

**ATTACHMENT C  
AUTHORIZATION OF CHANGE IN SERVICES  
CITY OF SAN MARCOS, TEXAS**

**PROJECT:** Miscellaneous Improvements at the San Marcos  
Wastewater Treatment Plant Project  
**ENGINEER:** CH2M HILL Engineers, Inc.,  
**AUTHORIZATION NO.:**  
**ORIGINAL CONTRACT DATE:**  
**AUTHORIZATION DATE:**

**WORK TO BE ADDED TO OR DELETED FROM SCOPE OF SERVICES**

See attached document, "DESIGN SERVICES SCOPE OF WORK FOR MISCELLANEOUS  
IMPROVEMENTS AT THE SAN MARCOS WASTEWATER TREATMENT PLANT, PHASE II"

Previous contract amount:	\$ 137,179
Net increase/decrease in contract amount:	\$ +\$157,795
Revised contract amount:	\$ 294,974

CH2M HILL Engineers, Inc.,

By: Heather G. Harris

Date: 9-18-18

Heather G. Harris, Vice President

Printed Name/Title

Approved by:

City of San Marcos:

Date: \_\_\_\_\_

By: \_\_\_\_\_

Printed Name/Title

# DESIGN SERVICES SCOPE OF WORK FOR MISCELLANEOUS IMPROVEMENTS AT THE SAN MARCOS WASTEWATER TREATMENT PLANT, PHASE II

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## PROJECT DESCRIPTION

This scope of work describes the services to be rendered by CH2M HILL Engineers, Inc. (CH2M and/or Engineer) for the preliminary design of a headworks fine screen and associated conveyor, roof replacement over grit classifier and screenings handling, new secondary clarifier effluent launder covers, new backup/redundant primary sludge screen, replacement of two existing centrifuges, chemical feed and conveyors, and sludge drying bed improvements. These projects were identified and described in CH2M's *Wastewater Treatment Plant Miscellaneous Improvements Assessment Study* dated January of 2015 (previous study). A previous design and construction contract completed other facility improvements recommended as part of the study. In addition to the improvements included in the previous study, this scope of work includes the preliminary design of a new blower building.

The contract for this project will be executed by CH2M HILL Engineers, Inc., a wholly owned subsidiary of Jacobs Engineering Group Inc. (Jacobs). This work will be performed under the Terms and Conditions of the Master of Services Agreement dated, September 1, 2015.

## WORK APPROACH

The objective of this project is to develop preliminary design documents that describe the wastewater treatment repairs and equipment replacements in adequate detail to develop a preliminary cost estimate and prioritize future improvements.

Upon Notice to Proceed, the Engineer will update the opinion of probable construction cost (OPCC) developed during the previous study and develop the preliminary design of a new blower building. The Engineer will present this information during a project definition meeting to be held with the City of San Marcos (Owner) personnel, operations staff, and key individuals from the Engineer team (the team). Among other things, the team will discuss available project budget and establish an initial priority ranking of each project element.

Following the Project Definition effort, endorsed project elements will be taken to a 30 percent level of design, and a more refined cost estimate will be prepared. The team will review the cost estimate compared to available budget and determine which project elements will be taken to a 60 percent level of design. The 60 percent design will be addressed under a separate scope of work/authorization.

During the 60 percent design effort, the Engineer will develop a Guaranteed Maximum Price (GMP) for each project element. The team will review the project elements and available budget compared to the GMP and determine which project elements are taken to a construction document level of detail and constructed.

The future scope of work would include taking the project drawings and specifications to a level of detail appropriate for construction and sealed. The selected contractor will construct the project elements based on these construction documents under a separate contract.

## **1. Task 1 – Project Management**

The Engineer will perform the following subtasks:

- 1.1. Staff Management and Task Coordination - Assemble a Project team comprised of Owner representatives, operations staff, and Engineer representatives. The Engineer will meet with the team to set the design and production schedule and parameters for all subsequent work, to verify the components within which all Project participants must perform, and to identify all parties and significant deadlines involved in the comprehensive schedule strategy. Based on this information, the Engineer will prepare a detailed schedule of its work for the Project, addressing each component of the work to be done and indicating the points of involvement of all project participants. Prior to the construction phase, the Engineer will conduct coordination of project staff, conduct monthly project staff coordination meetings as required, document meeting decisions and action items, and assign activities to team members.
- 1.2. Monitor Project Progress - Monitor project progress, including work completed, work remaining, budget expended, schedule, estimated cost of work remaining, and estimated cost at completion. The Engineer will monitor project activities for potential changes; will anticipate changes when possible; and, with Owner approval, modify project tasks, budgets, and approach as needed.

## **2. Task 2 – Project Definition**

The Engineer will:

- 2.1. Review the recommendations provided in the previous study.
- 2.2. Update the OPCC (American Society of Professional Estimators (ASPE) Class IV Cost Estimate) for the headworks fine screen and conveyor, roof replacement over grit classifier and screening handling, drying beds, primary sludge screen, secondary clarifier launder covers, and replacement of two existing centrifuges including polymer mix/feed units, dewatered cake conveyor(s).
- 2.3. Conduct a site visit with discipline leads to review the current conditions of the facilities being considered for improvement and to validate alignment of study recommendations with current needs.
- 2.4. Develop a preliminary blower building floorplan and preliminary cost estimate.
- 2.5. Summarize revised OPCC and construction scope items in brief technical memorandum (TM) to inform final design and construction scope.

- 2.6. Lead a workshop to review the components discussed in the TM. The OPCC will be compared to available budget. The team will establish a priority ranking of each project element and determine which project elements will be taken to the 30 percent level of design.

**Assumptions:**

- Class IV estimates have an accuracy range of +50 percent, -30 percent.
- For the purposes of the level of effort estimated for this project, the Engineer assumed all project elements will be included in the 30 percent design.
- Centrifuge replacement costs will be similar to the recent costs to replace Centrifuge No. 1.

**Deliverables:**

- Brief Basis of Design TM describing project elements and associated OPCC. TM will be delivered electronically in PDF format.
- Workshop meeting minutes, delivered electronically in PDF format.

### **3. Task 3 – 30 Percent Design Documents**

The Engineer will:

- 3.1. Create drawing indicating limits of construction and potential staging areas.
- 3.2. Develop initial draft specification list
- 3.3. Create initial demolition plan view drawings and plan for the following facilities:
  - 3.3.1. Roof replacement over headworks grit classifier and screenings handling
  - 3.3.2. Drying bed drain pipe and bed modifications for bin receiving
  - 3.3.3. Centrifuge equipment replacement
  - 3.3.4. Blower building
- 3.4. Headworks Fine Screen and Roof Replacement
  - 3.4.1. Develop initial layout drawing of screening equipment
  - 3.4.2. Develop initial drawing of roof replacement details
  - 3.4.3. Equipment design and quotes from up to three vendors
  - 3.4.4. Determine initial electrical feed and control panel requirements and modifications
  - 3.4.5. Determine whether the existing back-up generator will have the capacity to serve the new screen
  - 3.4.6. Develop initial process and instrumentation diagram (P&ID) drawing
  - 3.4.7. Recommend location for additional screenings disposal chute

### 3.5. Secondary Clarifier Effluent Launder Covers

- 3.5.1. Develop layout drawing of typical clarifier with effluent launder covers

### 3.6. Primary Sludge Screen

- 3.6.1. Develop initial structural and mechanical site layouts
- 3.6.2. Equipment design and quotes from up to three vendors
- 3.6.3. Determine initial electrical feed and control panel requirements and modifications
- 3.6.4. Develop initial P&ID drawing

### 3.7. Sludge Drying Bed Rehabilitation

- 3.7.1. Evaluate gravity versus pumped drainage system. Develop initial drain pipe and/or sump pump plan drawing
- 3.7.2. Develop receiving bin modification plan and bin drainage pad plan drawing
- 3.7.3. Perform material calculations, drain pipe sizing, and pump sizing (as needed)

### 3.8. Centrifuge Replacement (Typical of Two)

- 3.8.1. Develop initial mechanical and structural plan drawings for centrifuge replacement, include polymer feed, conveyor replacement, and sludge feed pump (as needed)
- 3.8.2. Perform calculations on sludge feed pumps and evaluate their condition to determine if replacement is required
- 3.8.3. Perform calculations on polymer feed requirements
- 3.8.4. Perform calculations and analysis of conveyor sizing requirements
- 3.8.5. Perform calculations on centrifuge structural support requirements from equipment manufacturers
- 3.8.6. Equipment design and quotes from up to three vendors for centrifuges and polymer feed units
- 3.8.7. Determine initial electrical feed and control panel requirements and modifications
- 3.8.8. Develop initial P&ID drawing

### 3.9. Blower building

- 3.9.1. Develop initial blower building location and connections to yard piping and building services. Prepare preliminary building access, grading, and drainage plans.

- 3.9.2. Document architectural design concept and assign code classifications. Establish preliminary room sizes and functional requirements. Prepare preliminary building layouts.
- 3.9.3. Establish foundation design, document structural design concepts, and prepare preliminary foundation, floor, and roof framing plans.
- 3.9.4. Prepare initial HVAC sizing calculation and layout of major equipment. Determine building plumbing needs and locate fixtures.
- 3.9.5. Update the treatment plant process model to determine air flow requirements. Model and analyze the blower system and prepare preliminary blower control strategy. Prepare initial blower system sizing and layout.
- 3.9.6. Develop electrical service strategy and prepare initial load calculations. Prepare preliminary layout of major electrical equipment.
- 3.9.7. Develop blower control philosophy and prepare P&ID drawing with equipment tags.
- 3.10. Perform continuous QC of deliverables and final internal QC review of design documents for all disciplines prior to deliverable submission
- 3.11. Perform constructability review of project elements
- 3.12. Develop 30 percent OPCC with a 30 percent contingency (ASPE Class III Cost Estimate +30 percent, -20 percent)
- 3.13. Lead a workshop where the Owner, Operations, and Engineer team review the 30 percent design and specifications, and the 30 percent OPCC. The OPCC will be compared to available budget and the team will verify the priority ranking of each project element established in the project definition phase and determine which project elements will be taken to the 60 percent level of design.

**Assumptions:**

- For the purposes of the budget, the engineer team assumes that all project elements will be carried through 30 percent design.

**Deliverables:**

- Updated basis of design summary TM describing project elements and associated OPCC. TM will be delivered electronically in PDF format.
- Workshop meeting minutes, delivered electronically in PDF format.

## **BASIS OF DESIGN SCOPE AND FEE DEVELOPMENT**

The following key assumptions were made in the compilation of this scope of work and the estimation of the level of effort:

## Design Assumptions

1. One construction document package per milestone will be prepared. Multiple construction packages would be additional services.
2. No equipment pre-procurement or pre-negotiation will be completed. Pre-procurement or pre-negotiation packages would be additional services.
3. No work is included that would trigger existing facilities to be updated to current building codes.
4. No changes will be made to any existing fire suppression systems.
5. No additional electrical service is required. Existing backup power is adequate to handle any new loads, except for the headworks generator which will be analyzed to determine if it can support the new screen.
6. Standard details will be included on the drawings.
7. No environmental survey is required.
8. Any investigation and remediation of possible hazardous materials encountered is not included in the Scope of Work and will be considered an additional service.
9. The design will be based upon existing geotechnical reports developed for the wastewater treatment plant and supplied by the Owner. No additional geotechnical investigations are included in the scope.
10. Any land acquisition and identification of property owners will be managed by the Owner.
11. Application for any necessary construction and other required permits will be prepared and submitted by either Contractor or the Owner, e.g., storm water permits and erosion and sedimentation control plan and all other required permits.
12. CH2M master specifications will be used as the basis for all Division 1 and technical specifications.
13. The drawings will follow the Owner's CAE/CAD standards. Microstation will be used to develop the drawings.
14. The Owner's Standard Construction Notes will be utilized in developing the construction drawings.
15. Restoration will be seeding and sod and no special landscape design effort is required.
16. No regulatory involvement/approval is included beyond notifying regulators of the project.
17. Project specifications will begin with Division 01: General Requirements; Division 00 – Procurement Requirements that includes bidding documents, contract forms, advertising, etc. will not be included.

18. No bidding support or services during construction including submittal review, RFI response, or inspection will be completed as part of this scope of work.

## Project Element Specific Assumptions

### Headworks Fine Screen

- One fine screen to be installed
- Existing screen channel to be utilized with minimal modifications
- Screen is assumed to be installed similar to existing screens. No hydraulic analysis will be performed or hydraulic profile created
- Separate washer/compactor required for proposed fine screen
- Screen is 10 mm
- Separate conveyor and chute required for existing and new screen to disposal bin
- 304 stainless steel materials will be required on critical screening, washer/compactor, and conveyor equipment
- Equipment is located outdoors
- Onsite electrical feed is adequate
- Control and electrical panels to be located outdoors

### Roof Replacement over Grit Classifier and Screenings Handling

- Steel roof decking is to be replaced
- Existing structural support members are adequate
- No coating of existing structural support members is assumed

### Secondary Clarifier Effluent Launder Covers

- Three secondary clarifier effluent launders are included
- Either fiberglass and aluminum covers will be chosen during design

### Primary Sludge Screen

- Primary sludge screen to be redundant with existing unit; shared feed pump, piping, and air piping/compressor
- Primary sludge screen capacity is assumed equivalent in size and capacity to the existing; manufacturer will match existing
- Elevated platform to be extended to accommodate proposed unit adjacent to existing
- Existing conveyor to be utilized with modifications to accommodate second feed
- No upgrades to capacity, coatings, condition, mechanical components (motors, gears, etc.) will be included

- Existing conveyor condition and capacity are adequate to meet current needs
- Onsite electrical feed is adequate
- Control and electrical panels to be located outdoors
- Previous onsite geotechnical work will be utilized for platform design; no geotechnical work is assumed

#### Drying Bed Modifications

- Existing drain pipe to be replaced
- New pump station and piping is required to route drainage to treatment process.
- Two drying beds will be modified to accommodate bins for receiving hauled solids
- A concrete pad will be installed near existing drying beds access to bins
- Drying bed modifications will be designed around selected bin vendor from Project Definition phase
- Profile drawings of the full alignment of the drying bed drainage system is not required

#### Centrifuge Replacement

- Two existing centrifuges are nearing end of useful life and require replacement
- New centrifuges will be identical to the recently installed centrifuge; design will verify existing physical space will accommodate units
- Design includes new access platform for each centrifuge
- Design will incorporate replacement of both units but construction may only be for one unit
- Existing feed sludge pumps are considered adequate and sludge feed and centrate piping is assumed to require minimal modifications to accommodate new centrifuge units
  - Feed pumps will be evaluated as part of design but replacement is not included in design scope. Replacement of feed pumps would be an additional service.
- Odor control capacity and piping is adequate to accommodate new units; minor modifications and tie ins to existing odor control ducting are assumed for piping connections
- Existing centrate handling systems can accommodate centrate flows from new units
- Non-potable water system feeding polymer units and centrifuges are adequate to meet needs of new equipment

- New polymer feed units, replacing existing units; one dedicated unit for each centrifuge
- Upgrades to the existing solids conveying system are included; capacity will be upgraded to match proposed centrifuge capacities (new and existing). Conveyor capacity can be increased with minor modification (motor/ gear replacements), and not full replacement. This will be verified during design, and the Owner alerted if more extensive conveyor replacement is needed. Conveyor will be upgraded to allow the two centrifuges that share one conveyor to be operated at the same time.
- Existing onsite electrical feed is adequate
- Existing electrical and control room has adequate space for proposed panels

#### Blower Building

- Structural design for the blower building will be based on existing geotechnical information. Additional geotechnical investigation would be completed under a separate scope of work.
- Blower building is assumed to be located in an area with current survey data. Additional survey would be completed under a separate scope of work.

### Construction Cost Estimate

The Engineer team will develop an OPCC at each major milestone. A summary of the OPCC will be transmitted to the Owner.

In providing estimates of cost, financial analyses, economic feasibility projections, and schedules for the project, CH2M has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality of performance by third parties; quality, type, management, or direction of operating personnel; and other economic and operational factors that may materially affect the ultimate project cost and schedule. Therefore, CH2M makes no warranty that the Owner's actual project costs, economic feasibility, or schedules will not vary from CH2M opinions, analyses, projections, or estimates.

### Drawing List

Based upon CH2M's understanding of the project, the level of effort has been developed assuming the following list of drawings (total of 49) will be required for final design. The drawings expected for the 30 percent deliverable are noted:

SHEET NO.	DWG NO.	DESCRIPTION
001	G-1	Cover/Index*
002	G-2	General Notes*
003	G-3	Abbreviations*
004	G-4	Civil Legend*
005	G-5	Civil Legend*

SHEET NO.	DWG NO.	DESCRIPTION
006	G-6	Structural Notes*
007	G-7	Structural Notes*
008	G-8	Mechanical Legend*
009	G-9	Electrical Legend*
010	G-10	I&C Legend*
011	G-11	I&C Legend*
012	C-1	General Site Layout*
013	C-2	Concrete Dewatering Pad*
014	C-3	Civil Details
015	C-4	Blower Building Grading*
016	C-5	Blower Building Utilities/Yard Piping*
017	C-6	Blower Building Details
018	D-1	Drying Bed Demolition
019	D-2	Centrifuge Demolition
020	D-3	Blower Building Demolition
021	A-1	Blower Building – Code Plan and Symbols*
022	A-2	Blower Building – Floor Plan *
023	A-3	Blower Building – Reflected Ceiling Plan
024	A-4	Blower Building – Roof Plan*
025	A-5	Blower Building – Elevations
026	A-6	Blower Building – Sections
027	A-7	Blower Building – Interior Details
028	A-8	Blower Building – Exterior Details
029	A-9	Blower Building – Schedules
030	S-1	Grit Classifier and Screen Disposal Roof Replacement – Plan*
031	S-2	Grit Classifier and Screen Disposal Roof Replacement – Section *
032	S-3	Primary Sludge Screen Platform – Plan View*
033	S-4	Primary Sludge Screen Platform – Section View*
034	S-5	Drying Bed Modifications – Plan View*
035	S-6	Drying Bed Modifications – Section View and Details*
036	S-7	Centrifuge Replacement Support Structure – Plan and Section*
037	S-8	Structural Details – Equipment Pads, Secondary Clarifier Launder Cover Attachment, Pipe Penetrations, etc

SHEET NO.	DWG NO.	DESCRIPTION
038	S-9	Structural Details – Equipment Pads, Secondary Clarifier Launder Cover Attachment, Pipe Penetrations, etc
039	S-10	Blower Building - Foundation and Floor Plan*
040	S-11	Blower Building - Roof Framing Plan*
041	S-12	Blower Building – Sections*
042	S-13	Blower Building - Details
043	M-1	Headworks Fine Screen – Plan View*
044	M-2	Headworks Fine Screen – Section View*
045	M-3	Secondary Clarifier – Effluent Launder Covers*
046	M-4	Primary Sludge Screen – Plan View*
047	M-5	Primary Sludge Screen – Section View*
048	M-6	Drying Bed – Drain Pipe Replacement*
049	M-7	Drying Bed – Package Sump Pump Station, Plan and Section*
050	M-8	Centrifuge Replacement – Plan View*
051	M-9	Centrifuge Replacement – Section View *
052	M-10	Mechanical Details
053	M-11	Blower Building – Plan*
054	M-12	Blower Building – Sections*
055	M-13	Blower Building - Sections
056	H-1	Blower Building - HVAC Plan*
057	H-2	Blower Building - HVAC Sections/Details
058	H-3	Blower Building - HVAC Schedules
059	P-1	Blower Building - Plumbing Plan*
060	P-2	Blower Building - Plumbing Schedules/Details
061	E-1	Overall Facility One-line Diagram*
062	E-2	Site Electrical Plan*
063	E-3	Headworks Fine Screen – Electrical Site Plan*
064	E-4	Headworks Fine Screen – One-line Diagram*
065	E-5	Primary Sludge Screen – Electrical Site Plan*
066	E-6	Primary Sludge Screen – One-line Diagram*
067	E-7	Drying Bed – Electrical Site Plan and One-line Diagram*
068	E-8	Centrifuge Replacement – Electrical Site Plan*
069	E-9	Centrifuge Replacement – One-line Diagram*
070	E-10	Electrical Details

SHEET NO.	DWG NO.	DESCRIPTION
071	E-11	Blower Building – One-line diagram*
072	E-12	Blower Building – Power Plan*
073	E-13	Blower Building – Lighting and Receptacle Plan
074	E-14	Blower Building – Details
075	E-15	Blower Building – Control Diagrams
076	E-16	Blower Building – Schedules
077	I-1	Headworks Fine Screen P&ID*
078	I-2	Primary Sludge Screen P&ID*
079	I-3	Centrifuge Replacement P&ID*
080	I-4	Centrifuge Polymer Systems P&ID*
081	I-5	Blower P&ID*
082	I-6	Instrumentation and Controls Details*

\* - Drawings expected to be in the 30 percent deliverable

## Owner Responsibilities

The Owner will:

1. Provide full and accurate information to the Engineer regarding the Owner's requirements for the Engineer's services under this Agreement. In addition, the Owner will furnish the Engineer with copies of data and information in the Owner's possession needed by the Engineer pertinent to the Engineer's provision of services required under this Agreement at the Engineer's request. The Owner's will provide this information and render decisions expeditiously for the orderly progress of the Engineer's services. Engineer will reasonably rely upon the accuracy, timeliness, and completeness of the information provided by Owner.
2. Designate Jon Clack, Assistant Director of Public Services, Water/Wastewater Division, as the Owner's authorized representative to act on the Owner's behalf with respect to this Agreement. The Owner will examine all documents and information submitted by the Engineer and promptly render responses to the Engineer on issues requiring a decision by the Owner.
3. Provide access to and make all necessary provisions for the Engineer to access Owner's personnel and to enter public and private property as required for the Engineer to perform its services under this Agreement.
4. Bear all costs incidental to this Article.

Proposed compensation and schedule information is provided in Appendix A.

# APPENDIX A: COMPENSATION AND SCHEDULE

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## Basic Design Services

Compensation by the Owner to CH2M for the Basic Design Services described in this authorization will be for a total fee of \$157,795. CH2M anticipates this work will be compensated on a Time and Materials basis, consistent with the previously executed contract. Invoices will be based upon the extent of work completed on a percentage basis.

Table 1 provides a summary of the fee by activity.

For the budget presented, CH2M assumes that all project elements will be designed through the construction document phase. The budget can be revised if the Owner modifies design execution of the assumed list of project elements.

TABLE 1  
San Marcos WWTP Engineering Design Fee Summary  
*2018 Miscellaneous Improvements, Phase II*

Description of Services	Labor Hours	Fee
Project Management – Design Phase	72	\$14,299
Project Definition	234	\$36,986
30 Percent Design	720	\$106,511
<b>Total</b>	<b>1,026</b>	<b>\$157,795</b>

## Additional Services

The Owner may direct the Engineer to perform services outside of the scope of the Basic Services described herein. The Engineer will submit a written estimate of fees to the Owner and obtain the Owner's authorization before initiating any additional services.

Unless specified otherwise in this authorization, additional services will be compensated on a Time and Expense - Per Diem Rate basis. Compensation will be Hourly Rates (Table 2); Direct Expenses; a service charge of ten (10) percent of Direct Expenses and ten (10) percent of subcontracts and outside services; and applicable sales, use, value added, business transfer, gross receipts, or other similar taxes.

TABLE 2  
Proposed 2018 Per Diem Hourly Rates  
*2018 Miscellaneous Improvements, Phase II*

Title	Proposed 2018 Rates
Project Manager	\$ 235

TABLE 2  
Proposed 2018 Per Diem Hourly Rates  
*2018 Miscellaneous Improvements, Phase II*

<b>Title</b>	<b>Proposed 2018 Rates</b>
Senior Technology Consultant	\$ 230
Senior Project Engineer	\$ 190
Project Engineer 4	\$ 180
Project Engineer 3	\$ 160
Project Engineer 2	\$ 140
Project Engineer 1	\$ 120
Junior Project Engineer (EIT)	\$ 108
Senior Cost Estimator	\$ 172
Cost Estimator	\$ 145
Senior Operations Specialist	\$ 170
Senior Technician	\$ 125
Junior Technician/CAD	\$ 94
Project Accountant	\$ 86
Administrative Assistant	\$ 86

The budgetary amount, excluding taxes, will be specified in each new Authorization. CH2M will make reasonable efforts to complete the work within the budget and will keep the Owner informed of progress toward that end so that the budget or work effort can be adjusted if necessary.

## Project Schedule

The engineer team anticipates that the contract period for design will occur in 2018. CH2M assumes all design work will be completed within approximately 6 months from notice to proceed. A detailed project schedule will be developed and submitted to the Owner for acceptance prior to beginning of Design activities. A summary of the schedule is provided in Table 3.

TABLE 3  
Estimated Delivery Schedule  
*2018 Miscellaneous Improvements, Phase II*

Task Name	Duration	Start	Finish
Notice to Proceed	1 day	Wed 8/29/18	Wed 8/29/18
Task 2 - Project Definition	16 days	Thu 8/29/18	Thu 9/19/18
Task 3 - 30% Design	46 days	Fri 9/20/18	Fri 11/22/18