



WEST DES MOINES WATER WORK BOARD OF TRUSTEES MEETING COMMUNICATION

DATE: June 18, 2018

ITEM:

6. Recommendations from Staff

f. Motion –

Approving and Authorizing Execution of Professional Services Agreement with HDR Engineering, Inc. for Design of WDMWW Portion of Joint Pump Station

FINANCIAL IMPACT:

Lump sum fee of \$213,000 for Design, Bidding and Construction Administrative Services and \$50,000 for Construction Observation Services.

SUMMARY:

Approval of this contract provides for design and construction services for the WDMWW pumps, programming, controls and related equipment for a joint booster station by HDR Engineering, Inc. Mark Duben of HDR will act as the primary engineer on the project design. A second engineering contract will be presented to the Board of Trustees at a future date for WDMWW's proportionate share of the Des Moines Water Works (DMWW) engineering costs for site work, utilities and building. These costs have been estimated at approximately \$90,000. Once the bid cost of pump station site work and building are known, WDMWW will be required to formally decide whether or not to participate in the joint station construction. If WDMWW decides not to proceed with participation in the joint station, an independent station connected to the joint water main would be required in the future.

BACKGROUND:

At a special meeting of the Board of Trustees held November 6, 2017, a resolution was adopted which allowed WDMWW to enter a joint project consisting of a 24 inch diameter water main and the ability to participate in the joint pump station. During the preliminary design process for the station it was determined that the difference in hydraulic gradients between the WDMWW system and other participating systems (Norwalk and Cumming) required two separate trains of pumps. Two design contracts are necessary to complete the site and building design (DMWW) and the WDMWW pump train (HDR).

RECOMMENDED ACTION BY THE BOARD OF TRUSTEES:

To concur with the recommendation of Staff and approve the motion approving and authorizing execution of professional services agreement with HDR Engineering, Inc. for design of WDMWW portion of joint pump station.

Prepared by: _____

Approved for Content by: _____

**AGREEMENT BETWEEN OWNER AND HDR ENGINEERING, INC. FOR
PROFESSIONAL SERVICES
AGREEMENT NUMBER _____**

THIS AGREEMENT is made as of this _____ day of June, 2018, between WEST DES MOINES WATER WORKS ("OWNER") an Iowa municipal utility organized and existing under Chapter 388 of the Code of Iowa, with principal offices at 4200 Mills Civic Parkway, Suite 1D, West Des Moines, Iowa, 50265, and HDR ENGINEERING, INC., ("ENGINEER") a Nebraska corporation, with principal offices at 8404 Indian Hills Drive, Omaha, Nebraska, 68114 for services in connection with the project known as Joint Maffitt Lake Park Booster Pump Station ("Project");

WHEREAS, OWNER desires to engage ENGINEER to provide professional engineering, consulting and related services ("Services") in connection with the Project; and

WHEREAS, ENGINEER desires to render these Services as described in SECTION I, Scope of Services.

NOW, THEREFORE, OWNER and ENGINEER in consideration of the mutual covenants contained herein, agree as follows:

SECTION I. SCOPE OF SERVICES

ENGINEER will provide Services for the Project, which consist of the Scope of Services as outlined on the attached Exhibit A.

SECTION II. TERMS AND CONDITIONS OF ENGINEERING SERVICES

The HDR Engineering, Inc. Terms and Conditions, which are attached hereto in Exhibit B, are incorporated into this Agreement by this reference as if fully set forth herein.

SECTION III. RESPONSIBILITIES OF OWNER

The OWNER shall provide the information set forth in paragraph 6 of the attached "HDR Engineering, Inc. Terms and Conditions for Professional Services."

SECTION IV. COMPENSATION

Compensation for ENGINEER'S services under this Agreement shall be on the basis of

- lump sum. The amount of the lump sum for Design Phase Services, Bidding Phase Services, and Construction Administration Services is Two Hundred Thirteen Thousand and 00/100 Dollars (\$213,000.00).

- lump sum. The amount of the lump sum for Construction Observation Services (if desired and authorized by OWNER) is Fifty Thousand and 00/100 Dollars (\$50,000.00).

The amount of any sales tax, excise tax, value added tax (VAT), or gross receipts tax that may be imposed on this Agreement shall be added to the ENGINEER'S compensation as Reimbursable Expenses.

Compensation terms are defined as follows:

Lump Sum shall mean a fixed amount which shall be the total compensation agreed upon in advance for Scope of Services.

SECTION V. PERIOD OF SERVICE

Upon receipt of written authorization to proceed, ENGINEER shall perform the services within the time period(s) described in Exhibit A.

Unless otherwise stated in this Agreement, the rates of compensation for ENGINEER'S services have been agreed to in anticipation of the orderly and continuous progress of the project through completion. If any specified dates for the completion of ENGINEER'S services are exceeded through no fault of the ENGINEER, the time for performance of those services shall be automatically extended for a period which may be reasonably required for their completion and all rates, measures and amounts of ENGINEER'S compensation shall be equitably adjusted.

SECTION VI. SPECIAL PROVISIONS

None.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first written above.

WEST DES MOINES WATER WORKS
"OWNER"

BY: _____

NAME: _____

TITLE: _____

ADDRESS: 4200 Mills Civic Parkway,
Suite 1D
West Des Moines, IA 50265

HDR ENGINEERING, INC.
"ENGINEER"

BY: _____

NAME: Matthew Tondl, PE

TITLE: Senior Vice President

ADDRESS: 8404 Indian Hills Drive
Omaha, NE 68114

EXHIBIT A
SCOPE OF SERVICES

SCOPE OF SERVICES
JOINT MAFFITT LAKE PARK BOOSTER PUMP STATION
WEST DES MOINES WATER WORKS
WEST DES MOINES, IOWA
JUNE 7, 2018

SCOPE OF SERVICES

This Scope of Services is for HDR Engineering, Inc. (“ENGINEER”) to provide engineering design, bidding, and construction phase services to the West Des Moines Water Works (WDMWW) (“OWNER”) related to the Joint Maffitt Lake Park Booster Pump Station project. The Scope of Services to be performed by ENGINEER shall be completed in accordance with generally accepted standards of practice and shall include the services and supplies to complete the following tasks:

- Task Series 100 – Design Phase Services
- Task Series 200 – Bidding Phase Services
- Task Series 300 – Construction Administration Services
- Task Series 400 – Construction Observation Services

PROJECT DESCRIPTION

Des Moines Water Works (DMWW) is designing a booster pump station (BPS) at a site in Maffitt Lake Park that is owned by DMWW. The Cities of Cumming and Norwalk will be served by DMWW with this BPS. WDMWW also desires to serve its expanding Pressure Zone 5 with its own pumps and related equipment in this BPS. Therefore, DMWW and WDMWW propose to jointly design, bid, build, operate, and maintain this BPS. ENGINEER will provide engineering services to WDMWW and coordinate with DMWW for design, bidding, and construction of this joint BPS as described herein.

This Scope of Services assumes that DMWW will design, bid, and contract for construction of the BPS building, their pumps and related equipment, and sitework; and that WDMWW will design, bid, and contract for construction of their pumps and related equipment in the BPS building provided by DMWW.

The design basis of the WDMWW pumps and related equipment is based on the Technical Memo of the Osmium Data Center Preliminary Modeling Results by HR Green dated June 13, 2017; the email from Heath Picken of HR Green to Bill Mabuice of WDMWW dated December 14, 2017 defining target ground elevation and discharge pressures of the pump station; and the letter from Cole Prevost of DMWW to Diana Wilson of WDMWW dated March 8, 2018 for pump analysis.

Task Series 100 – Design Phase Services

Objective: Develop the project design, drawings, specifications, and contract documents for bidding and construction of the project. Provide project management activities over project duration, including team management and project control, project planning, and liaison with OWNER.

ENGINEER Activities:

Task 101 – Team Management and Project Control

- Budget and invoice management.
- Schedule monitoring and update for project development.
- Resource management and allocation based on project schedules and activities.
- Monthly progress report submitted to OWNER with each invoice.

Task 102 – Project Planning

- Create the internal Project Management Plan for the project. Project Management Plan will document project activities, constraints, guidelines, budget, and procedures.
- Maintain Project Management Plan, distribute and update as activities dictate.

Task 103 – Kickoff Meeting

- Introduce the project team and establish the lines of communication.
- Establish review meeting dates.
- Identify OWNER staff who are to provide information/services during the project.
- Facilitate discussion of project goals, expectations and objectives.
- Present and request information and initial data needs from OWNER.
- Collect background data.
- Conduct key issues brainstorming.
- Kickoff meeting will include ENGINEER's Project Manager and Project Engineer.

Task 104 – Background Data

- Request and compile the background data provided by OWNER in electronic format, as available, and hard copy.
- ENGINEER will provide a list of requested data to OWNER prior to Kickoff Meeting.

Task 105 – Quality Control

- Conduct team meetings on a regular basis during project to facilitate communication flow and design development.
- Provide independent quality control reviews for drawings, specifications, and other project deliverables.
- Schedule internal audits of the project to confirm compliance with scope and the project quality assurance plans.

Task 111 – Site Survey and Base Mapping

- Not Applicable – to be performed by DMWW.
- Task 112 – Geotechnical Exploration and Report
- Not Applicable – to be performed by DMWW.
- Task 121 – Iowa Department of Natural Resources Permit
- Required permits include only the IDNR Water Supply Construction Permit for the WDMWW pumps and related equipment. All other permits shall be obtained by DMWW for the site and building construction, storm water management, their pumps and related equipment, etc.
 - Prepare the IDNR permit application and submit to OWNER.
 - Provide technical input as required in securing the permit.
 - Permit application will be formally submitted and paid for by OWNER.
- Task 131 – Design Memorandum
- Prepare a Design Memorandum (DM).
 - The DM is a summary of design criteria and data, and other pertinent information presented in outline format.
 - The primary intent of the DM is to allow the OWNER to review and comment on the design before ENGINEER proceeds with detailed design and drafting.
 - Perform quality control review of DM document.
 - Incorporate quality control reviewer comments into DM document.
 - Submit the DM document to OWNER for review and comment.
- Task 132 – Pre-Design Meeting
- Conduct a pre-design meeting with OWNER to review the project specifics and DM, and receive comments.
 - Provide minutes of the pre-design meeting to document discussion items and action items.
 - Incorporate action items into the project design as agreed upon in the pre-design meeting.
 - Pre-design meeting will include ENGINEER's Project Manager and Project Engineer.
- Task 141 – Preliminary (50%) Design Drawings
- Perform calculations to support preliminary design.
 - Develop preliminary drawings, anticipated to include the following sheets:
 - Cover Sheet and Index of Drawings
 - General Abbreviations
 - General Legend
 - Civil Legend
 - Electrical Legend
 - Instrumentation Legend
 - Process and Instrumentation Diagram (WDMWW Pumps)
 - Instrumentation Control System Architecture (WDMWW System)
 - Civil Site Plan (coordinated with DMWW)
 - Civil Site Piping Details
 - Structural General Notes

- Structural General Details
- Structural Floor Plan (coordinated with DMWW)
- Structural Sections & Details (coordinated with DMWW)
- Process Floor Plan (coordinated with DMWW)
- Process Sections & Details (coordinated with DMWW)
- Electrical Floor Power Plan (coordinated with DMWW)
- Electrical One-Line Diagram (coordinated with DMWW)
- Electrical Details
- Electrical Panelboard, Conduit & Wire Schedules
- Electrical Control Block Diagram
- Electrical Control Diagrams
- Instrumentation Details

Task 142 – Preliminary (50%) Design Specifications List

- Develop preliminary list of technical specifications required for the project (Divisions 01 through 43 in CSI format and SUDAS).

Task 143 – Preliminary (50%) Opinion of Probable Project Cost and Construction Schedule

- Develop a preliminary opinion of probable project cost based on the 50% design documents.
- Develop a preliminary construction schedule based on the 50% design documents.

Task 144 – Preliminary (50%) Design Review

- Perform quality control review of preliminary design documents.
- Incorporate quality control reviewer comments into preliminary design documents.
- Submit preliminary design documents to OWNER for review and comment.
- Conduct a preliminary design review meeting with OWNER to review design documents and receive comments.
- Provide minutes of design review meeting to document discussion items and action items.
- Incorporate action items into project design as agreed upon in the preliminary design review meeting.
- Preliminary design review meeting will include ENGINEER's Project Manager and Project Engineer.

Task 151 – Final (90%) Design Drawings

- Perform calculations to support final design.
- Develop final drawings, anticipated to include the following sheets:
 - Cover Sheet and Index of Drawings
 - General Abbreviations
 - General Legend
 - Civil Legend
 - Electrical Legend
 - Instrumentation Legend
 - Process and Instrumentation Diagram (WDMWW Pumps)

- Instrumentation Control System Architecture (WDMWW System)
- Civil Site Plan (coordinated with DMWW)
- Civil Site Piping Details
- Structural General Notes
- Structural General Details
- Structural Floor Plan (coordinated with DMWW)
- Structural Sections & Details (coordinated with DMWW)
- Process Floor Plan (coordinated with DMWW)
- Process Sections & Details (coordinated with DMWW)
- Electrical Floor Power Plan (coordinated with DMWW)
- Electrical One-Line Diagram (coordinated with DMWW)
- Electrical Details
- Electrical Panelboard, Conduit & Wire Schedules
- Electrical Control Block Diagram
- Electrical Control Diagrams
- Instrumentation Details

Task 152 – Final (90%) Design Specifications and Front End Documents

- Develop final technical specifications (Divisions 01 through 43 in CSI format and SUDAS).
- Develop final front end documents (Divisions 0 and 1).

Task 153 – Final (90%) Opinion of Probable Cost and Construction Schedule

- Develop a final opinion of probable project cost based on the 90% design documents.
- Develop a final construction schedule based on the 90% design documents.

Task 154 – Final (90%) Design Review

- Perform quality control review of final design documents.
- Incorporate quality control reviewer comments into final design documents.
- Submit final design documents to OWNER for review and comment.
- Conduct a final design review meeting with OWNER to review design documents and receive comments.
- Provide minutes of design review meeting to document discussion items and action items.
- Incorporate action items into project design as agreed upon in the review meeting.
- Final design review meeting will include ENGINEER's Project Manager and Project Engineer.

Task 161 – Final Bidding Documents

- Develop final bidding drawings.
- Develop final bidding technical specifications.
- Develop final bidding front end documents.

Task 162 – Final Bidding Opinion of Probable Project Cost and Construction Schedule

- Develop a final bidding opinion of probable project cost based on the final bidding documents.

- Develop a final bidding construction schedule based on the final bidding documents.

Task 163 – Final Bidding Documents Submittal

- Submit final bidding drawings, technical specifications, front end documents, opinion of probable project cost, and construction schedule to OWNER.
- Submit final bidding drawings, technical specifications, front end documents, opinion of probable project cost, construction schedule, and construction permit application documents to Iowa Department of Natural Resources (Task 121).

OWNER Activities:

- Provide timely review and processing of monthly progress report and invoices.
- Identify and provide relevant prior studies, reports, drawings, specifications, manuals, and other data prepared by others.
- Provide timely review and comment on project deliverables.
- Coordinate OWNER staff participation and actively participate in meetings.
- Provide and make arrangements for facilities to conduct meetings.
- Provide access to project site as required for ENGINEER's performance of the scope of services.
- Sign, submit, and pay the cost for permit application.

Deliverables:

- Monthly project status reports and invoices.
- Kickoff meeting minutes.
- Design memorandum.
- Pre-design meeting minutes.
- Preliminary (50%) design drawings, technical specifications list, opinion of probable project cost, and construction schedule.
- Preliminary (50%) design review meeting minutes.
- Final (90%) design drawings, technical specifications, front end documents, opinion of probable project cost, and construction schedule.
- Final (90%) design review meeting minutes.
- Final bidding drawings, technical specifications, front end documents, opinion of probable project cost, and construction schedule to OWNER and Iowa Department of Natural Resources.

Key Understandings and Assumptions:

- OWNER includes both West Des Moines Water Works and Des Moines Water Works for providing background data, providing input on design, review and comments on deliverables, participation in meetings, review and comment on meeting minutes, cooperation and assistance as required for ENGINEER's performance of the scope of services.
- Project background data is provided in a timely manner.

- The design will be based on applicable codes and standards in effect at the start of the project. Changes in codes that occur after the start of the project will be incorporated by Contract Amendment.
- Topographic and utility surveys and base mapping will be provided by DMWW and not by ENGINEER.
- Legal surveys, easements, or plats of the project site and surrounding areas will not be required, or will be provided by DMWW and not by ENGINEER.
- Soil borings and geotechnical investigations, engineering services, and reports will be provided by DMWW and not by ENGINEER.
- Wetlands, archeological, historical, or cultural resources investigations and reports will not be required, or will be provided by DMWW and not by ENGINEER.
- All preliminary deliverables will be submitted to OWNER in electronic PDF format via email or on flash drive.
- Final bidding documents deliverables will be submitted to OWNER in electronic PDF format via email or on flash drive and in three signed and sealed half-size hard copies, and to IDNR in two signed and sealed half-size hard copies.
- ENGINEER's standard drawing, technical specification, and opinion of probable cost format will be utilized.
- Front end documents format will be coordinated with West Des Moines Water Works.
- Opinion of probable cost will be developed using Excel software with the format of estimate being broken down by CSI Divisions.
- Redesigns associated with modifications of previously approved design concepts and design documents are not included in this scope of services and will be incorporated by Contract Amendment.
- Language will be included in the bidding documents to establish the Contractor's responsibility for construction means and methods, to limit ENGINEER's responsibilities as defined by the front end documents, to include ENGINEER as an additional insured on Contractor's insurance, to enable ENGINEER reimbursement for review of multiple resubmittals and redesign to accommodate substitution requests.
- Only permits specifically identified in the Scope of Services will be prepared.
- Permits required by the contract documents shall be obtained by the construction Contractor in accordance with the contract documents.
- The project will be bid as a single contract package including all materials and equipment to be incorporated.
- Design shall include all SCADA communication and programming using the preferred contractor of WDMWW (Automatic Systems). Automatic Systems Company, separate from ENGINEER's contract, will need to complete a Radio Study prior to communication design work.
- An emergency electrical generator on the booster pump station site will not be required, or will be provided by DMWW and not by ENGINEER.

- Utility coordination for bringing the necessary three-phase power to the site will be provided by DMWW and not by ENGINEER.
- DMWW will design, bid, and contract for construction of the BPS building, including civil sitework, architectural, structural, process, mechanical HVAC and plumbing, electrical, instrumentation and controls for their pumps and related equipment.
- WDMWW will design, bid, and contract for construction of their pumps and related equipment in the BPS building provided by DMWW. Civil sitework design for discharge piping from the WDMWW pumps to the WDMWW water distribution main on Adams Street will be provided by ENGINEER. Structural, process, electrical, instrumentation and controls design for WDMWW pumps and related equipment will be provided by ENGINEER.

Task Series 200 – Bidding Phase Services

Objective: Assist OWNER in bidding and award to a Contractor for construction of the project.

ENGINEER Activities:

Task 201 – Team Management and Project Control

- Budget and invoice management.
- Schedule monitoring and update for project development.
- Resource management and allocation based on project schedules and activities.
- Monthly progress report submitted to OWNER with each invoice.

Task 211 – Notice of Project

- Provide informal advance notification of the project to plan rooms and prospective bidders and suppliers.

Task 212 – Distribute Bidding Documents

- Reproduce up to 40 sets of bidding documents for distribution.
- Distribute bidding documents to interested parties.

Task 213 – Maintain Official Plan Holders List

- Maintain a record of parties holding bidding documents.
- Provide the plan holders list to potential material/equipment suppliers and construction information services as requested.

Task 221 – Respond to Inquiries

- Correspond with prospective bidders and suppliers, and respond to questions.

Task 231 – Addenda

- Prepare addenda items as required to document changes or clarifications, assuming up to two addendum packages.
- Distribute addenda to official plan holders.

Task 241 – Pre-Bid Meeting

- Attend a pre-bid meeting to be conducted by OWNER.

- Include any necessary clarifications to the contract documents identified in the pre-bid meeting in the addendum package following the pre-bid meeting.
- Task 251 – Bid Opening
- Attend the bid opening to be conducted by OWNER.
- Task 261 – Bid Tabulation
- Prepare a tabulation of bids and distribute to OWNER and plan holders.
- Task 271 – Award of Contract
- Review bids for conformance to the contract documents.
 - Make a recommendation of award of the construction contract.
- Task 281 – Contract Documents
- Prepare the construction contract documents and submit to Contractor for execution.
 - Review the executed contract documents from Contractor, and provide comments to Contractor for corrections.
 - Submit executed contract documents to OWNER for final review and approval.
- Task 291 – Conformed Construction Documents
- Prepare conformed construction documents, incorporating addenda items and Contractor's information into bidding documents.
 - Distribute to OWNER and Contractor up to 10 sets of conformed construction documents.

OWNER Activities:

- Advertise the project as legally required, and pay for advertisement costs.
- Conduct public hearings.
- Conduct the pre-bid meeting.
- Conduct the bid opening.
- Award the construction contract.
- Issue the Notice of Award to Contractor.
- Review and approve the final executed contract, bonds, and insurance certificates from Contractor.
- Issue the Notice to Proceed to Contractor.

Deliverables:

- Informal Notice of Project to prospective bidders, suppliers, and plan rooms.
- Bidding documents, including up to 20 sets of half-size drawings, front end documents, and technical specifications to requesting parties, and electronic PDF documents to all remaining parties.
- Plan holders list to OWNER and requesting parties.
- Addenda items as required to document changes or clarifications.
- Addenda to OWNER and plan holders.
- Bid tabulation to OWNER and plan holders.
- Recommendation of award to OWNER.
- Construction contract documents to Contractor for execution.

- Executed construction contract documents to OWNER for review and approval.
- Conformed construction documents, incorporating addenda items and Contractor's information into bidding documents.
- Conformed construction documents, including up to 10 sets to OWNER and Contractor.

Key Understandings and Assumptions:

- Up to 20 sets of bidding documents will be reproduced and distributed to prospective bidders, suppliers, and plan rooms, and electronic PDF documents to all remaining parties.
- Up to two addendum packages will be prepared and distributed.
- Bid evaluation will be limited to information presented by the bidders at the time of the bid opening and phone calls soliciting feedback from references if the apparent low bidder has not previously worked for OWNER.
- Up to 6 sets of construction contract documents will be reproduced for Contractor's execution.
- Up to 10 sets of conformed construction contract documents will be reproduced and distributed to OWNER and Contractor.

Task Series 300 – Construction Administration Services

Objective: Assist OWNER during construction of the project.

ENGINEER Activities:

Task 301 – Team Management and Project Control

- Budget and invoice management.
- Schedule monitoring and update for project development.
- Resource management and allocation based on project schedules and activities.
- Monthly progress report submitted to OWNER with each invoice.

Task 311 – Pre-Construction Conference

- Attend a pre-construction conference with OWNER, Contractor, Subcontractors, suppliers, utility companies, and regulatory agencies.
- Prepare and distribute minutes of conference to attendees.

Task 321 – Submittal Review

- Receive and log Contractor submittals (shop drawings, samples, and O&M manuals) required by the contract documents.
- Review and provide comments or approval of submittals.
- Maintain log of submittals received, returned, and status.

Task 331 – Requests for Information

- Receive and log requests for information (RFI) from Contractor and OWNER.
- Review and provide responses to RFIs.

- Maintain log of RFIs received, returned, and status.
 - Budgeted as 2 hours /week for 4 months of construction.
- Task 341 – Payment Requests
- Receive partial payment requests from Contractor.
 - Review and provide comments to Contractor.
 - Submit finalized partial payment requests to OWNER for final review and approval.
 - Budgeted as 2 hours/month for 4 months of construction.
- Task 351 – Change Order Requests
- Receive change order requests from Contractor.
 - Review and provide comments to Contractor.
 - Submit finalized change order requests to OWNER for final review and approval.
 - Budgeted as 4 hours/month for 4 months of construction.
- Task 361 – Construction Progress Meetings
- Attend monthly construction progress meetings with OWNER, Contractor, Subcontractors, and suppliers.
 - Review minutes of meetings prepared and distributed by Contractor.
 - Budgeted as 4 hours/month for 4 months of construction.
- Task 371 – Construction Site Visits
- Conduct site visits during the project to review installation progress at the request of OWNER.
 - Budgeted as two site visits for a total of 8 hours/month for 4 months of construction.
 - If additional construction site visits are required by OWNER, the labor and expenses for these additional site visits will be billed as Additional Services based on hourly rates and reimbursable expenses based on the attached ENGINEER's Standard Fee Schedule.
 - Either OWNER or ENGINEER may provide a Resident Project Representative (to be determined by OWNER) for day-to-day construction observation throughout the construction duration (see Task Series 400 – Construction Observation Services).
- Task 372 – Startup Services
- Project Engineer will participate in and observe initial operation of the project (startup) and review operation and performance tests required by the contract specifications.
 - Process, electrical, and instrumentation engineers will be made available to resolve startup issues as required, budgeted as 4 hours for each discipline engineer.
 - Budgeted as 3 days or 24 hours for Project Engineer.
- Task 381 – Construction Pre-Final Review
- Conduct a site visit for pre-final review of the completed work.
 - Prepare a punch list of items to be completed or remedied by Contractor.
 - Submit punch list to Contractor.

- Recommend to OWNER that the project is substantially complete.
- Issue a certificate of substantial completion to Contractor.

Task 382 – Construction Final Review

- Conduct a site visit for final review of the completed work.
- Verify completion of punch list items by Contractor.
- Recommend to OWNER that the project is finally complete and ready for final acceptance.
- Issue a certificate of final completion to Contractor.

Task 391 – Record Drawings

- Receive and review Contractor's as-recorded marked-up drawings and information indicating changes made during construction.
- Prepare and submit to OWNER record drawings incorporating Contractor's as-recorded information.
- Two half-size hard copies of record drawings and electronic files on flash drive will be furnished to OWNER.

OWNER Activities:

- Participate in the pre-construction conference.
- Provide timely review and comment on project submittals.
- Provide timely review and comment on project RFIs.
- Review and approve finalized payment requests.
- Review and approve finalized change order requests.
- Participate in construction progress meetings and review minutes of meetings prepared and distributed by Contractor.
- Participate in construction site visits by ENGINEER personnel.
- Participate in project startup and training activities.
- Participate in site visits for pre-final and final reviews of the completed work and preparation of a punch list of items to be completed or remedied by Contractor.
- Verify completion of punch list items by Contractor.
- Execute final acceptance of the project.
- Conduct warranty reviews for the completed project.

Deliverables:

- Pre-construction conference agenda to invitees.
- Pre-construction conference minutes to attendees.
- Reviewed submittals with comments or approval to Contractor and OWNER.
- Responses to RFIs to Contractor and OWNER.
- Payment request comments to Contractor.
- Finalized payment requests to OWNER.
- Change order request comments to Contractor.
- Finalized change order requests to OWNER.
- Comments on construction progress meeting minutes to Contractor.
- Punch list to Contractor and OWNER.

- Recommendation of substantial completion to OWNER.
- Certificate of substantial completion to Contractor.
- Recommendation of final completion to OWNER.
- Certificate of final completion to Contractor.
- Record drawings to OWNER.

Key Understandings and Assumptions:

- Construction administration services are based on 4 months of construction from notice to proceed to final completion.
- Construction staking during construction will be specified as part of the bidding documents for Contractor to perform or will be performed by DMWW and not by ENGINEER.
- Soils, concrete, and other performance testing during construction will be specified as part of the bidding documents for Contractor to perform or will be performed by DMWW and not by ENGINEER.
- One construction progress meeting per month will be held.
- Two other site visits per month for 4 months by ENGINEER personnel will be provided.
- Payment requests will be submitted monthly.
- Change order requests will be submitted no more frequently than monthly.

Task Series 400 – Construction Observation Services

Objective: Provide a Resident Project Representative (RPR) to assist OWNER during construction of the project (to be determined by OWNER whether ENGINEER or OWNER will provide the RPR for the project).

ENGINEER Activities:

Task 401 – Resident Project Representative

- Provide routine day-to-day observation of construction of the project by RPR.
- Prepare daily observation reports and submit to ENGINEER and OWNER.
- RPR will also participate in or provide input for the following project activities:
 - Pre-Construction Conference
 - Request for Information
 - Payment Requests
 - Change Order Requests
 - Construction Progress Meetings
 - Construction Site Visits
 - Startup
 - Construction Pre-Final Review
 - Construction Final Review
 - Record Drawings Review

- Budgeted as 8 hours per day for 2 months or 45 working days, for a total of 360 hours for RPR.

OWNER Activities:

- Provide timely review and comment on RPR's observation reports.

Deliverables:

- RPR's observation reports.

Key Understandings and Assumptions:

- Construction observation services are based on 2 months or 45 working days of active construction requiring construction observation services.

SCHEDULE

The scope of services shall be completed in accordance with the following schedule unless modified by mutual agreement or by factors beyond the control of ENGINEER:

Task Series 100 – Design Phase Services	4 months after NTP
Task Series 200 – Bidding Phase Services	6 months after NTP
Task Series 300 – Construction Administration Services	10 months after NTP
Task Series 400 – Construction Observation Services	10 months after NTP

EXHIBIT B
TERMS AND CONDITIONS

HDR Engineering, Inc.

Terms and Conditions for Professional Services

1. STANDARD OF PERFORMANCE

The standard of care for all professional engineering, consulting and related services performed or furnished by ENGINEER and its employees under this Agreement will be the care and skill ordinarily used by members of ENGINEER's profession practicing under the same or similar circumstances at the same time and in the same locality. ENGINEER makes no warranties, express or implied, under this Agreement or otherwise, in connection with ENGINEER's services.

2. INSURANCE/INDEMNITY

ENGINEER agrees to procure and maintain, at its expense, Workers' Compensation insurance as required by statute; Employer's Liability of \$250,000; Automobile Liability insurance of \$1,000,000 combined single limit for bodily injury and property damage covering all vehicles, including hired vehicles, owned and non-owned vehicles; Commercial General Liability insurance of \$1,000,000 combined single limit for personal injury and property damage; and Professional Liability insurance of \$1,000,000 per claim for protection against claims arising out of the performance of services under this Agreement caused by negligent acts, errors, or omissions for which ENGINEER is legally liable. OWNER shall be made an additional insured on Commercial General and Automobile Liability insurance policies and certificates of insurance will be furnished to the OWNER. ENGINEER agrees to indemnify OWNER for third party personal injury and property damage claims to the extent caused by ENGINEER's negligent acts, errors or omissions. However, neither Party to this Agreement shall be liable to the other Party for any special, incidental, indirect, or consequential damages (including but not limited to loss of profits or revenue; loss of use or opportunity; loss of good will; cost of substitute facilities, goods, or services; and/or cost of capital) arising out of, resulting from, or in any way related to the Project or the Agreement from any cause or causes, including but not limited to any such damages caused by the negligence, errors or omissions, strict liability or breach of contract.

3. OPINIONS OF PROBABLE COST (COST ESTIMATES)

Any opinions of probable project cost or probable construction cost provided by ENGINEER are made on the basis of information available to ENGINEER and on the basis of ENGINEER's experience and qualifications, and represents its judgment as an experienced and qualified professional engineer. However, since ENGINEER has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractor(s)' methods of determining prices, or over competitive bidding or market conditions, ENGINEER does not guarantee that proposals, bids or actual project or construction cost will not vary from opinions of probable cost ENGINEER prepares.

4. CONSTRUCTION PROCEDURES

ENGINEER's observation or monitoring portions of the work performed under construction contracts shall not relieve the contractor from its responsibility for performing work in accordance with applicable contract documents. ENGINEER shall not control or have charge of, and shall not be responsible for, construction means, methods, techniques, sequences, procedures of construction, health or safety programs or precautions connected with the work and shall not manage, supervise, control or have charge of construction. ENGINEER shall not be responsible for the acts or omissions of the contractor or other parties on the project. ENGINEER shall be entitled to review all construction contract documents and to require that no provisions extend the duties or liabilities of ENGINEER beyond those set forth in this Agreement. OWNER agrees to include ENGINEER as an indemnified party in OWNER's construction contracts for the work, which shall protect ENGINEER to the same degree as OWNER. Further, OWNER agrees that ENGINEER shall be listed as an additional insured under the construction contractor's liability insurance policies.

5. CONTROLLING LAW

This Agreement is to be governed by the law of the state where ENGINEER's services are performed.

6. SERVICES AND INFORMATION

OWNER will provide all criteria and information pertaining to OWNER's requirements for the project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability,

and any budgetary limitations. OWNER will also provide copies of any OWNER-furnished Standard Details, Standard Specifications, or Standard Bidding Documents which are to be incorporated into the project.

OWNER will furnish the services of soils/geotechnical engineers or other consultants that include reports and appropriate professional recommendations when such services are deemed necessary by ENGINEER. The OWNER agrees to bear full responsibility for the technical accuracy and content of OWNER-furnished documents and services.

In performing professional engineering and related services hereunder, it is understood by OWNER that ENGINEER is not engaged in rendering any type of legal, insurance or accounting services, opinions or advice. Further, it is the OWNER's sole responsibility to obtain the advice of an attorney, insurance counselor or accountant to protect the OWNER's legal and financial interests. To that end, the OWNER agrees that OWNER or the OWNER's representative will examine all studies, reports, sketches, drawings, specifications, proposals and other documents, opinions or advice prepared or provided by ENGINEER, and will obtain the advice of an attorney, insurance counselor or other consultant as the OWNER deems necessary to protect the OWNER's interests before OWNER takes action or forebears to take action based upon or relying upon the services provided by ENGINEER.

7. SUCCESSORS, ASSIGNS AND BENEFICIARIES

OWNER and ENGINEER, respectively, bind themselves, their partners, successors, assigns, and legal representatives to the covenants of this Agreement. Neither OWNER nor ENGINEER will assign, sublet, or transfer any interest in this Agreement or claims arising therefrom without the written consent of the other. No third party beneficiaries are intended under this Agreement.

8. RE-USE OF DOCUMENTS

All documents, including all reports, drawings, specifications, computer software or other items prepared or furnished by ENGINEER pursuant to this Agreement, are instruments of service with respect to the project. ENGINEER retains ownership of all such documents. OWNER may retain copies of the documents for its information and reference in connection with the project; however, none of the documents are intended or represented to be suitable for reuse by OWNER or others on extensions of the project or on any other project. Any reuse without written verification or adaptation by ENGINEER for the specific purpose intended will be at OWNER's sole risk and without liability or legal exposure to ENGINEER, and OWNER will defend, indemnify and hold harmless ENGINEER from all claims, damages, losses and expenses, including attorney's fees, arising or resulting therefrom. Any such verification or adaptation will entitle ENGINEER to further compensation at rates to be agreed upon by OWNER and ENGINEER.

9. TERMINATION OF AGREEMENT

OWNER or ENGINEER may terminate the Agreement, in whole or in part, by giving seven (7) days written notice to the other party. Where the method of payment is "lump sum," or cost reimbursement, the final invoice will include all services and expenses associated with the project up to the effective date of termination. An equitable adjustment shall also be made to provide for termination settlement costs ENGINEER incurs as a result of commitments that had become firm before termination, and for a reasonable profit for services performed.

10. SEVERABILITY

If any provision of this agreement is held invalid or unenforceable, the remaining provisions shall be valid and binding upon the parties. One or more waivers by either party of any provision, term or condition shall not be construed by the other party as a waiver of any subsequent breach of the same provision, term or condition.

11. INVOICES

ENGINEER will submit monthly invoices for services rendered and OWNER will make payments to ENGINEER within thirty (30) days of OWNER's receipt of ENGINEER's invoice.

ENGINEER will retain receipts for reimbursable expenses in general accordance with Internal Revenue Service rules pertaining to the support of

expenditures for income tax purposes. Receipts will be available for inspection by OWNER's auditors upon request.

If OWNER disputes any items in ENGINEER's invoice for any reason, including the lack of supporting documentation, OWNER may temporarily delete the disputed item and pay the remaining amount of the invoice. OWNER will promptly notify ENGINEER of the dispute and request clarification and/or correction. After any dispute has been settled, ENGINEER will include the disputed item on a subsequent, regularly scheduled invoice, or on a special invoice for the disputed item only.

OWNER recognizes that late payment of invoices results in extra expenses for ENGINEER. ENGINEER retains the right to assess OWNER interest at the rate of one percent (1%) per month, but not to exceed the maximum rate allowed by law, on invoices which are not paid within thirty (30) days from the date OWNER receives ENGINEER's invoice. In the event undisputed portions of ENGINEER's invoices are not paid when due, ENGINEER also reserves the right, after seven (7) days prior written notice, to suspend the performance of its services under this Agreement until all past due amounts have been paid in full.

12. CHANGES

The parties agree that no change or modification to this Agreement, or any attachments hereto, shall have any force or effect unless the change is reduced to writing, dated, and made part of this Agreement. The execution of the change shall be authorized and signed in the same manner as this Agreement. Adjustments in the period of services and in compensation shall be in accordance with applicable paragraphs and sections of this Agreement. Any proposed fees by ENGINEER are estimates to perform the services required to complete the project as ENGINEER understands it to be defined. For those projects involving conceptual or process development services, activities often are not fully definable in the initial planning. In any event, as the project progresses, the facts developed may dictate a change in the services to be performed, which may alter the scope. ENGINEER will inform OWNER of such situations so that changes in scope and adjustments to the time of performance and compensation can be made as required. If such change, additional services, or suspension of services results in an increase or decrease in the cost or time required for performance of the services, an equitable adjustment shall be made, and the Agreement modified accordingly.

13. CONTROLLING AGREEMENT

These Terms and Conditions shall take precedence over any inconsistent or contradictory provisions contained in any proposal, contract, purchase order, requisition, notice-to-proceed, or like document.

14. EQUAL EMPLOYMENT AND NONDISCRIMINATION

In connection with the services under this Agreement, ENGINEER agrees to comply with the applicable provisions of federal and state Equal Employment Opportunity for individuals based on color, religion, sex, or national origin, or disabled veteran, recently separated veteran, other protected veteran and armed forces service medal veteran status, disabilities under provisions of executive order 11246, and other employment, statutes and regulations, as stated in Title 41 Part 60 of the Code of Federal Regulations § 60-1.4 (a-f), § 60-300.5 (a-e), § 60-741 (a-e).

15. HAZARDOUS MATERIALS

OWNER represents to ENGINEER that, to the best of its knowledge, no hazardous materials are present at the project site. However, in the event hazardous materials are known to be present, OWNER represents that to the best of its knowledge it has disclosed to ENGINEER the existence of all such hazardous materials, including but not limited to asbestos, PCB's, petroleum, hazardous waste, or radioactive material located at or near the project site, including type, quantity and location of such hazardous materials. It is acknowledged by both parties that ENGINEER's scope of services do not include services related in any way to hazardous materials. In the event ENGINEER or any other party encounters undisclosed hazardous materials, ENGINEER shall have the obligation to notify OWNER and, to the extent required by law or regulation, the appropriate governmental officials, and ENGINEER may, at its option and without liability for delay, consequential or any other damages to OWNER, suspend performance of services on that portion of the project affected by hazardous materials until OWNER: (i) retains appropriate specialist consultant(s) or contractor(s) to identify and, as appropriate, abate, remediate, or remove the hazardous materials; and (ii) warrants that the project site is in full compliance with all applicable

laws and regulations. OWNER acknowledges that ENGINEER is performing professional services for OWNER and that ENGINEER is not and shall not be required to become an "arranger," "operator," "generator," or "transporter" of hazardous materials, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act of 1990 (CERCLA), which are or may be encountered at or near the project site in connection with ENGINEER's services under this Agreement. If ENGINEER's services hereunder cannot be performed because of the existence of hazardous materials, ENGINEER shall be entitled to terminate this Agreement for cause on 30 days written notice. To the fullest extent permitted by law, OWNER shall indemnify and hold harmless ENGINEER, its officers, directors, partners, employees, and subconsultants from and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) caused by, arising out of or resulting from hazardous materials, provided that (i) any such cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or injury to or destruction of tangible property (other than completed Work), including the loss of use resulting therefrom, and (ii) nothing in this paragraph shall obligate OWNER to indemnify any individual or entity from and against the consequences of that individual's or entity's sole negligence or willful misconduct.

16. EXECUTION

This Agreement, including the exhibits and schedules made part hereof, constitute the entire Agreement between ENGINEER and OWNER, supersedes and controls over all prior written or oral understandings. This Agreement may be amended, supplemented or modified only by a written instrument duly executed by the parties.

17. ALLOCATION OF RISK

OWNER AND ENGINEER HAVE EVALUATED THE RISKS AND REWARDS ASSOCIATED WITH THIS PROJECT, INCLUDING ENGINEER'S FEE RELATIVE TO THE RISKS ASSUMED, AND AGREE TO ALLOCATE CERTAIN OF THE RISKS, SO, TO THE FULLEST EXTENT PERMITTED BY LAW, THE TOTAL AGGREGATE LIABILITY OF ENGINEER (AND ITS RELATED CORPORATIONS, SUBCONSULTANTS AND EMPLOYEES) TO OWNER AND THIRD PARTIES GRANTED RELIANCE IS LIMITED TO THE LESSER OF \$1,000,000 OR ITS FEE, FOR ANY AND ALL INJURIES, DAMAGES, CLAIMS, LOSSES, OR EXPENSES (INCLUDING ATTORNEY AND EXPERT FEES) ARISING OUT OF ENGINEER'S SERVICES OR THIS AGREEMENT REGARDLESS OF CAUSE(S) OR THE THEORY OF LIABILITY, INCLUDING NEGLIGENCE, INDEMNITY, OR OTHER RECOVERY.

18. LITIGATION SUPPORT

In the event ENGINEER is required to respond to a subpoena, government inquiry or other legal process related to the services in connection with a legal or dispute resolution proceeding to which ENGINEER is not a party, OWNER shall reimburse ENGINEER for reasonable costs in responding and compensate ENGINEER at its then standard rates for reasonable time incurred in gathering information and documents and attending depositions, hearings, and trial.

19. NO THIRD PARTY BENEFICIARIES

No third party beneficiaries are intended under this Agreement. In the event a reliance letter or certification is required under the scope of services, the parties agree to use a form that is mutually acceptable to both parties.

20. UTILITY LOCATION

If underground sampling/testing is to be performed, a local utility locating service shall be contacted to make arrangements for all utilities to determine the location of underground utilities. In addition, OWNER shall notify ENGINEER of the presence and location of any underground utilities located on the OWNER's property which are not the responsibility of private/public utilities. ENGINEER shall take reasonable precautions to avoid damaging underground utilities that are properly marked. The OWNER agrees to waive any claim against ENGINEER and will indemnify and hold ENGINEER harmless from any claim of liability, injury or loss caused by or allegedly caused by ENGINEER's damaging of underground utilities that are not properly marked or are not called to ENGINEER's attention prior to beginning the underground sampling/testing.