

# **EXHIBIT A**

## **CONSULTANT'S PROPOSAL**

### **SCOPE OF WORK**

#### **Task 1 - Project Management, Quality Assurance/Quality Control (QA/QC), and Meetings**

##### **Subtask 1.1 - Project Management and Coordination**

A project management plan will be developed to serve as a communication tool for City and HDR staff (and subconsultants). HDR will prepare invoices, progress reports, and decision log updates on a monthly basis. The monthly progress reports will summarize budget and schedule status in measurable terms. Other activities include coordination with City staff and subconsultants through all phases of the contract work, scheduling of staff, and coordinating the quality assurance effort.

***Deliverables:** Monthly progress reports, invoices, project management plan, and decision log.*

##### **Subtask 1.2 - QA/QC Program**

HDR will institute and maintain a QA/QC program for the work performed on this project. To ensure objectivity, senior technical staff, not involved in the project, will perform internal QA/QC upon completion of the deliverables before they are submitted to the City.

***Deliverables:** To be incorporated into the deliverables.*

##### **Subtask 1.3 - Kick-off Meeting/Site Visit**

HDR will meet with City staff to introduce the project team, collect background information, discuss the City's project goals and objectives, and establish lines of communications. The kick-off meeting will focus on getting the remaining issues on the table, discussing potential alternatives and resolutions, and preparing a detailed and concise action plan, list of needed information and data, defined schedule, and list of participants with their assignments. After the kick-off meeting, HDR will tour the wastewater treatment plant facilities.

***Deliverables:** Meeting agenda, minutes, action plan, and schedule.*

##### **Subtask 1.4 - Progress Meetings/Site Visits**

HDR will meet with City staff to discuss comments on draft design confirmation memo, 50 percent design submittal, and 90 percent design submittal. A review comments log will be kept

to ensure design comments are incorporated. Design review comments will be encouraged and welcome from the City's engineering and operations personnel.

In addition, HDR's budget assumes up to three addition meetings with City staff, Fort Bragg City Council, or committees to discuss options and present project status.

***Deliverables:** Meeting agenda and minutes.*

## **Task 2 - Preliminary Design Phase**

### **Subtask 2.1 - Background Information Review**

HDR will review the background information collected, which is expected to include:

- Predesign Summary Report, Volumes 1 and 2, dated September 2013.
- Development of Design Criteria Technical Memorandum dated February 2013.
- Evaluation of Aero-Mod System Technical Memorandum dated May 2013.
- Previously developed improvement drawings for wastewater treatment plant improvements.
- Regulatory Review Technical Memorandum dated February 2013.
- Evaluation of On-Site Stormwater Handling Requirements Technical Memorandum dated March 2013.
- 2013 and 2014 wastewater treatment facility analytical data (monthly averages).
- Monthly Operations Summary dated January 2015.
- Estimated growth in loading and/or flows, supplemental to the data in Table 4-1.
- Evaluation of Options for Collection System Pump Station Upgrades Technical Memorandum dated March 2013.
- Geotechnical Investigation Report dated May 2001 and 1987 geotechnical investigations.
- Available surveying and mapping that defines improvements or project site.

***Deliverables:** To be incorporated into predesign and design documents.*

### **Subtask 2.2 - Surveying**

HDR's local surveying subconsultant, Forrest Francis Land Surveyor, will perform site topographic surveys and other field investigations to refine predesign report to plans and construction documents. Existing survey information will be used to the greatest extent possible.

Up to four days of crew time have been budgeted for this subtask. Unless required for the final bid package, property boundary surveys will not be completed.

***Deliverables:** Base map suitable for design.*

### **Subtask 2.3 - Geotechnical Report**

HDR will perform a geotechnical investigation, which will include:

- Review of available geotechnical and geologic information regarding the project area, including the previous Harding Lawson and Associates (HLA, 987) and Kleinfelder (KLF, 2001) reports, and published geologic information pertaining to the site vicinity.
- Undertake a field investigation program consisting of up to four test borings at locations to be determined later. Borings will be advanced by a subcontractor driller under our observation, to depths of about 20 feet or to practical refusal in bedrock, whichever is shallower. Prior to performing the field exploration, HDR's team will obtain the required County of Mendocino boring permit, mark the proposed test boring locations, and Underground Service Alert (USA).
- Perform geotechnical laboratory testing on selected samples recovered from the test borings.
- Perform engineering analyses to develop geotechnical conclusions and recommendations for the project. A geotechnical investigation report will be prepared that will describe subsurface conditions encountered, field and laboratory test data, logs of the test borings, and a site plan showing the location of each exploration. The report will present our discussions, conclusions, and recommendations for the proposed structures.

***Deliverables:** Draft and final geotechnical report.*

### **Subtask 2.4 - Predesign Report Review/Update**

The Predesign Summary Report, Volumes 1 and 2, dated September 2013, will be reviewed for opportunities to improve design, which may include construction cost decrease, operation cost decrease, improved efficiencies, reduced power requirements, and reasonable anticipated regulatory changes. The following updates are anticipated:

#### **2.4.1 Update Stormwater Handling**

HDR will update the stormwater handling analysis to address the grading that was completed for the perimeter of the existing wastewater treatment plant site to eliminate run-on water from adjacent lands. Opportunities to improve design, which include construction cost decrease, operation cost decrease, improved efficiencies, and reduced power requirements will be addressed, such as:

- Considering infiltration trenches or similar improvements in-lieu of tight line storm drain pipes. The intent is minimize the amount of stormwater to be conveyed on-site and treated.
- Possibility of eliminating on-site pumping of stormwater. If needed, pump efficiencies shall be optimized. Use of excavated materials can be used to regrade the demolished facilities.
- Reviewing and minimizing stormwater handling pipe layout to minimize the size and scope of this piping system.

***Deliverables:** Memorandum summarizing the updated stormwater handling analysis.*

### **2.4.2 Solids Handling**

HDR will analyze the feasibility of what may be necessary (e.g. extra treatment) to reach a Class A biosolids standards for the sludge. HDR will analyze and make recommendations for other, practical re-use of the treated sludge as a raw material or finished product. One such alternative that will be evaluated will be the use of a thermal dryer. A biosolids thermal dryer is currently being used at the City of Rio Dell's wastewater treatment plant.

HDR will also evaluate options for providing sufficient dewatering of solids, which shall include centrifuge, screw press, and belt filter press. An appropriate dewatering method shall be recommended for incorporation into the design.

***Deliverables:** Memorandum summarizing the solids handling analysis.*

### **2.4.3 Power Requirements**

HDR shall review overall energy needs for new plant and make recommendations for practical efficiency improvements to be incorporated into the design. In addition, HDR will analyze alternative methods for generating energy at the plant, which includes using wind power or solar on site. The feasibility of a fat, oil, and grease (FOG) receiving station at the treatment plant will be investigated.

***Deliverables:** Memorandum summarizing the power requirements and potential alternative energy sources.*

## **Subtask 2.5 - Design Confirmation Memorandum**

HDR will prepare a design confirmation summary memorandum, which will include updated Subtask 2.4 memorandums after City review of the draft memorandums, and the recommendations regarding key equipment, including the pumping, electrical, and instrumentation systems.

The design memorandum will also include a brief evaluation of the proposed activated sludge system. HDR will identify opportunities to improve the activated sludge design, which include

construction cost decrease, operation cost decrease, improved efficiencies, and reduced power requirements. HDR's analysis will include:

- Identifying the constraints created by other elements of the treatment process elements affecting the expansion of the activated sludge system.
- Reviewing the hydraulic profile will be reviewed and identifying improvements
- Determining if lowering the grade(s) of activated sludge units could potentially eliminate pumping as well as cost.
- Analyzing the feasibility of achieving Title 22 water recycling status.
- Evaluating the control systems for the new improvements to the wastewater treatment plant for ease of incorporation into a future Supervisory Control and Data Acquisition System (SCADA).

***Deliverables:** Memorandum confirming improvements to be designed.*

### **Task 3 - Contract Documents**

#### **Subtask 3.1 - Main Project Design**

Once consensus has been reached on the recommended project, HDR will proceed with design. The budget for this task assumes the following will be designed:

- Replacement of the existing trickling filters and clarifiers with an Aero-Mod SEQUOX activated sludge system. The activated sludge system will address the updates identified in Subtask 2.5.
- Repurposing the clarifiers into emergency/flow equalization and/or storm run-off storage.
- Treatment of on-site stormwater, including the updates identified in Subtask 2.4.1.
- Solids handling recommendation identified Subtask 2.4.2.
- Power requirements recommendations identified in Subtask 2.4.3.

The following is also assumed:

- No modifications to the existing disinfection system.
- The dewatering technology identified in Subtask 2.4.2 will be located in the existing dewatering building. No new building will be designed for the belt press facility.
- The new standby generator will be installed in the existing generator building or in the new blower building. No separate building will be designed for the standby generator.

Drawings will be prepared in AutoCAD. Design plans will be developed utilizing industry standard scales, in English (not metric) engineering units. Table 1 shows a preliminary listing of drawings anticipated for the project.

<b>TABLE 1 - PRELIMINARY LIST OF DRAWINGS ANTICIPATED FOR THE PROJECT</b>		
<b>No.</b>	<b>Sheet No.</b>	<b>Drawing Description</b>
<b>General</b>		
1	G1	Cover Sheet with Location Maps
2	G2	Sheet List
3	G3	Abbreviations
4	G4	Symbols Legend
5	G5	Process Flow Diagram and Design Criteria
6	G6	Hydraulic Profile
7	G7	Standard Details - Divisions 5 through 14
8	G8	Standard Details - Division 15-1
9	G9	Standard Details - Division 15-2
10	G10	Standard Details - Pipe Supports
<b>Civil</b>		
11	C1	Site Key Plan
12	C2	Site Grading and Paving Plan 1
13	C3	Site Grading and Paving Plan 2
14	C4	Yard Piping Plan
15	C5	Contractor Staging Area, Fencing Plan, and General Notes
16	C6	Site Sections and Details 1
17	C7	Site Sections and Details 2
<b>Demolition</b>		
17	X1	Site Demolition Plan and Key Map
18	X2	Existing Primary Biofilter Demolition Plan and Details
19	X3	Existing Secondary Biofilter Demolition Plan and Details
20	X4	Existing Sludge Dewatering Building Equipment Demolition Plan and Sections

**TABLE 1 - PRELIMINARY LIST OF DRAWINGS ANTICIPATED FOR THE PROJECT**

<b>No.</b>	<b>Sheet No.</b>	<b>Drawing Description</b>
21	X5	Existing Sludge Dewatering Building Equipment Demolition Sections and Details
22	X6	Existing Sludge Drying Beds Demolition Plan, Sections, and Details
23	X7	Existing Sludge Drying Beds Demolition Sections and Details
24	X8	Existing Primary Clarifier Demolition Plan and Details
25	X9	Existing Secondary Clarifier Demolition Plan and Details
26	X10	Existing Miscellaneous Structure Demolition Plan and Sections
<b>Architectural</b>		
27	A1	Architectural Site Code Plan
28	A2	Blower Building Exterior Elevations
29	A3	Architectural Door, Window, and Room Finish Schedules and Details
30	A4	Architectural Details 1
31	A5	Architectural Details 2
<b>Mechanical</b>		
32	M1	Mechanical Symbols and Legends
32	M2	HVAC and Plumbing Schedules
34	M3	Blower Building HVAC Plan
35	M4	Blower Building Plumbing and Drainage Plan
<b>Structural</b>		
36	S1	Structural General Notes 1
37	S2	Structural General Notes 2
38	S3	Typical Concrete Details 1
39	S4	Typical Concrete Details 2
40	S5	Typical Concrete Details 3
41	S6	Typical Concrete Walls Details
42	S7	Typical Block Wall Details
43	S8	Typical Grading Details

**TABLE 1 - PRELIMINARY LIST OF DRAWINGS ANTICIPATED FOR THE PROJECT**

<b>No.</b>	<b>Sheet No.</b>	<b>Drawing Description</b>
44	S9	Opening and Penetrations
45	S10	Metal Star and Railing Details
46	S11	Biological Treatment Facility Structural Plan
47	S12	Biological Treatment Facility Structural Section 1
48	S13	Biological Treatment Facility Structural Section 2
49	S14	Biological Treatment Facility Aluminum Stair Plan and Sections
50	S15	Biological Treatment System Influent Pumping Station Plan
51	S16	Biological Treatment System Influent Pumping Station Sections and Details
<b>Process</b>		
52	P1	Biological Treatment Facility Process Connection Location Plan
53	P2	Biological Treatment Facility Pipe Connection Sections
54	P3	Existing Headworks Modification Plan and Sections
55	P4	Blower Building Foundation Plan and Sections
56	P5	Blower Building Floor Plan and Sections
57	P6	Blower Building Roof Framing Plan and Details
58	P7	Dewatering Building Plan and Sections 1
59	P8	Dewatering Building Plan and Sections 2
60	P9	Existing Effluent Pump Station Demolition and Modification Plans and Sections
<b>Electrical</b>		
61	E1	Electrical Symbols and Legend
62	E2	Electrical Single-Line Diagrams
63	E3	Electrical Panel Schedules
64	E4	Electrical Control Diagrams 1
65	E5	Electrical Control Diagrams 2
66	E6	Electrical Control Diagrams 3
67	E7	Electrical Site Plan 1



TABLE 1 - PRELIMINARY LIST OF DRAWINGS ANTICIPATED FOR THE PROJECT		
No.	Sheet No.	Drawing Description
68	E8	Electrical Site Plan 2
69	E9	Electrical Underground Duct Bank, Conduit, and Conductor Schedules
70	E10	Blower Building Power and Lighting Plans
71	E11	Biological Treatment Facility Power Plan
72	E12	Biological Treatment Facility Lighting Plan
73	E13	Biological Treatment System Influent Pumping Station Electrical Plan
74	E14	Biological Treatment System Influent Pumping Station Electrical Details
75	E15	Electrical Details 1
76	E16	Electrical Details 2
77	E17	Electrical Details 3
78	E18	Electrical Details 4

Specifications will be prepared in Construction Specifications Institute (CSI) format using Microsoft Word. HDR's budget for this task assumes that the City will prepare and provide a set of General Conditions and Special Provisions, bid form, example agreement and other “front-end” sections for HDR to incorporate into the bid set, and that HDR’s master specifications will be used as a basis for the technical provisions.

The contract documents will include a requirement of contractor to supply all operations, maintenance manuals, as well as training. Bid schedule shall be developed with unit prices. Appropriate language and provisions in the contract documents related to state or federal funding will be included.

Engineer’s opinion of construction cost will be prepared in Microsoft Excel.

Drawings, specifications, and engineer’s estimate of probable construction cost will be submitted to the City for review and approval at the 50 and 90 percent design stages. The bid set (100 percent design) will include final drawings and specifications ready for advertising for bids in accordance with the City’s final review comments.

***Deliverables:*** Three sets of half-size (11” x 17”) drawings, bound copies of technical specifications, and engineer’s opinion of construction cost for review by City personnel at the 50 and 90 percent design stages. Three bound sets and one reproducible original sets of half-size drawings, technical specifications, and engineer’s opinion of construction cost at the 100 percent design stage. CD containing electronic PDF files of bid set drawings and specifications.

## **Task 4 - Funding Support**

HDR will provide a funding investigation and project support for funding assistance, which is assumed to involve State Water Resources Control Board (SWRCB) and State Revolving Fund (SRF) assistance. This task excludes both the Clean Water State Revolving Fund (CWSRF) working directly with the SWRCB and the Infrastructure State Revolving Fund (ISRF) working with the Infrastructure Bank (I-Bank). This task assumes preparation and processing of the SWRCB/SRF funding application will be handled by the City.

### **Subtask 4.1 - Funding Investigation**

HDR will conduct a review of two other potential funding opportunities that may be applicable to the City, including opportunities with the U.S. Department of Agriculture (USDA) and an additional California agency that may have Proposition 1 funds soon available. HDR will discuss potential additional opportunities with the City. HDR will also help coordinate inquiries between the California Financing Coordinating Committee (CFCC) and the City.

HDR will identify which programs will reimburse cost incurred before funding award.

If the City would like HDR to assist in the pursuit of funding in addition to the scoped SWRCB grant/loan effort, the work would be performed on a time and materials basis to be agreed upon following the determination of the funding pursuit.

Up to 60 hours have been budgeted for this subtask.

### **Subtask 4.2 - Meetings**

HDR will participate in the following meetings (*assumed by teleconference*):

- Initial project/process coordination with City staff, SWRCB Division of Financial Assistance (DFA) staff.
- Progress meeting with City staff for completed application.
- One onsite meeting with SWRCB.

***Deliverables:*** Meeting agenda and minutes.

### **Subtask 4.3 - Project Definition and Preliminary Analysis/Coordination**

HDR will prepare for City staff a listing of detailed requirements and checklist for completing SWRCB/SRF funding, prepare a listing of likely City Council/legal counsel actions required for completing SWRCB/SRF funding application, provide the City with samples and/or templates for planned Council actions

HDR will collect and review existing City documents for candidate project to establish initial project definition (we understand that City is not yet positioned on the current fiscal year Project Priority List, which can be quickly remedied by DFA staff).

HDR will perform preliminary coordination with SWRCB staff to alert them to pending application and initial issues (*may require some preliminary project submittals to SWRCB and preparation of the Financial Assistance Application Submittal Tool [FAAST]*), and perform ongoing coordination (*assume 12-month duration*).

HDR will coordinate with the City's legal counsel, as well as City staff and other project consultants throughout application preparation.

HDR will assist City staff in developing critical issue list, early critical equipment selection needs, if any, and other special needs, if any, for consideration by SWRCB staff.

***Deliverables:*** SWRCB/SRF checklist.

## **Task 7 - Bid Period Services**

### **Subtask 7.1 - Prebid Meeting**

HDR will assist the City with conducting a job walk and attend the prebid conference to meet with prospective contractors and answer contractor questions.

It is assumed that the City will receive and record contractor written and faxed questions, evaluate the bids, and prepare, negotiate, and execute the construction agreement with the selected contractor.

It is also assumed that no addenda to the contract documents will be provided by HDR for distribution to plan and specifications holder.

***Deliverables:*** Prebid meeting minutes.

## **SCHEDULE**

Figure 1 shows the proposed time schedule for completion of the work.

## **BUDGET**

Table 3 presents the estimated work effort and budget to perform the scope of work described above.

## **RATE SCHEDULE**

HDR will invoice the City by HDR's standard employee hourly billing rate for services provided. The billing rates cover payroll cost, employee benefits, and HDR overhead and profit. The ranges of hourly billing rates shown on in Table 4 are intended to illustrate typical rates for each billing category. These rates are effective until December 31, 2016.

### Figure 1 - Project Schedule

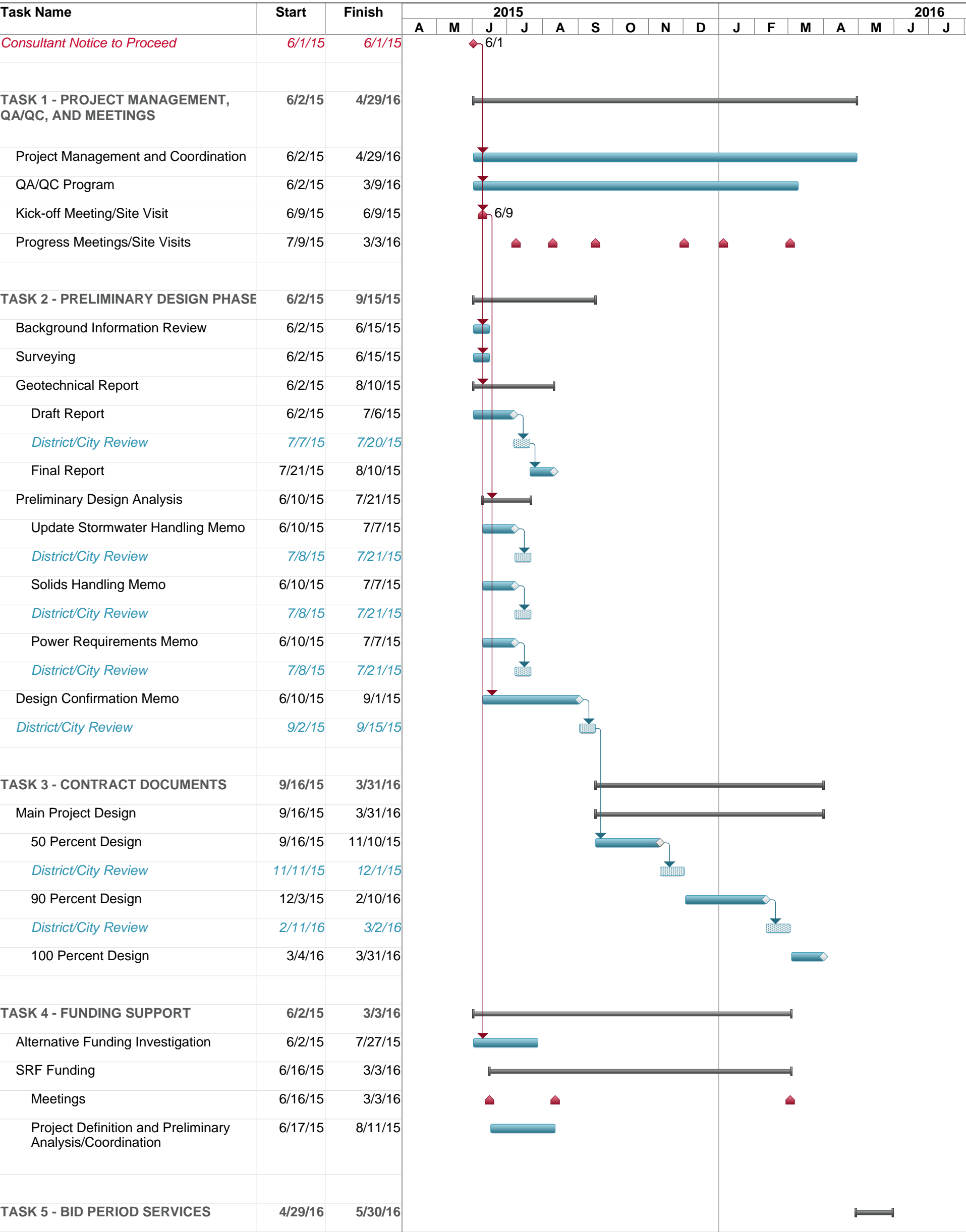


Table 3 - Estimated Work Effort and Cost

Fort Bragg Municipal Improvement District No. 1

Wastewater Treatment Plant Upgrade

Task No.	Task Description	Tech Specialist	Project Manager	Project Engineer	Process Engineer	Sr. Struct Engr	Struct Engr	Mech Engr	Sr. Elect Engr	Arch	Sr. Geotech Engineer	Geotech Engineer	Funding Specialist	CADD Tech	Admin/ Clerical	Total HDR Labor Hours	Total HDR Labor (\$)	Total HDR Expenses (\$)	Subs (\$)	Total Cost (\$)
	Rates	\$ 295.00	\$ 295.00	\$ 170.00	\$ 205.00	\$ 240	\$ 150	\$ 220	\$ 265	\$ 175	\$ 260	\$ 125	\$ 130	\$ 160	\$ 110					
Task 1 - Project Management, QA/QC, and Meetings																				
1.1	Project Management and Coordination		120	20											24	164	\$41,440	\$414		\$41,854
1.2	QA/QC Program	120													8	128	\$36,280	\$363		\$36,643
1.3	Kick-off Meeting/Site Visit		8	8	8				8						2	34	\$7,700	\$385		\$8,085
1.4	Progress Meetings/Site Visits (up to 6)		24	32	8	8		8	16						3	99	\$22,410	\$1,121		\$23,531
	Subtotal Task 1	120	152	60	16	8	0	8	24	0	0	0	0	0	37	425	\$107,830	\$2,283	\$0	\$110,113
Task 2 - Preliminary Design Phase																				
2.1	Background Information Review		8	16	8				4							36	\$7,780	\$78		\$7,858
2.2	Surveying			4												4	\$680	\$10	\$11,218	\$11,908
2.3	Geotechnical Report										34	90		6	8	138	\$21,930	\$2,500	\$3,465	\$27,895
2.4.1	Updated Stormwater Handling		4	16	24											44	\$8,820	\$441		\$9,261
2.4.2	Solids Handling		4	40											2	46	\$8,200	\$410		\$8,610
2.4.3	Power Requirements								40						2	42	\$10,820	\$541		\$11,361
2.5	Design Confirmation Memorandum	4	4	24	34				8						4	78	\$15,970	\$799		\$16,769
	Subtotal Task 2	4	20	100	66	0	0	0	52	0	34	90	0	6	16	388	\$74,200	\$4,778	\$14,683	\$93,661
Task 3 - Contract Documents																				
3.1	Main Project Design	0	140	388	104	56	84	33	209	20	16	16	0	1,260	142	2,468	\$444,145	\$29,138	\$0	\$473,283
3.1.1	50% Drawings, Specifications, and Cost Estimate		70	144	54	24	36	17	76	10	8	8		540	70	1,057	\$190,170	\$11,410		\$201,580
3.1.2	90% Drawings, Specifications, and Cost Estimate		35	144	36	24	36	8	76	8	4	4		360	36	771	\$139,745	\$9,732		\$149,477
3.1.3	Final Drawings, Specifications, and Cost Estimate		35	100	14	8	12	8	57	2	4	4		360	36	640	\$114,230	\$7,996		\$122,226
	Subtotal Task 3	0	140	388	104	56	84	33	209	20	16	16	0	1,260	142	2,468	\$444,145	\$29,138	\$0	\$473,283
Task 4 - Funding Support																				
4.1	Funding Investigation												60			60	\$7,800	\$390		\$8,190
4.2	Meetings (up to 3)												18		1	19	\$2,450	\$123		\$2,573
4.3	Project Definition and Preliminary Analysis/Coordination			10									52		6	68	\$9,120	\$456		\$9,576
	Subtotal Task 4	0	0	10	0	0	0	0	0	0	0	0	130	0	7	147	\$19,370	\$969	\$0	\$20,339
Task 5 - Bid Period Services																				
5.1	Prebid Meeting		8													8	\$2,360	\$236		\$2,596
	Subtotal Task 5	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8	\$2,360	\$236	\$0	\$2,596
COLUMN TOTALS		124	320	558	186	64	84	41	285	20	50	106	130	1,266	202	3,436	\$647,905	\$37,404	\$14,683	\$699,992

TABLE 4 - HDR ENGINEERING, INC., RATE SCHEDULE JANUARY 1, 2015, TO DECEMBER 31, 2016	
Job Classification	Hourly Billing Rate
Administration/Clerical	\$110
Architect	\$175
CAD Technician	\$160
Drafter	\$110
Senior Electrical Engineer	\$265
Electrical Engineer	\$170
Funding Specialist	\$130
Geotechnical Engineer	\$125
Sr. Geotechnical Engineer	\$260
Mechanical Engineer	\$220
Project Engineer	\$170
Process Engineer	\$205
Project Manager	\$295
Staff Engineer	\$165
Structural Engineer	\$150
Sr. Structural Engineer	\$240
Technical Specialist	\$295

## Expenses

### In-House Expenses

Technology Charge per Direct Labor Hour	\$3.70
Vehicle Mileage (per mile)	Current Federal Travel Regulation (FTR)
Black/White Photocopies (per copy)	\$0.05 to \$0.09
Color Copy (per copy)	\$0.15 to \$0.30
Bond Plotting - Black & White (per square foot)	\$0.15
Bond Plotting - Color (per square foot)	\$0.90

*Please Note: Technology charges include computer, computer aided design and drafting (CADD), network, software, and other related technology services. Subconsultants are charged with a five percent markup.*