliverables, along with a detailed cost and budget methodology.

The elements of the Project to be designed consist of the remedial measures described in Section 2.3 of the Department's RFP and the items described in District's Santa Monica Debris Basin Engineering Report (District; September, 2018) and the Santa Monica Debris Basin Preliminary Design Alternatives Report.

TASKS AND DELIVERABLES

The scope of work includes the following tasks and associated deliverables:

1. PROJECT MANAGEMENT, TEAM LEADERSHIP, AND QUALITY CONTROL

a. Manage, administer, and coordinate all work including QA/QC

b. Coordinate with and inform District Project Manager of schedule, design, or budget changes

c. Prepare agenda, task list, minutes, and attend monthly meetings

2. PRELIMINARY ENGINEERING AND DATA GATHERING

a. Review Santa Monica Debris Basin Topographic Survey (Stantec, 2019) and perform supplemental field survey as needed for Final Design.

b. Review Santa Monica Spillway Bridge Inspection and Type Selection Report (Bengal, 2019) and perform supplemental geotechnical field investigation and engineering as needed for Final Design.

Details of Bengal's Geotechnical Services are shown at the end of this section.

c. Develop conceptual designs of the Spillway and Channel bridges for review and approval by the District.

d. Develop alternatives analysis and conceptual design of preferred alternative to modify inlet towers, including grate hydraulics for review and approval by the District.

e. Develop alternatives analysis and conceptual design of preferred alternative to improve tower access crane pads for review and approval by the District.

3. 65% DESIGN SUBMITTAL

a. Prepare and submit plans, specifications (technical special provisions only), and engineer's estimate based on input received during preliminary engineering and data gathering.

b. Prepare and submit a design documentation report that documents the design, methods, analyses, and decisions made by the Project team.

c. Coordinate review of plans, specifications, engineer's estimate and design documentation report by the NRCS. Accept, review and address comments received back from the NRCS.

d. Coordinate review of plans, specifications, engineer's estimate and design documentation report by the DSOD. Accept, review and address comments received back from the DSOD.

4. ~~95~~ 100% DESIGN SUBMITTAL

a. Update and submit plans, specifications (technical special provisions only), and engineer's estimate based on input received during the review of the 65% Design submittal.

b. Update and submit a design documentation report that documents the design, methods, analyses, and decisions made by the Project team.

c. Coordinate review of plans, specifications, engineer's estimate and design documentation report by the NRCS. Accept, review and address comments received back from the NRCS.

d. Coordinate review of plans, specifications, engineer's estimate and design documentation report by the DSOD. Accept, review and address comments received back from the DSOD.

~~5. 100 % DESIGN SUBMITTAL~~

~~a. Update and submit plans, specifications (technical special provisions only), and engineer's estimate based on input received during the review of the 95% Design submittal.~~

~~b. Update and submit a design documentation report that documents the design, methods, analyses, and decisions made by the Project team. Coordinate review of plans, specifications, engineer's estimate and~~

~~design documentation report by the NRCS. Accept, review and address comments received back from the NRCS.~~

~~c. Coordinate review of plans, specifications, engineer's estimate and design documentation report by the DSOD. Accept, review and address comments received back from the DSOD.~~

5. BIDDING SUPPORT

a. Attend a pre-bid meeting and field walk.

b. Respond to contractor RFIs as required.

c. Assist in the preparation of Addenda as needed.

d. Review and comment on Bid results as requested by the County.

Design Standards

- Bengal's work will be designed in accordance with the latest editions of pertinent standards including: the latest Santa Barbara County design standards, AASHTO LRFD Bridge Design Specifications, NRCS design standards, and Caltrans regulations, policies, procedures, guidelines, and standards.

- Bengal notes that the Division requests that Special Provisions must conform to Caltrans 2010 Standard Specifications format. Because the bridge work—will be designed using later design standards, Bengal will work with the Division to meld the bridge design, using current standards with the older-format specifications, to achieve the Division's goals.

- All deliverables will comply with County, State, and Federal regulations.

- All deliverables will be in English units.

- NRCS design standards include, but may not be limited to:
  - National Engineering Manual, June 2017
  - Conservation Practice Standard 350, Sediment Basin, May 2016
  - Engineering Technical Release 30, Structural Design of Standard Covered Risers, August 1965
  - Engineering Technical Release 60, Dams and Reservoirs, May 2019
  - Engineering Technical Release 67, Reinforced Concrete Strength Design, August 1980
  - Engineering Technical Release 68, Seismic Analysis of Risers, August 1982

DETAILS PROPOSED GEOTECHNICAL SERVICES

Bengal will provide geotechnical engineering (including seismic design) services for the project. The scope of work for our geotechnical services will be developed and executed in accordance with procedures included in Exhibit 11-C, Foundation Investigation for Design (of Bridge Structures) of the current Caltrans Local Assistance Procedure Manual (LAPM).

Our geotechnical engineering services for the bridge work will be provided in accordance with Caltrans' current policy, procedures, standards and specification documents, including but not limited to:

a. AASHTO LRFD Bridge Design Specifications, 4th Edition (2007) with Caltrans California Amendments.

b. Seismic Design Criteria (2013)

c. AASHTO Guide Specifications for LRFD Seismic Bridge Design. 2nd Edition with 2012 and 2014 Interim Revision.

d. Bridge Memo to Designers MTDs, specifically 1-35, 4-1 and 3-1

e. Corrosion Guideline (2012), 2nd Edition

f. Caltrans Soil and Rock Logging, Classification, and Presentation Manual (2010)

g. Foundation Report Preparation for Bridges

h. Caltrans ARS Online (v2.2.06)

Preliminary geotechnical services for the project will consist of site reconnaissance and data review, subsurface exploration using a track- and truck-mounted drill rig, geotechnical testing of soil samples; engineering analyses and geo-hazards evaluation, and preparation of a Draft Geotechnical Report (DGR).

DRAFT GEOTECHNICAL REPORT

Bengal will compile the field and laboratory test results and prepare a Draft Geotechnical Report (DGR). The DGR will be prepared to aid in the preparation of the Bridge

General Plans and Foundation Plans, along with the road improvement plans (65% level).

The DGR will document the following:

a. The generalized subsurface soil and groundwater conditions;

b. Preliminary seismic information and qualitative assessment of geologic hazards such as seismicity, fault ground rupture hazards, liquefaction potential, and seismic settlement. Seismic information will include preliminary data on the (a) identification of and seismic source parameters for the nearby faults, (b) Design Acceleration Response Spectrum (ARS) developed using Caltrans ARS Online Tool (Version 2.0) for the seismic design of the bridge structure, and (b) Design Peak Ground

Acceleration (PGA) and (c) Design Earthquake Magnitude for geotechnical seismic hazard analysis and design.

c. Geotechnical input to potential foundation types; their advantages and disadvantages for the project sites, capacities, and a recommended foundation type.

d. Preliminary opinions regarding construction considerations related to excavation characteristics of the soils encountered, adjacent structures, and foundation construction.

e. Recommendations for structural sections for the proposed roadway improvements.

f. Findings, preliminary opinions and preliminary recommendations will be documented in a Draft Geotechnical Report.

FINAL GEOTECHNICAL REPORT

As presented above the field exploration, laboratory testing, preliminary geotechnical evaluation, and Draft Geotechnical Report will be completed during the prior phase of this project.

After the type selection and once the draft structure plans with selected foundation type, support locations, and the design loads (service, strength and seismic) are available, Bengal will prepare a Geotechnical Report (GR) as per MTD 1-35.

Bengal will address Draft Geotechnical Report review comments, as appropriate, and prepare and submit a final Geotechnical Report for the project. A Log of Test Borings (LOTB) sheet will also be provided in the report.

In general, the GR will be prepared by updating the items included in the DGR. It will also include results of additional analysis and recommendations necessary for the preparation of the structure PS&E. The Geotechnical Report is anticipated to include the following items:

a. Soil/ rock, and groundwater conditions encountered.

b. Site geology, faulting and seismicity.

c. Potential for geologic hazards to impact the project and geotechnical seismic design recommendations (such as, surface rupture hazard design ARS, design PGA and Earthquake Magnitude , and secondary seismic hazards including soil liquefaction, slope instability and/or lateral spreading, landslides, flooding/inundation, and ground subsidence).

d. Foundation design recommendations

e. Lateral earth pressures, spring constants, and passive pressure resistance for abutment design; and

f. Construction considerations specific to the site conditions and the recommended foundation type.

g. Deliverables

h. Geotechnical Report (GR)

ASSUMPTIONS AND EXCLUSIONS

1. We assume stakeholders will participate proactively throughout the course of the project and that the project will proceed uninterrupted.

2. County's "red lines" will be made on half sized drawings. County will organize a single set of redline plans for Bengal's use.

3. We assume the County will route the plans through the various review agencies as part of the reviews and that these reviewers will interact with the District.

4. Specifications: Effort shown in the Fee Estimate is for Bengal's work to create the "Technical Specification" (Caltrans-2010 format). Others will assemble the bid package with all the "boilerplate".

5. Project Meetings: the figure shown in the Fee Estimate is a budget figure.

6. Utility agreements /relocation will be performed by others.

7. Erosion control plans will be included in the plans. The preparation of Stormwater Pollution Protection Plan will be included as a construction contract item and is not part of the "design".

8. Reproduction and scanning of the Construction Bid Documents will be performed by the District.

9. No "Design exceptions" are expected for the work.

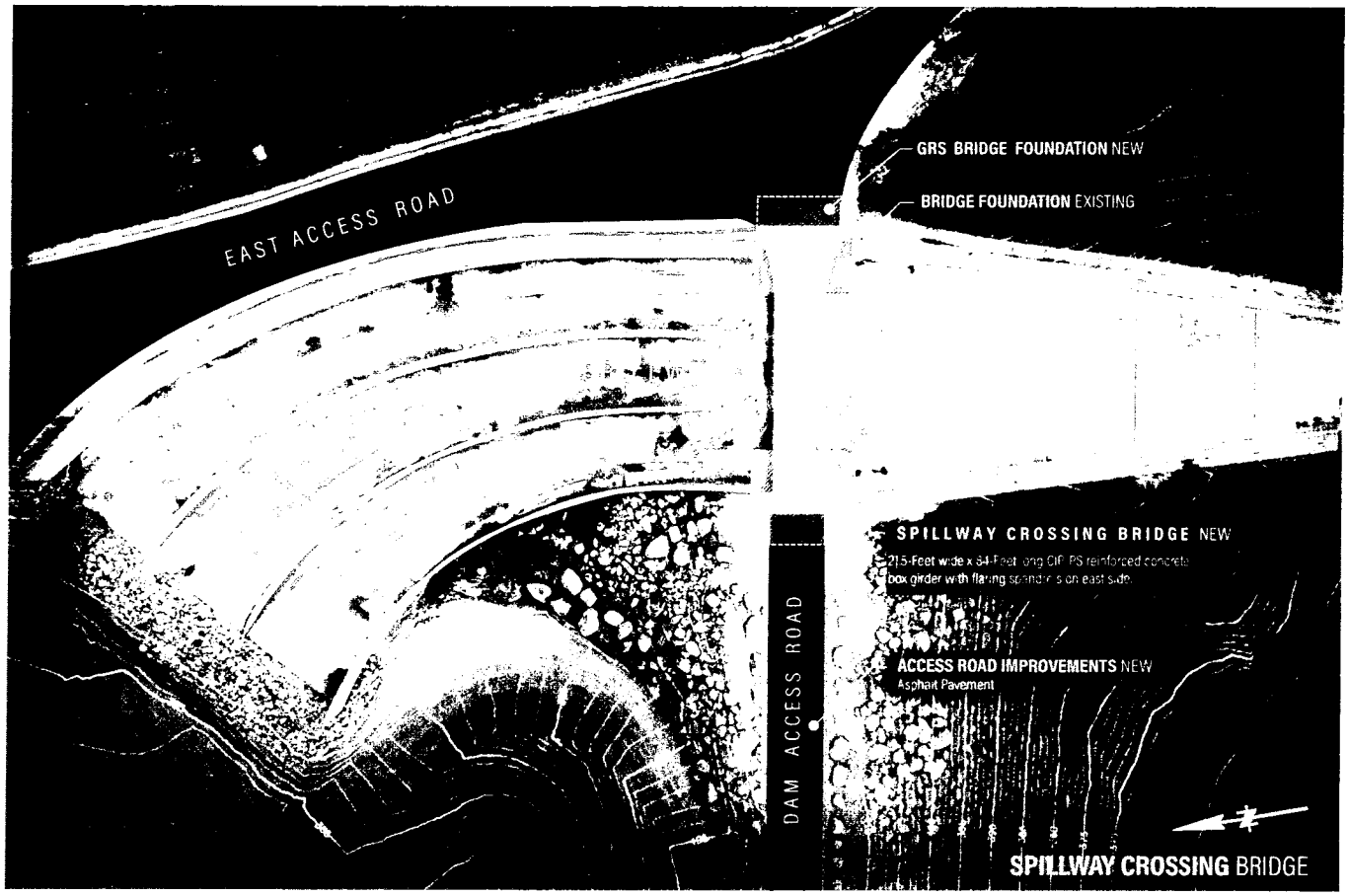
10. Hazardous material remediation for contaminated soils, if present, is excluded.

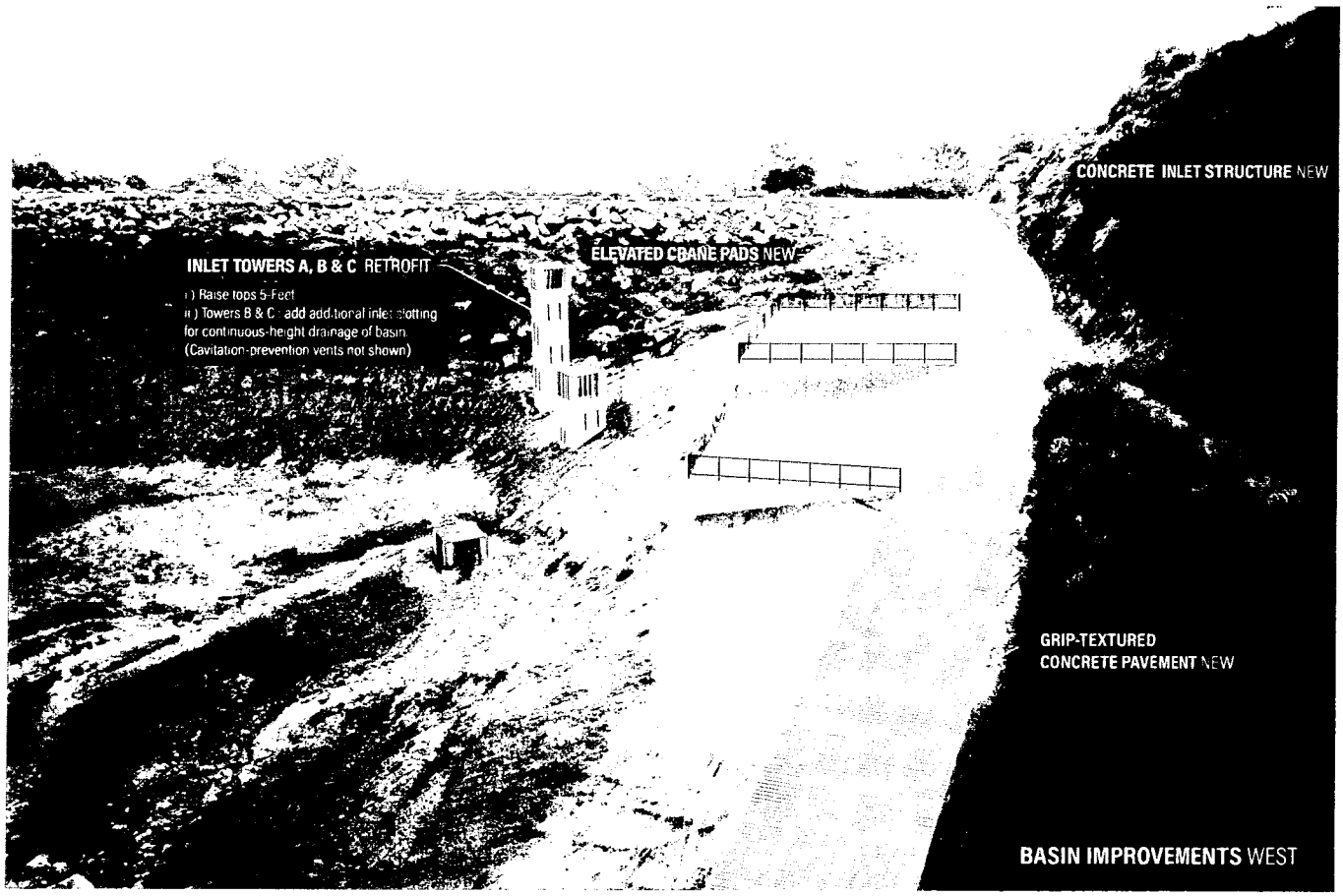
COST CONTROL AND BUDGETING METHODOLOGY

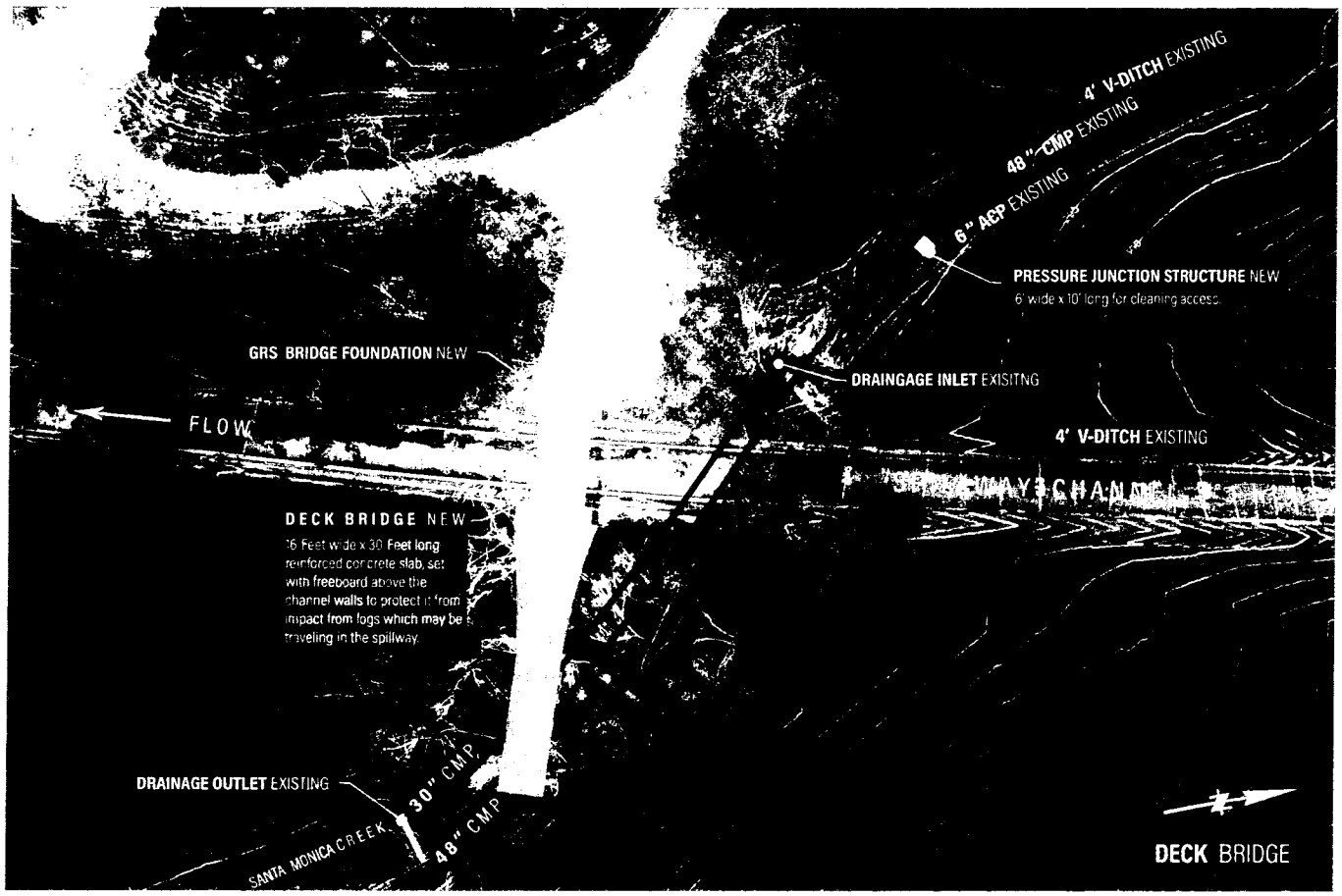
Based on the final, negotiated fee estimate, Bengal's project manager and accounting staff will track the project month by month, according to the task categories. Monthly invoices will be generated based on timecard hours and outside subconsultant invoices. Timecards and subconsultant invoices will be reviewed by Bengal's management and verified. Bengal's management will ensure that work hours are kept in line with budget expectations. Along with each monthly invoice (which will be broken down by task) a budget worksheet will be submitted showing the costs incurred to date and compared to the budget for each task category. The percent spent to date will be shown as well.

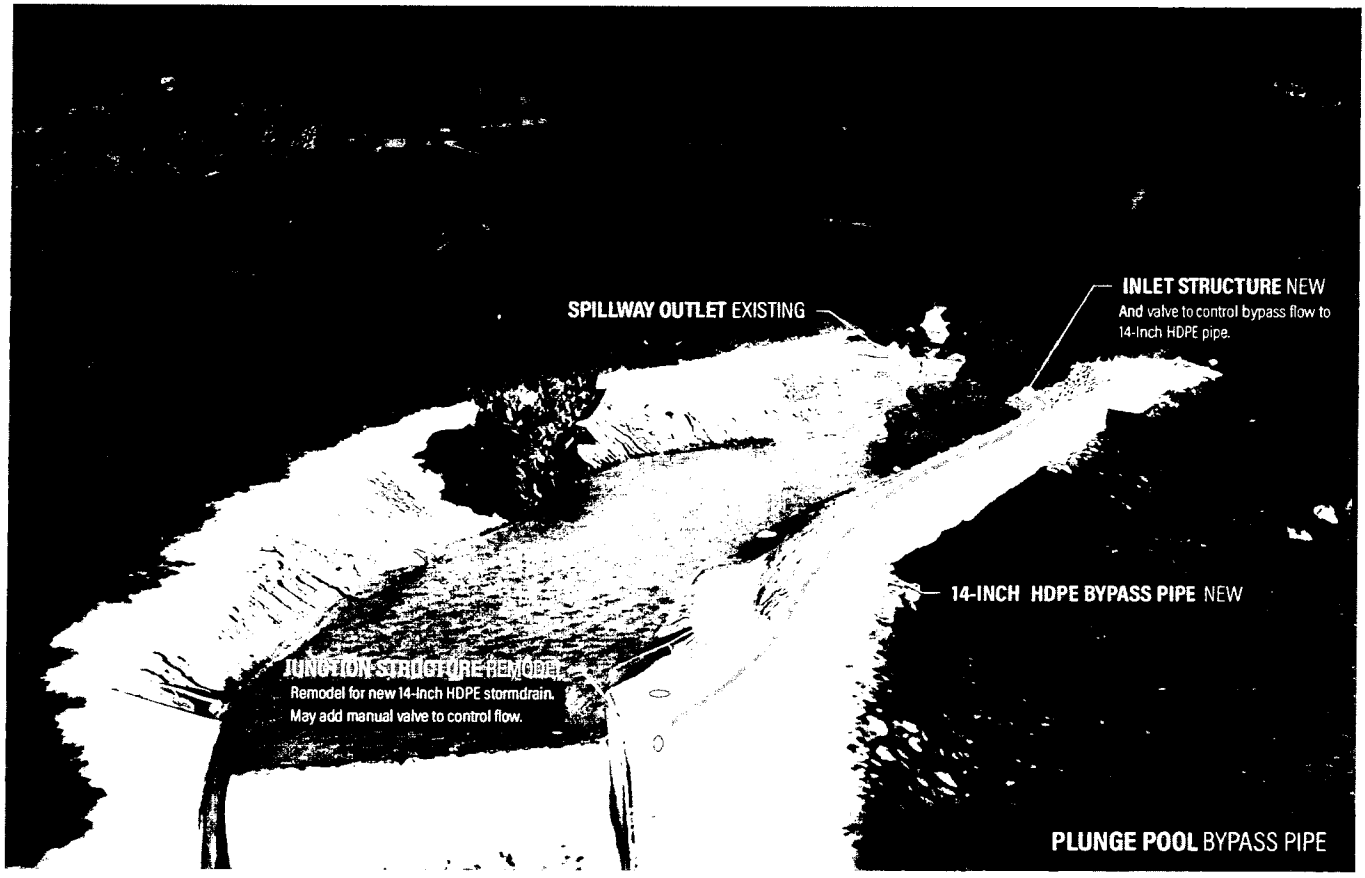
A memo will accompany each monthly invoice, outlining the accomplishments for the month and recording any unusual events. Bengal Engineering strives to stay ahead of the potential pitfalls and events that could trigger a change order. As our record shows, we do not have a history of requesting a change order unless absolutely necessary.

BENGAL'S CONCEPT DESIGN RENDERINGS


EAST ACCESS ROAD
GRS BRIDGE FOUNDATION NEW
BRIDGE FOUNDATION EXISTING
DAM ACCESS ROAD
SPILLWAY CROSSING BRIDGE NEW
215-Feet wide x 84-Feet long CIP PS reinforced concrete box girder with flaring spandrels on east side
ACCESS ROAD IMPROVEMENTS NEW
Asphalt Pavement
SPILLWAY CROSSING BRIDGE


CONCRETE INLET STRUCTURE NEW
ELEVATED CRANE PADS NEW
INLET TOWERS A, B & C RETROFIT
i.) Raise tops 5-Feet
ii.) Towers B & C : add additional inlet slotting
for continuous-height drainage of basin.
(Cavitation-prevention vents not shown)
GRIP-TEXTURED
CONCRETE PAVEMENT NEW
BASIN IMPROVEMENTS WEST


4' V-DITCH EXISTING
48" CMP EXISTING
6" ACP EXISTING
PRESSURE JUNCTION STRUCTURE NEW
6' wide x 10' long for cleaning access
GRS BRIDGE FOUNDATION NEW
DRAINGAGE INLET EXISITNG
FLOW
4' V-DITCH EXISTING
DECK BRIDGE NEW
36 Feet wide x 30 Feet long reinforced concrete slab, set with freeboard above the channel walls to protect it from impact from fogs which may be traveling in the spillway.
DRAINAGE OUTLET EXISTING
30" CMP
48" CMP
SANTA MONICA CREEK
DECK BRIDGE


SPILLWAY OUTLET EXISTING
INLET STRUCTURE NEW
And valve to control bypass flow to 14-Inch HDPE pipe.
14-INCH HDPE BYPASS PIPE NEW
JUNCTION STRUCTURE REMODEL
Remodel for new 14-Inch HDPE stormdrain.
May add manual valve to control flow.
PLUNGE POOL BYPASS PIPE

5. SCHEDULE

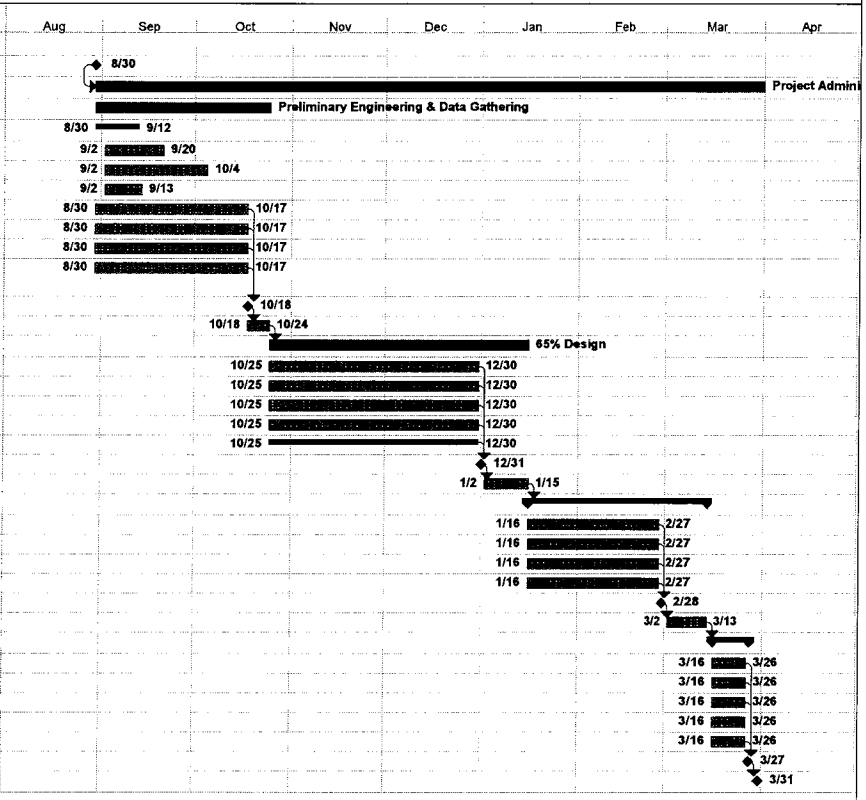
Bengal has prepared the attached schedule using the District's suggestions for submittals and project mileposts. Note that the time for reviews by others is not shown.

~~Bengal would like to discuss the schedule with the District, update it before we begin work, should we be considered for the project.~~

The Schedule will be modified with the same durations provided in the original proposal submitted but dates will be shifted accordingly to adjust for contract award date (TBD).

Schedule for the
Santa Barbara County Flood Control and Water Conservation District
Santa Monica Debris Basin Operational Improvements

ID	Task Name
1	**Santa Monica Debris Basin Operational Improvements-Design**
2	**NTP**
3	**Project Administration**
4	**Preliminary Engineering & Data Gathering**
5	**Site Visit**
6	**Supplemental Data - Surveying**
7	**Supplemental Data - Geotechnical Fieldwork**
8	**Review Design Data**
9	**Prepare and Develop Concept Alternates for Spillway Bridge**
10	**Prepare and Develop Concept Alternates for Deck Bridge**
11	**Prepare and Develop Concept Alternates for Tower Inlets**
12	**Prepare and Develop Concept Alternates for Access: West Road and Alignment for Channel / Deck Bridge**
13	**Submit Preliminary Engineering Documents/Plans**
14	**District/Agency Review**
15	**65% Design**
16	**Spillway Bridge**
17	**Deck Bridge**
18	**Tower Inlets**
19	**Access: West Road and Alignment for Channel / Deck Bridge**
20	**Draft Geotechnical Report**
21	**Submit 65% Design**
22	**District/Agency Review**
23	**95% Design**
24	**Spillway Bridge**
25	**Deck Bridge**
26	**Tower Inlets**
27	**Access: West Road and Alignment for Channel / Deck Bridge**
28	**Submit 95% Design**
29	**District/Agency Review**
30	**100% Design**
31	**Spillway Bridge**
32	**Deck Bridge**
33	**Tower Inlets**
34	**Access: West Road and Alignment for Channel / Deck Bridge**
35	**Final Geotechnical Report**
36	**Submit 100% Design**
37	**End Design Phase**



Dates to be revised based upon actual contract approval date

Wed 7/10/19

6. CONFLICT OF INTEREST STATEMENT

Bengal Engineering's only interest is in providing engineering services for the Santa Barbara County flood control district. If selected we shall refrain from subsequent potential conflicts during this contract.

7. LITIGATION

Bengal Engineering has never been involved in litigation in any of their projects.

8. CONTRACT AGREEMENT

Bengal Engineering has successfully completed many projects for the County without contract issues. Bengal has reviewed and will accept the contract terms and conditions presented in the RFP.

Bengal affirms that the proposal terms will remain in effect for ninety (90) days following the date proposal submittals are due.

Bengal has reviewed the sample agreement and we acknowledge our acceptance of the terms of that agreement. The "Attachment A" mentioned in the clause below, is from the County's RFP.

AGREEMENT FOR SERVICES OF INDEPENDENT CONTRACTOR

Attachment A contains the Standard Agreement used by the District for technical services and added clauses by the State Auditors; no changes will be made to the Standard Agreement language. Consultants are required to review the Standard Agreement and acknowledge their acceptance of the terms of the Standard Agreement language in the space provided below. Failure to acknowledgement acceptance of the Standard agreement language will cause the rejection of the proposal without further consideration.

Bengal Engineering, Inc. _____ acknowledges acceptance of the terms of the Standard Agreement, "Agreement for Services of Independent Contractors."

Signature: Tom Conti 

9. RESOURCE ALLOCATION MATRIX

Hours by task and category

Santa Monica Debris Basin Operational Improvement

Resource Allocation Matrix

Labor Classification	2019																2020												Resource Partcipation for this Project
	Committed Effort in % Estimated for the Labor Classifications																Committed Effort in % Estimated for the Labor Classifications												
	1-Sep	2-Sep	3-Sep	4-Sep	1-Oct	2-Oct	3-Oct	4-Oct	1-Nov	2-Nov	3-Nov	4-Nov	1-Dec	2-Dec	3-Dec	4-Dec	1-Jan	2-Jan	3-Jan	4-Jan	1-Feb	2-Feb	3-Feb	4-Feb	1-Mar	2-Mar	3-Mar	4-Mar	
Project Manager	32%	32%	32%	32%	32%	32%	District/Agency Review	32%	32%	32%	32%	32%	32%	32%	32%	32%	District/Agency Review		32%	32%	32%	32%	32%	32%	District/Agency Review		32%	32%	TC, SO
Civil Engineer	29%	29%	29%	29%	29%	29%		29%	29%	29%	29%	29%	29%	29%	29%	29%			29%	29%	29%	29%	29%	29%			29%	29%	SO, TC, MB, HO
Bridge Engineer	48%	48%	48%	48%	48%	48%		48%	48%	48%	48%	48%	48%	48%	48%	48%			48%	48%	48%	48%	48%	48%			48%	48%	MW, SO, MB
Engineering Geologist	39%	39%	39%	39%	39%	39%		25%	25%	25%	25%	25%	25%	25%	25%	25%			15%	15%	15%	15%	15%	15%			15%	15%	EP
Geotechnical Engineer	26%	26%	26%	26%	26%	26%		44%	44%	44%	44%	44%	44%	44%	44%	44%			8%	8%	8%	8%	8%	8%			8%	8%	SI
Hydraulic Engineer	13%	13%	13%	13%	13%	13%		7%	7%	7%	7%	7%	7%	7%	7%	7%			8%	8%	8%	8%	8%	8%			8%	8%	MW, MB
Technician	30%	30%	30%	30%	30%	30%		68%	68%	68%	68%	68%	68%	68%	68%	68%			32%	32%	32%	32%	32%	32%			32%	32%	MC, HS, HO
Administrative/Clerical	12%	12%	12%	12%	12%	12%		12%	12%	12%	12%	12%	12%	12%	12%	12%			12%	12%	12%	12%	12%	12%			12%	12%	LO

Resource Name: Ton Conti (TC), Scott Onishul (SO), Md Wahiduzzaman (MW), Michael Bandich (MB), Henry Osegueda (HO), Marc Compton (MC), Harrison Smith (HS), Ed Pongracz (EP), Shafiq Islam (SI), Lori Onishuk (LO)

BENGAL ENGINEERING TEAM: Task Summary, Resource Estimate 8/9/2019

Santa Monica Debris Basin Operational Improvements Project, Proj. No SC8370

TASK No.	ITEM DESCRIPTION	PROJECT OR TASK MANAGER HRS	CIVIL ENGINEER HRS	BRIDGE ENGINEER HRS	ENGINEERING GEOLOGIST HRS	GEOTECHNICAL ENGINEER HRS	HYDRAULIC ENGINEER HRS	TECHNICIAN HRS	ADMIN / CLERICAL HRS	TOTAL LABOR HOURS
1	**Project Administration**									
1.1	Project Management	20	80	64	20	13	0	0	40	237
1.2	Progress Meetings (Budget Figure)	32	64	32	0	0	0	0	7	135
1.3	Quality Control	13	7	13	0	0	0	13	0	46
	Sub total	**65**	**151**	**109**	**20**	**13**	**0**	**13**	**47**	**418**
2	**Preliminary Engineering and Data Gathering**									
2.1	Review Preliminary Data	7	10	10	20	7				54
2.2	Supplemental Data: Surveying		13							13
2.3	Supplemental Data: Geotechnical Field Work	7	16		48	32				103
2.3	Prepare and Develop Concept Alternates for Spillway Bridge	7	16	32	7	13		64		139
2.4	Prepare and Develop Concept Alternates for Deck Bridge	4	10	10	20	8		32		84
2.5	Prepare and Develop Concept Alternates for Tower Inlets	10	32	32	7	8	32	64		185
2.6	Prep. and Dev. Concept Alt. for Access: West Road & Align. for Channel / Deck Br.	7	26	10				26		69
2.7	Prepare and Develop Conduit / Bypass Improvements	7	26				13	32		78
2.8	Environmental Support to County: Budget Figure	7	32	4						43
	Sub total	**56**	**181**	**98**	**102**	**68**	**45**	**218**	**0**	**768**
3	**65% Plans and Updated Estimate**									
3.1	Prepare 65% Civil and Bridge Plans: Spillway Bridge	16	40	144		13		280	7	500
3.2	Prepare 65% Civil and Bridge Plans: Channel / Deck Bridge	8	16	64		13		160	7	268
3.3	Prepare 65% Tower Inlet Design Plans	13	32	64		48		80		237
3.4	Prepare 65% Tower Access Pad Plans	13	48			13		64		138
3.5	Prepare 65% Conduit/Bypass Plans	16	64			48		64		192
3.6	Prepare and Submit a "Design Doc.Rpt."; documents approach & decisions	13	64	64		20		64		225
3.7	65% Specifications, Items List, Engineer's Estimate	7	48	32				32		119
3.8	Draft Geotechnical Report	4	7	7	96	96		7	10	227
3.9	65% PS&E Submittal	1	7	7				7	2	24
3.10	Accept, review & address comments received back from the NRCS & DSOD	1	80	32			32	39	4	188
	Sub total	**92**	**406**	**414**	**96**	**251**	**32**	**797**	**30**	**2118**
4	**100% Final Plans, Specifications and Estimate**									
4.1	Prepare 100% Civil and Bridge Plans: Spillway Bridge	26	64	72	13			64		239
4.2	Prepare 100% Civil and Bridge Plans: Deck Bridge	13	32	32	13			32		122
4.3	Prepare 100% Tower Inlet Design Plans	20	61	7			13	64		165
4.4	Prepare 100% Tower Access Pad Plans	16	32					32		80
4.5	Prepare 100% Conduit/Bypass Plans	16	52				13	55		136
4.6	100% Specifications, Items List, Engineer's Estimate	5	26	13			13		10	67
4.7	95% PS&E Submittal	1	5					2	2	10
4.8	Final Geotechnical Report	4	7	7	32	32		7	10	99
4.9	Accept, review & address comments recvd. from the NRCS and DSOD	1	32	16				13	2	64
	Sub total	**102**	**311**	**147**	**58**	**32**	**39**	**269**	**24**	**982**
5	**Bid Support**									
	Bid Assistance	8	24	24				16	2	74
	Sub total	**8**	**24**	**24**	**0**	**0**	**0**	**16**	**2**	**74**
	Total (hours)	**323**	**1073**	**792**	**276**	**364**	**116**	**1313**	**103**	**4360**

10. SEPARATELY SEALED COST PROPOSAL

See separate envelope

11. CONSULTANT INFORMATION SHEET

Consultant Information Sheet

Name of Proposer BENGAL ENGINEERING INC.

Business P.O. Box N/A

City, State, Zip N/A

Business Street Address 360 SOUTH HOPE AVENUE SUITE C-110
(Include even if P.O. Box is used)

City, State, Zip SANTA BARBARA, CALIFORNIA 93105

Telephone No. 805 563 0788 **Fax No.** 805 685 6511

Contractor License No. N/A **License Classification** N/A

Public Works Contractor Registration No. N/A

Business Type (Check One) **Corporation:** _____ **Partnership:** _____ **Sole Proprietorship:** _____

Contact Person Name TOM CONTI

Contact Person Phone No. 805 563 0788 EXT. 106

Contact Person Email TOM@BENGALENGINEERING.COM

Employer's Tax Identification Number 202027764

12. DISADVANTAGED BUSINESS ENTERPRISE (DBE) INFORMATION:

Bengal Engineering is a certified DBE firm.

Exhibit 10-O1 Consultant Proposal DBE Commitment

1. Local Agency: Santa Barbara County Flood Control District 2. Contract DBE Goal: 0%

3. Project Description: Santa Monica Debris Basin Operational Improvements Project; Final Design

4. Project Location: Santa Monica Debris Basin, near Carpinteria, CA

5. Consultant's Name: Bengal Engineering, Inc. 6. Prime Certified DBE: ☒

7. Description of Work, Service, or Materials Supplied	8. DBE Certification Number	9. DBE Contact Information	10. DBE %
Professional Engineering Services	31261		+/- 90%

Local Agency to Complete this Section		11. TOTAL CLAIMED DBE PARTICIPATION	85%
17. Local Agency Contract Number: (805) 568-3440			
18. Federal-Aid Project Number: N/A			
19. Proposed Contract Execution Date: 08/27/2019			
Local Agency certifies that all DBE certifications are valid and information on this form is complete and accurate.		IMPORTANT: Identify all DBE firms being claimed for credit, regardless of tier. Written confirmation of each listed DBE is required.	
		Thomas Conti	7/2/19
20. Local Agency Representative's	21. Date	12. Preparer's Signature	13. Date
		Tom Conti	805-563-0788 x106
22. Local Agency Representative's Name	23. Phone	14. Preparer's Name	15. Phone
24. Local Agency Representative's Title		Project Manager 16. Preparer's Title	

DISTRIBUTION: Original – Included with consultant's proposal to local agency.

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("INSTURCTIONS",p.2, not included.)

APPENDIX A - RESUMES

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RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Thomas Conti, P.E.	**Senior Project Manager**	**30**	**7**

15. FIRM NAME AND LOCATION *(City and State)*
Bengal Engineering, Inc. Santa Barbara, California

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS/2002/Civil Engineering AAS/1993/Architectural/Construction Technology	California - Civil Engineer (C 73108)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Conti has over 30 years of experience in construction, heavy equipment operation and civil engineering. His **Project Management Experience** includes administration of transportation projects, flood control projects, railroad construction, utility design and analysis, and pavement inspection including system-wide condition assessment reporting.
He is a key member of Bengal Engineering; Bengal knows he is a good fit for the City of San Luis Obispo because of his skill, perseverance, and positive attitude. His familiarity with tight urban environments for transportation projects will be a benefit to any project.
Tom has graduated from the "Local Assistance Residential Engineer Academy", and is certified APWA Construction Inspector.

19 RELEVANT PROJECTS

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Quinientos Street Bridge Replacement (HBP Project) **City of Santa Barbara, California**	2014-present	2019

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

As **Project Manager** for this bridge replacement project, Tom oversaw coordination of all sub-consultants, discretionary approvals, project design and plan production. Tom's leadership allowed to completion of a complicated environmental (NEPA) process in less than 24 months. The project included roadwork, drainage, utility relocation and sidewalk modifications, similar to those mentioned in SLO's RFQ.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Cacique & Soledad Pedestrian/Bicycle Bridges (ATP Project) **City of Santa Barbara, California**	2015-16	2017-2018

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Besides being **Project Manager** he acted as the environmental technical studies lead, the utility coordinator, the lead civil designer. He also led all presentations at Architectural Board of Review. The project obtained NEPA approval in 18 months and now under construction. Mr. Conti also served as an extension of City staff providing near-daily help to the City of Santa Barbara.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Alisal Road Bridge Seismic Retrofit Project (HBP Project) **City of Solvang, California**	2014-16	2016

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Conti supported Md. Wahiduzzaman in implementing the seismic retrofit for this 850-foot long bridge across the Santa Ynez River. **He was responsible for delivering the PS&E package and providing construction support**.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Mason and Cota Street Bridge Replacements (HBP Projects) **City of Santa Barbara, California**	2010	2015-2016

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Conti served as **Project Manager and Lead Civil Engineering.** Both projects included roadway and sidewalk realignment, geotechnical analysis, hydraulic modeling, riparian restoration, multiple utility relocations along with bridge/structure design.
Tom also supported City staff with their day-to-day needs by providing exhibits, supporting documents, and attending meetings.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Lower Mission Creek Flood Control Project **City/County of Santa Barbara, California**	2006-present	2009-2019

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Conti is serving as **Project Manager,** leading Bengal's design of the channel improvements for reaches 3 and 4, which will begin construction in 2018. Previously Mr. Conti served as a **Project Engineer** on key elements of this approx. $80 million project. His work included grant funding, Coastal Commission permitting, and coordination with the Corps of Engineers and Santa Barbara County.

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RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Md. Wahiduzzaman, P.E.	**Principal Civil/Bridge Engineer**	**32**	**23**

15. FIRM NAME AND LOCATION *(City and State)*
Bengal Engineering, Inc. Santa Barbara, California

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
MBA/1987/International Business BS/1982/Civil Engineering	California - Civil Engineer (C 49838)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
Mr. Wahiduzzaman has a broad background in analysis, design, construction, and overall project management for bridge, flood control and other public works projects. He performs bridge design, bridge retrofit, hydraulics and hydrological study, scour analysis, inspection, existing structures evaluation, geotechnical engineering, and road improvement design. He is well-versed with federal projects including those for the FHWA, Vandenberg Air Force Base and US Army Corps of Engineers. His projects have been recognized for innovative design by ASCE, APWA, the National Association of Counties, and Caltrans.

19 RELEVANT PROJECTS

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Dune Palms Road Low Water Crossing Replacement City of La Quinta	2014	2019

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Project Manager and Bridge Engineer responsible for designing a bridge spanning the main flood channel operated by Coachella Valley Water District (CVWD). The project will replace the Low-Water Crossing with a 480-foot-long, four-span, CIP/PS RC Box Girder Structure; the roadway is a 4-lane arterial with special accusations for electric vehicles

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Quinientos Street Bridge (Replacement) City of Santa Barbara, California	2013-2016	2019

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Program Manager and Bridge Engineer responsible for designing this single span 50-ft long, cast-in-place, concrete slab bridge. This new bridge is curved to fit the surrounding roads and is designed per FHWA/Caltrans LRFD standards. The bridge is designed to satisfy Caltrans, FEMA and County Flood Control requirements.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Cabrillo Blvd. , Mason, and Cota St. Bridge Replacements (HBP projects) City of Santa Bárbara, California	2005-present	2014-2017

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

For each project, Md. was the **Program Manager and Bridge Engineer.** He was responsible for identifying bridge structural, hydraulics, and geotechnical deficiencies and leading the design team to create the structure plans. Each project was located within environmentally sensitive habitats and involved close coordination with the USACE.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Cohansey Ave. Bridge City of Gilroy, California	2014-2018	2018-2019

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Lead Bridge, Geotech and Hydraulics Engineer responsible for design of 119-foot long single-span bridge over a flood control channel. Mr. Wahiduzzaman was responsible for bridge, geotech and hydraulic design per Caltrans /City guidelines.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Perform Bridge Inspection, Vandenberg Air Force Base, Lompoc, California	2010	NA

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Program Manager and Lead Bridge Engineer responsible for performing bridge inspections **of five bridges at VAFB**. The inspections identified seismic and hydraulic scour vulnerability of some of the mission critical bridges. Local knowledge, extensive multi-discipline experience, and previous retrofit work helped anticipate problems saving time-and-money.

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RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Scott Onishuk, P.E.	**Principal/ Highway Civil Engineer**	**35**	**23**

15. FIRM NAME AND LOCATION *(City and State)*
Bengal Engineering, Inc. Santa Barbara, California

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS/1986/Civil Engineering: Montana State Univ., Bozeman	California - Civil Engineer (C 48052)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
Mr. Onishuk is an experienced Project Manager and Civil Engineer. In addition to leading project design, Scott has overseen the construction of many roadway projects including State highways, County roads, and City streets. His experience also includes bridge design, hydraulic & drainage design, site grading, utility coordination and right-of-way acquisition. He often leads projects from the preparation of Project Study Reports through Environmental Studies, detailed design, right-of-way acquisition and utility relocation, and also construction.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Emergency Repair of Coast Road: Space Launch Complex 6 Vandenberg AFB, California	2017	2017-2018

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

As the Lead Civil Engineer for this fast-paced emergency roadway realignment, Scott conceived of a way to demolish part of an existing railroad spur from the Union Pacific Railroad, so that Coast Road—the only access to SLC-6-- could be temporarily relocated onto a geo-reinforced embankment until a multi-million dollar repair could be designed and constructed. Bengal Engineering also performed geotechnical investigations, including Ground Penetrating Radar studies, for this project.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
San Jose Creek Bikepath & Bridge Santa Barbara County Public Works Dept.	2004-2018	2017-2018

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Project Manager / Lead Civil Engineer for a new multi-using path, which included a 140-foot long bridge spanning San Jose Creek. The project required coordination between SB County Flood Control District, utility companies, and private landowners. The project cost was approximately $2 Million including the right-of-way acquisition. Bengal's work including geotechnical recommendations and stream hydraulics evaluation for permitting. The project was completed on-time/on budget.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Cohansey Ave. Bridge City of Gilroy, California	2014-2019	2018-2019

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Lead Civil Engineer/Structure Representative to construct a new 119-foot long single-span bridge over a flood control channel in a quickly-developing community. Mr. Onishuk was responsible for overall project management, civil engineering, and preparation of PS&E package per Caltrans /City guidelines. The project cost was approximately $4 Million, including construction of an innovative retaining wall system which will allow a multi-use path to be completed when funding is available. Mr. Onishuk also served as the Structure Representative for the project during construction. The project was completed on time / under budget, thanks to Bengal's team skill.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Cabrillo Blvd. Bridge Replacement City of Santa Barbara, California	2005-17	2015-2017

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Mr. Onishuk is the **Project Manager and Lead Civil Engineer** for all roadway and civil design for this federally-funded HBP project, located in high-profile, environmentally-sensitive area. The project cost was about $26 million, making it the most expensive Highway Bridge Program project yet constructed in Santa Barbara. **The project was awarded the Ventura / Santa Barbara American Society of Engineers, "2017 Project of the Year.**

Key factors for project success include environmental benefits for fish-passage and creek restoration, careful consideration construction staging which included a 130-foot long temporary bridge, utility relocation, remodeling of an adjacent building, and accommodation of needs of many project stakeholders including adjacent businesses, local vendors, and tourists.

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E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
Ed Pongracz-Bartha, CEG Engineering Geologist	**Field Geologist**	a. TOTAL: **19**	b. WITH CURRENT FIRM: **7**

15. FIRM NAME AND LOCATION *(City and State)*
Bengal Engineering, Inc. Santa Barbara, California

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS/1997/Geological Sciences	**California; Engineering Geologist** (CEG 2370) **California; Professional Geologist** (PG 7673)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*
Mr. Pongracz-Bartha has experience in conducting and managing geotechnical projects in the following areas: structures, bridges, land development, mass-grading residential projects, and commercial sites. Relevant field experience includes logging small- and large-diameter (i.e. bucket-auger) borings for foundation and landslide studies, fault trenching, field mapping of rock/soil exposures and geomorphic mapping. His role with SubSurface includes plan review and performing site inspections to verify geologic conditions and to ensure geotechnical/foundation recommendations are met. Member: Association of Environmental & Engineering Geologists (AEG)

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Santa Monica Spillway Bridge Foundation Investigation, Santa Monica Debris Basin, Carpinteria area, Santa Barbara County, CA	2018	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Under sub-contract to the Prime (Bengal Engineering) a foundation investigation of the existing spillway bridge was conducted. The investigation included drilling, logging and sampling two (2), fifty-five foot (55') deep borings and subsequent laboratory testing. Difficult drilling conditions, in the form of coarse-grained, cohesionless materials with occasional large boulders and underlying hard bedrock, were anticipated and encountered. Mud rotary and hollow-stem drilling methods were utilized to ensure that the target drilling depths were achieved.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
San Jose Creek Capacity Improvement Project, Goleta, CA	2009	2012-13

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☐ Check if project performed with current firm

An extensive field geotechnical study was performed for the proposed improvements along a ~4,000-foot long section of a flood control channel, in downtown Goleta. Duties included logging 11 mud rotary borings, oversight and advancing of 14 CPT soundings in critical areas along the alignment, determination of seismic design parameters, oversight of abutment concrete coring and subsequent laboratory testing (including ASR analysis) and preparation of numerous geotechnical documents.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
CDT Access Road Slope Stability Study, Vandenberg Air Force Base, Santa Barbara County, CA	2007-11	2012-13

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☐ Check if project performed with current firm

Several areas along the roadway were showing signs of distress, the results of heavy 2005-06 winter rains. Duties included logging of 18 soil/rock borings (including downhole logging a 24" diameter boring), installation of three piezometers and four slope inclinometers, geologic mapping of adjacent cut slopes and rock exposures, air photo analysis, geomorphic mapping, review and interpretation of existing geologic reports, and preparation of the report presenting our finding, conclusions, and remedial options. Repairs, designed by Bengal, are expected to cost $15 million

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Honda Ridge Road Landslide Study, VAFB, California	2011	N/A

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☐ Check if project performed with current firm

Performed geotechnical study to determine the cause(s) of distress to approximately 350 feet of roadway providing access to critical tracking facilities along Tranquillon Ridge on the southern portion of VAFB. Detailed field work included the downhole logging of four (4) large-diameter borings, geologic mapping, air photo interpretation, installation and monitoring of a slope inclinometer, and a seismic refraction study.

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(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Canyon Country Education Center, College of the Canyons, Canyon Country, CA	PROFESSIONAL SERVICES: 2005	CONSTRUCTION: 2006-07
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	☒ Check if project performed with current firm	
Project geologist for the mass grading of an 80-acre hillside property that is the new satellite campus for the College of the Canyons. Specific responsibilities included performing the preliminary field work, reducing the data, slope stability analysis within critical areas, preparation of the reports, and field/office management of the mass-grading operation. Existing landslides, adverse geology, and high groundwater levels were among the challenges faced during grading.		
(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Emergency Repair of Pueblo Street Bridge over Mission Creek Santa Barbara, CA	PROFESSIONAL SERVICES: 2005	CONSTRUCTION: 2005
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	☐ Check if project performed with current firm	
Bridge integrity was threatened by scour during the 2005 winter rains. Foundation retrofit of existing bridge included the use of drilled micro-piles below the abutments. Specific duties included logging of hollow-stem borings and boring log preparation.		
(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Geologic & Seismic Feasibility Study for Proposed Residential Development, 500 Acre Parcel, Barrel Springs Rd., Palmdale, CA	PROFESSIONAL SERVICES: 2003	CONSTRUCTION: N/A
(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE	☒ Check if project performed with current firm	
Subject property located within the San Andreas Fault Zone. Responsible for the air photo analysis to identify possible fault-related ground lineaments, field mapping of suspected fault traces, review of regional geologic/seismic maps and reports, review of site-specific reports on adjacent parcels, and logging more than ½ mile of fault trenches excavated over a two-month span. Four faults were identified, classified as active, and structural setbacks adjacent to these features were established.		

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E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
M. Shafiq Islam, PHD, PE, GE Director	**Geotechnical and Earthquake Engineering Specialist**	**22**	**8**

15. FIRM NAME AND LOCATION *(City and State)*

Bengal Engineering, Inc. Santa Barbara, California

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
BS, Civil Engineering MS, Geotech Engineering PhD, Geotech Engineering	Professional Engineer, Civil, CA, #53338, 1995; Professional Engineer, Geotechnical, CA, #2485, 2000; Project Management Professional (PMP), PMI, #1340789, 2010

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Dr. Islam has over 20 years of geotechnical and seismic engineering work experience involving projects throughout the State of California. His has worked on both public and private sector projects including water and wastewater storage, treatment pumping, transmission and distribution facilities; flood control projects, power transmission and distribution projects, transportation projects including bridge structures, earth retaining systems, roadways/embankments, and slope/landslide stabilization bridges; residential and commercial developments/buildings projects, and near- and off-shore structures.

His expertise includes geotechnical scope, cost and schedule development/control; conducting, leading/supervising and managing geotechnical exploration projects, field and laboratory data review/analysis/interpretation, identification of and developing solutions for geotechnical and seismic factors/issues/challenges.

Dr Islam is specialized in geotechnical and geotechnical earthquake/seismic engineering. He has extensive experience using a wide range of specialized geotechnical software.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Water and Wastewater Dams, Reservoirs, Transmission Pipelines, Pumping Facilities, Various locations throughout Inland Empire for EMWD and other Local Agencies, California	1990-2005	Varies

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☐ Check if project performed with current firm

Project Geotechnical Engineer/Manager in charge of the geotechnical site exploration, geotechnical and seismic hazard evaluation, geotechnical report preparation and/or material testing and/or construction inspection services for numerous projects throughout Inland Empire.

Project included:

- 50-mile long NE Perris Valley Interceptor Sewer Pipeline
- NW Perris Valley Interceptor Sewer Pipeline
- 70-mile long Morongo Basin Water Pipeline
- Winchester Reach I, Reach II and Reach IV Water Transmission Pipelines
- Victorville Lower Narrows Sewer Pipeline Replacement Project
- Reach IV Lake Elsinore Water and Non-Reclaimable Waste Transmission Pipeline
- Reach IV Reclaimed Water De-chlorination and Energy Dissipation Facility
- Canyon Lake Water Treatment Plant
- Loma Linda 8-Million Gallon Underground Concrete Reservoir
- Riverside 2-Million Gallon 2 Overhead Storage Tanks
- San Bernardino 6-Million Gallon Reservoir
- Seven Oaks Dam
- Devil Canyon 2nd Afterbay of the State Water Project

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(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
San Jose Creek Capacity Improvement Project, Goleta, California	PROFESSIONAL SERVICES	CONSTRUCTION
	2009-2011	2010-2014

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Geotechnical Engineer for the geotechnical investigation of a multi-agency flood control project to increase the design storm capacity of a 4,000 foot length of urban flood control channel from a 25 year to a 100 year storm event. Developed scope of work for site exploration and performed data analysis and evaluation. Performed static and seismic analysis to determine appropriate retaining/flood walls types and bank slope/support for this complex and highly challenging urban project characterized by the presence of deep soft and extensively liquefiable soils, high seismicity, limited right of way alignment and budget. Developed static and seismic lateral earth pressures and soil resistance conditions for various loading combinations as per USACE design requirements. Developed design soil profiles and foundation design recommendations, and prepared geotechnical investigation report.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Lower Mission Creek Capacity Improvement / Flood Control Project, Santa Barbara, California	PROFESSIONAL SERVICES	CONSTRUCTION
	2009-present	On-going

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Geotechnical Engineer for a highly-challenging project consisted of improving conveyance of an existing channel traversing though a densely developed and geotechnically complex downtown area of the City. Developed detailed scope of work for geotechnical investigation, performed analysis, evaluation, interpretation and QA/QC for field and laboratory data. Performed slope stability analysis, and seismic hazard analysis for this site with high liquefaction and lateral spreading potential. Developed static and seismic lateral earth pressures, soil resistance conditions, and analysis and design recommendations for various loading combinations as per USACE design requirements.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Command Destruct Tower Access Road Slope Stability Study, Vandenberg Air Force Base, Santa Barbara County, California	PROFESSIONAL SERVICES	CONSTRUCTION
	2013	2015-16

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Geotechnical Engineer for a multiphase and multi-year project consisting of landslides, roadway, retaining structure and other ground distress conditions study at multiple locations along a mission critical access road though a mountainous terrain.. Developed scope of work for geotechnical investigation. Performed QA/QC task, data evaluation/interpretation and stability analysis for slope and existing earth retaining systems to evaluate potential causes for observed distresses, and evaluated and developed remedial/stabilization recommendations using multiple systems appropriate for the various site conditions and types or causes of distress. Developed design recommendations for structural and grading remedial/stabilization systems and prepared geotechnical exploration reports

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Prado Auxiliary Dike Floodwall, Corona, California	PROFESSIONAL SERVICES	CONSTRUCTION

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — ☒ Check if project performed with current firm

Geotechnical Engineer responsible for independent technical review of seepage analysis, soil bearing capacity, pile capacity, seismic earth pressure calculations and geotechnical reports including boring logs for this USACE project

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EXHIBIT B

PAYMENT ARRANGEMENTS
Periodic Compensation (with attached Schedule of Fees)

A. For CONTRACTOR services to be rendered under this Agreement, CONTRACTOR shall be paid a total contract amount, including cost reimbursements, up to but not to exceed **$ 692,907**.

B. Extra Work required to complete the project may be authorized only if CONTRACTOR receives written approval by the COUNTY's designated representative as identified in Paragraph 1 of the Agreement at the same rate per unit as defined in **Attachment B1**. The total amount of this contingency fund is 10% of the agreement amount or **$69,290.70**.

C. Payment for services and /or reimbursement of costs shall be made upon CONTRACTOR's satisfactory performance, based upon the scope and methodology contained in **EXHIBIT A** as determined by COUNTY. Payment for services and/or reimbursement of costs shall be based upon the costs, expenses, overhead charges and hourly rates for personnel, as defined in **Attachment B1** (Schedule of Fees). Invoices submitted for payment that are based upon **Attachment B1** must contain sufficient detail to enable an audit of the charges and provide supporting documentation if so specified in **EXHIBIT A.**

D. **Monthly**, CONTRACTOR shall submit to the COUNTY DESIGNATED REPRESENTATIVE an invoice or certified claim on the County Treasury for the service performed over the period specified. These invoices or certified claims must cite the assigned Board Contract Number. COUNTY DESIGNATED REPRESENTATIVE shall evaluate the quality of the service performed and if found to be satisfactory and within the cost basis of **Attachment B1** shall initiate payment processing. COUNTY shall pay invoices or claims for satisfactory work within 30 days of receipt of correct and complete invoices or claims from CONTRACTOR.

E. COUNTY's failure to discover or object to any unsatisfactory work or billings prior to payment will not constitute a waiver of COUNTY's right to require CONTRACTOR to correct such work or billings or seek any other legal remedy.

F. CONTRACTOR shall comply with the California Labor Code, including but not limited to the payment of prevailing wage when required. The general prevailing wage rates determined by the Director of Industrial Relations, for the county or counties in which the work is to be done, are on file at the office of the Santa Barbara County Flood Control and Water Conservation District, 130 E. Victoria Street, Suite 200, Santa Barbara, CA 93101. Copies of these general prevailing wage rates shall be made available to any interested party on request. Changes, if any to the general prevailing wage rates will be available at the same location. The prevailing wage rates are also available from the California Department of Industrial Relations' Internet website at http://www.dir.ca.gov/dlsr/pwd.

ATTACHMENT B1

January 2019

Bengal Engineering's Fee Schedule and Classification of Personnel

Classification	**Rate/hr**
Project Manager	$ 150.00
Bridge Engineer	$ 150.00
Civil Engineer	$ 150.00
Geotechnical Engineer	$ 150.00
Engineering Geologist	$ 150.00
Drafter/Technician	$ 85.00
Clerical	$ 55.00
Subcontractor	Cost + 15% oversight
Direct Costs	
Travel	Cost; No cost for local projects
Vehicle	$0.35/mile; No cost for local projects
Reproduction/ Postage/ Reimbursable	Cost

360 South Hope Ave
Santa Barbara, CA 93105
Tel: (805) 563-0788

EXHIBIT C

Indemnification and Insurance Requirements (For Design Professional Contracts)

INDEMNIFICATION

CONTRACTOR agrees to fully indemnify and hold harmless COUNTY and its officers, officials, employees, agents and volunteers from and against any and all claims, actions, losses, suits damages, costs, expenses, judgments and/or liabilities that arise out of, or pertain to, or relate to the negligence, recklessness, or willful misconduct of the CONTRACTOR and its employees, subcontractors, or agents in the performance of services under this Agreement but this indemnity does not apply to liability for damages arising from the sole negligence, active negligence, or willful acts of the COUNTY. The indemnity includes the cost to defend COUNTY to the extent of the CONTRACTOR's proportionate percentage of fault. Should one (or more) defendants be unable to pay its share of the defense costs due to bankruptcy or dissolution of the business, CONTRACTOR shall meet and confer with other parties regarding unpaid defense costs and CONTRACTOR shall pay County's cost of defense to the fullest extent permitted by law.

NOTIFICATION OF ACCIDENTS AND SURVIVAL OF INDEMNIFICATION PROVISIONS

CONTRACTOR shall notify COUNTY immediately in the event of any accident or injury arising out of or in connection with this Agreement. The indemnification provisions in this Agreement shall survive any expiration or termination of this Agreement.

INSURANCE

CONTRACTOR shall procure and maintain for the duration of this Agreement insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder and the results of that work by the CONTRACTOR, its agents, representatives, employees or subcontractors.

A. Minimum Scope of Insurance

Coverage shall be at least as broad as:

1. **Commercial General Liability (CGL):** Insurance Services Office (ISO) Form CG 00 01 covering CGL on an "occurrence" basis, including products-completed operations, personal & advertising injury, with limits no less than $1,000,000 per occurrence and $2,000,000 in the aggregate.
2. **Automobile Liability**: ISO Form Number CA 00 01 covering any auto (Code 1), or if CONTRACTOR has no owned autos, hired, (Code 8) and non-owned autos (Code 9), with limit no less than $1,000,000 per accident for bodily injury and property damage.
3. **Workers' Compensation**: as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than $1,000,000 per accident for bodily injury or disease.
4. **Professional Liability** (Errors and Omissions) Insurance appropriate to the CONTRACTOR'S profession, with limit of no less than $1,000,000 per occurrence or claim, $2,000,000 aggregate.

If the CONTRACTOR maintains higher limits than the minimums shown above, the COUNTY requires and shall be entitled to coverage for the higher limits maintained by the CONTRACTOR. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the COUNTY.

B. Other Insurance Provisions

The insurance policies are to contain, or be endorsed to contain, the following provisions:

1. **Additional Insured** – COUNTY, its officers, officials, employees, agents and volunteers are to be covered as additional insureds on the CGL policy with respect to liability arising out of work or operations performed by or on behalf of the CONTRACTOR including materials, parts, or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the CONTRACTOR's insurance at least as broad as ISO Form CG 20 10 11 85 or if not available, through the addition of both CG 20 10 and CG 20 37 if a later edition is used).
2. **Primary Coverage** – For any claims related to this Agreement, the CONTRACTOR's insurance coverage shall be primary insurance as respects the COUNTY, its officers, officials, employees, agents and volunteers. Any insurance or self-insurance maintained by the COUNTY, its officers, officials, employees, agents or volunteers shall be excess of the CONTRACTOR's insurance and shall not contribute with it.
3. **Notice of Cancellation** – Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the COUNTY.
4. **Waiver of Subrogation Rights** – CONTRACTOR hereby grants to COUNTY a waiver of any right to subrogation which any insurer of said CONTRACTOR may acquire against the COUNTY by virtue of the payment of any loss under such insurance. CONTRACTOR agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation, but this provision applies regardless of whether or not the COUNTY has received a waiver of subrogation endorsement from the insurer.
5. **Deductibles and Self-Insured Retention** – Any deductibles or self-insured retentions must be declared to and approved by the COUNTY. The COUNTY may require the CONTRACTOR to purchase coverage with a lower deductible or retention or provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention.
6. **Acceptability of Insurers** – Unless otherwise approved by Risk Management, insurance shall be written by insurers authorized to do business in the State of California and with a minimum A.M. Best's Insurance Guide rating of "A- VII".
7. **Verification of Coverage** – CONTRACTOR shall furnish the COUNTY with proof of insurance, original certificates and amendatory endorsements as required by this Agreement. The proof of insurance, certificates and endorsements are to be received and approved by the COUNTY before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the CONTRACTOR's obligation to provide them. The CONTRACTOR shall furnish evidence of renewal of coverage throughout the term of the Agreement. The COUNTY reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.
8. **Failure to Procure Coverage** – In the event that any policy of insurance required under this Agreement does not comply with the requirements, is not procured, or is canceled and not replaced, COUNTY has the right but not the obligation or duty to terminate the Agreement. Maintenance of required insurance coverage is a material element of the Agreement and failure to maintain or renew such coverage or to provide evidence of renewal may be treated by COUNTY as a material breach of contract.
9. **Subcontractors** – CONTRACTOR shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein, and CONTRACTOR shall ensure that COUNTY is an additional insured on insurance required from subcontractors.

10. **Claims Made Policies** – If any of the required policies provide coverage on a claims-made basis:
    i. The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work.
    ii. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of contract work.
    iii. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, the CONTRACTOR must purchase "extended reporting" coverage for a minimum of five (5) years after completion of contract work.

11. **Special Risks or Circumstances** – COUNTY reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

Any change requiring additional types of insurance coverage or higher coverage limits must be made by amendment to this Agreement. CONTRACTOR agrees to execute any such amendment within thirty (30) days of receipt.

Any failure, actual or alleged, on the part of COUNTY to monitor or enforce compliance with any of the insurance and indemnification requirements will not be deemed as a waiver of any rights on the part of COUNTY.

Exhibit D

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS, AND COOPERATIVE AGREEMENTS
(Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (As Amended))

The undersigned CONTRACTOR certifies, to the best of his or her knowledge, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form- LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

CONTRACTOR, **Bengal Engineering Inc.**, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, CONTRACTOR understands and agrees that the provisions of 31 U.S.C. § 3801 et seq., apply to this certification and disclosure, if any.

Md. Wahiduzzaman
Signature of Contractor's Authorized Official

MD. WAHIDUZZAMAN, CEO
Name and Title of Contractor's Authorized Official

10/8/19
Date