The City of Lowell
City Hall • 375 Merrimack Street • Lowell, MA 01852
P: 978.970.4110 • F: 978.970.4114
www.LowellMA.gov

March 30, 2015

ADDENDUM #2
IFB 15-71
WATER SYSTEM IMPROVEMENTS PROJECT
DWSRF-3531, CONTRACT 2

The number of this Addendum, Addendum No. 2, must be entered in the space provided on the Bid Form or the City will also accept acknowledgement of Addenda No. 2 by signing and returning this addenda separately before the bid opening by fax (978-970-4114), email pmvaughn@lowellma.gov or hand delivery.

The Bidder acknowledges addenda.

Addenda #1 _____

Addenda #2 _____

Company Name Signature

REPLACE:

DUE DATE
Sealed Filed Sub Bids will be publicly opened on at 11:00 AM, EST/EDST on **April 2, 2015** at the City of Lowell Purchasing Department, 375 Merrimack Street, Lowell, MA 01852 for the work described herein. BIDDERS ARE REQUIRED TO SUBMIT A BID INCLUDING ALL BID FORMS CONTAINED IN THIS PACKAGE. DO NOT REMOVE PAGES.

CLARIFY:
The note on Drawing E-311 that states that the only equipment supplied by the electrical sub bidder is the MBB & ATS. It states all other electrical shown on pump station interior is by the packaged Pump station Manufacturer. Does this include the VFD,s and all conduit and wiring except the few listed to be by the EC? I just want to make sure we are all bidding the same thing and the City doesn't get short changed.

- Yes. Refer to Drawings E-302 and E-311 for clarification

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SPECIFICATIONS

- Delete Section 01 11 00 Summary of Work entirely and replace with Section 01 11 00 Summary of Work that is included as an attachment to this Addendum (Addendum No. 2).
- Specification replacement pages identified in the following table are included as an attachment to this Addendum (Addendum No. 2), have an Issue Date of March 30, 2015 and contain reference to "ADDENDUM NO. 2" in the footers. Text changes are identified by double-underline for additions and ~~strikeout~~ for deletions.

Replacement pages (with text changes)	Provided for purposes of double-sided printing only - no changes (front or back of replacement page)
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00 11 16-1	00 11 16-2
00 73 10-6	00 73 10-5,
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01 15 00-1	01 15 00-2
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Sincerely,

P. Michael Vaughn
Chief Procurement Officer

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SECTION 00 11 16

INVITATION TO BID

On behalf of the City of Lowell, Massachusetts (Owner and Awarding Authority), the Lowell Regional Water Utility (LRWU and Bidding Authority) invites Bidders to submit Bids for Contract No. 2, MA DEP Project No. DWSRF-3531, Water System Improvements, which includes, but is not limited to the Work described in Section 01 11 00 Summary of Work; and all materials, equipment, services and construction inherent to the Work.

The Work shall be substantially complete within 365 calendar days from the commencement of Contract Time and completed and ready for final payment 395 calendar days from the commencement of Contract Time.

This Project is to be funded in part with monies made available by the Drinking Water State Revolving Fund (SRF) and the Massachusetts Water Pollution Abatement Trust (the "Trust"), and compliance with the following is required: Diesel Retrofit Program; Disadvantaged Business Enterprise Program; the American Iron and Steel requirements of P.L. 113-76 (the Consolidated Appropriations Act of 2014); Federal Minimum Wage Rates as determined by the United States Department of Labor under the Davis-Bacon Act; and other MassDEP/DMS provisions and policies.

The Project being bid is subject to Massachusetts General Laws, Chapter 149, Sections 44A-J. Sealed Sub-Bids are required for the following classes of Work.

roofing and flashing
painting
heating, ventilating and air-conditioning
electrical work
masonry work
elevators

General Bidders must be certified by the Commonwealth of Massachusetts Division of Capital Asset Management and Maintenance (DCAMM) for **Pumping Stations** and **Sewage and Water Treatment Plants**. Sub-Bidders must be DCAMM certified for their respective class of Work.

A mandatory pre Bid conference will be held at 10:00 AM local time on Thursday, March 19, 2015 at the Lowell Water Treatment Plant, 815 Pawtucket Boulevard, Lowell, MA 01854 for General Bidders. General Bidders are required to attend and participate in the conference.

Sub-Bids will be received until 11:00 AM local time on ~~Tuesday, March 31, 2015~~ Thursday, April 2, 2015 at the City of Lowell Purchasing Department, City Hall, 375 Merrimack Street, Lowell, MA 01852, Attention: Mr. P. Michael Vaughn, Chief Procurement Officer. Sub-Bids filed will then and there be publicly opened and read aloud. Sub-Bids received after the time of announced opening will not be accepted.

General Bids will then be received until 11:00 AM local time on Wednesday, April 15, 2015 at the City of Lowell Purchasing Department, City Hall, 375 Merrimack Street, Lowell, MA 01852, Attention: Mr. P. Michael Vaughn, Chief Procurement Officer. General Bids will then and there be publicly opened and read aloud. General Bids received after the time of announced opening will not be accepted.

General Bidders must submit the DCAMM Prime/General Certificate of Contractor Eligibility and the DCAMM Prime/General Contractor Update Statement. Sub-Bidders must submit the DCAMM Filed Sub-Bid Certificate of Contractor Eligibility and the DCAMM Sub-Bidder Update Statement.

Sets of Bidding Documents may be examined at the following location(s) on or after 10:00 AM local time on Wednesday, March 11, 2015.

Issuing Office:
City of Lowell Purchasing Department
City Hall
375 Merrimack Street
Lowell, MA 01852
Attention: Mr. P. Michael Vaughn, Chief Procurement Officer
Phone: (978) 674-4110

Sets of Bidding Documents may be obtained on or after 10:00 AM local time on Wednesday, March 11, 2015

in electronic format at no cost by registering on the City of Lowell website.

http://www.lowellma.gov/purchasing

Bidding Documents can be found by click "Open Solicitations" under the Department Facts tab on the left hand side.

Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of the incomplete sets of Bidding Documents or for modifications to the Bidding Documents including electronic conversion.

Bid security in the amount of 5 percent of the prices bid must accompany each General Bid and each Sub-Bid in accordance with the Instructions to Bidders.

Minimum wage rates as issued by the Executive Office of Labor and Workforce Development, Department of Labor Standards under the provisions of Massachusetts General Laws, Chapter 149, Sections 26 to 27D inclusive, as amended, apply to this Project. It is the responsibility of the Bidders, before Bid opening, to request if necessary, any additional information on Minimum Wage Rates for those trades people who may be employed for the proposed Work under the resulting Contract. Federal Minimum Wage Rates as determined by the United States

2. Adjustments to the Contract Price (deductions) will be made for each hour Owner's personnel work outside regular working hours or on Saturday, Sunday and holidays, as set forth in the Agreement, in the event the need for performing construction outside of regular working hours or on Saturday, Sunday and holidays is due to delays that are within the Contractor's control, as set forth in Paragraph 12.03 of the General Conditions and Supplementary Conditions, if any.

SC-6.03 *Services, Materials, and Equipment*

Add the following to Paragraph 6.03 per SRF requirements.

E. Contractor and Subcontractors shall comply with the *Diesel Retrofit Program* included as an attachment to this Section and shall each have provided the Contractor Certification (included at the end of the attachment) which are incorporated into the Agreement Form Supplements.

F. Contractor shall fully comply with Subpart C of 2 CFR Part 180 and 2 CFR Part 1532, entitled "*Responsibilities of Participants Regarding Transactions (Doing Business with Other Persons).*" The Contractor shall not award any subcontracts or purchase any materials from Suppliers that appear on the Excluded Parties List System. The Contractor shall include this requirement in each subcontract and require it to be included in all subcontracts regardless of tier. The Contractor shall maintain reasonable records to demonstrate compliance with these requirements.

G. Except for SRF ineligible items, statutory requirements commonly known as "American Iron and Steel (AIS) Requirement" that requires all of the iron and steel products used in the Project to be produced in the United States including iron and steel products provided by the Contractor, apply to this Contract. Except for SRF ineligible items, Contractor shall provide that all of the iron and steel products used in the Project will be and/or have been produced in the United States in a manner that complies with the AIS Requirement, unless a waiver of the AIS Requirement is approved, and the Contractor will provide any further verified information, certification or assurance of compliance with the AIS Requirement, or information necessary to support a waiver of the AIS Requirement, as may be requested by Owner. See guidance information included in attachments to this section.

H. Per MassDEP DMS requirements, whenever it is written that an equipment manufacturer must have a specified period of experience with his product, equipment which does not meet the specified experience period can be considered if the equipment Supplier or manufacturer is willing to provide an "Efficiency Guarantee Bond" or cash deposit for the duration of the specified time period which will guarantee replacement of that equipment in the event of failure.

SC-6.06 *Concerning Subcontractors, Suppliers and Others*

Add the following to Paragraph 6.06 per SRF requirements.

H. Contractor shall fully comply with Subpart C of 2 CFR Part 180 and 2 CFR Part 1532, entitled "*Responsibilities of Participants Regarding Transactions (Doing Business with Other Persons)*." The Contractor shall not award any subcontracts or purchase any materials from Suppliers that appear on the Excluded Parties List System. The Contractor shall include this requirement in each subcontract and require it to be included in all subcontracts regardless of tier. The Contractor shall maintain reasonable records to demonstrate compliance with these requirements.

I. Per MassDEP DMS requirements, Contractor shall comply with the minimum Disadvantaged Business Enterprise goals set forth in Section 00 73 38. The Awarding Authority (Owner) may suspend, terminate or cancel the Contract, in whole or in part, or may call upon the Contractor's surety to perform all terms and conditions in the Contract, unless the Contractor is able to demonstrate compliance with the terms of Section 00 73 38, and may further deny to the Contractor, the right to participate in any future contracts awarded by the Awarding Authority for a period of up to three years.

SC-6.08 *Permits*

Delete the last sentence of 6.08.A. Add the following to Paragraph 6.08.A.

Contractor shall comply with the Owner's requirements for obtaining permits set forth in the City Of Lowell, Department Of Public Works, Permit Manual (Effective May 1, 2010) and available online at:

http://www.lowellma.gov/dpw/engineering/Pages/General/Documents.aspx

except for the following which is covered in the Contract Documents:

IV. BOND REQUIREMENTS
v. INSURANCE REQUIREMENTS

General Contractor shall pay for the electric utility (National Grid) to provide required electrical work at Stackpole Street Pump Station, as specified in Section 01 11 00 (Work by Others), and coordinate with Electrical Subcontractor for this work. Electrical Subcontractor shall coordinate with the electric utility (National Grid) to provide required electrical work at Stackpole Street Pump Station.

Pursuant to subparagraph 6.08.A.1, Contractor shall comply with the following licenses and permits Owner has obtained for the Project.

- Massachusetts Department of Environmental Protection (MassDEP) BRP WS 25 Treatment Facility Modification, included in Section 01 15 00

- Massachusetts Department of Environmental Protection (MassDEP) BRP WS 32 Distribution System Modifications >3,300 people, included in Section 01 15 00

- Massachusetts Department of Environmental Protection (MassDEP) BRP WPA Form 3 Notice of Intent for Lowell Regional Water Utility's Raw Pump Station, included in Section 01 15 00

- City of Lowell Zoning Board of Appeals Special Permit Application and Approval for Stackpole Street Pump Station, included in Section 01 15 00

SC-6.09 ***Laws and Regulations***

Pursuant to Paragraph 6.09, the Contractor shall comply with additional requirements included in Section 00 73 73 and Section 01 15 00 and the following requirements.

- EPA's Drinking Water SRF program requirements
- MassDEP DMS policies and requirements under the SRF Program

SC-7.01 ***Related Work at Site***

Pursuant to Paragraph 7.01, Owner has separately contracted for upgrades to the water treatment plant's residuals lagoons. See SC-7.02 for coordination details.

SC-7.02 ***Coordination***

Pursuant to Paragraph 7.02.A, for other work on the Project at the Site Owner has separately contracted for or intends to separately contract for as identified in SC-7.01, authority and responsibility for coordination of the other work will be identified at the Preconstruction Conference.

SC-8.11 ***Evidence of Financial Arrangements***

Pursuant to Paragraph 8.11.A, the Project is to be funded in part with monies made available by the EPA's Clean Water State Revolving Fund and the Massachusetts Water Pollution Abatement Trust (the "Trust") and is subject to the approval by the MassDEP.

SC-11.01 ***Cost of the Work***

Add the following after subparagraph 11.01.A.1.a.

b. Per MassDEP DMS requirements:

1) mobilization shall not exceed 5 percent of the total Contract Price;

2) the Direct Labor Cost markup percentage applicable to change orders for this Contract is as included in Section 00 54 00; and

3) see Section 01 15 00 for limitations on financial participation by MassDEP DMS under the State Revolving Loan Fund Program for certain items.

c. Costs for work at the Stackpole Street Pump Station by the electric utility (National Grid), as specified in Section 01 11 00 (Work by Others), shall NOT include a markup by the Contractor.

SC-12.01 *Change of Contract Price*

Add the following to Paragraph 12.01.A.

1. Change orders shall be processed in accordance with MassDEP DMS Policy Memorandum CG-10 included as an attachment to this Section and overhead and profit referenced shall be as follows for this Project.

   For items B(5) and C(5): 10%
   For items B(6) and C(6): 5%

2. Documentation required to substantiate quantities in change orders shall be in accordance with MassDEP DMS Policy Memorandum CG-16 included in Section 01 15 00.

Replace subparagraph 12.01.C.1 with the following per MassDEP DMS requirements:

1. the Direct Labor Cost markup percentage applicable to change orders for this Contract is as included in Section 00 54 00; and

SC-14.02 *Progress Payments*

Add the following immediately after subparagraph 14.02.A.1.

a. Per MassDEP DMS requirements, the Contractor shall provide reports documenting the portion of Contract and subcontract dollars paid to DBEs, and Contractor's efforts to achieve the goals, with each application for payment submitted or at such greater intervals as specified by the Owner in accordance with Section 00 73 38. The Contractor shall require similar reports from its Subcontractors.

Insert the following language before ";or" at the end of subparagraph 14.02.D.1.c:

and deductions for Additional Work Fees defined the Agreement

SC-14.07 *Final Payment*

Add the following to Paragraph 14.07.A.1.

a. Per MassDEP requirements, documentation required to substantiate quantities in the request for Final Payment shall be in accordance with MassDEP DMS Policy Memorandum CG-16 included as an attachment to Section 01 15 00.

ATTACHMENTS

A. DEP Diesel Retrofit Program (Appendix B of the Mass DEP DMS policies, pages DEP-DMS-P&S-19 & 20, 22 & 23)

B. AIS Guidance Information

C. MassDEP DMS Policy Memorandum CG-10 (pages DEP-DMS-P&S-7 through 13)

END OF SECTION

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SECTION 01 15 00

SPECIFIC PROJECT REQUIREMENTS AND PROCEDURES

The following supplement the requirements and procedures of Sections 01 15 30, 01 50 00, and 01 70 00 using the same titles, headings, and paragraph numbers to which the supplement applies.

Certain provisions required by Laws and Regulations may be referenced. Contractor is responsible to determine and obtain applicable Laws and Regulations and to review and interpret the full text of such Laws and Regulations.

SECTION 01 15 30 - PAYMENT AND ADMINISTRATIVE PROCEDURES AND QUALITY REQUIREMENTS

1.02 PAYMENT PROCEDURES

Pursuant to Paragraph A. **Schedule of Values,** subparagraph 1, delineate SRF Eligible and Non Eligible items per MassDEP-DMS requirements.

Also, costs for work at the Stackpole Street Pump Station by the electric utility (National Grid), as specified in Section 01 11 00 (Work by Others), shall be paid for through the Owner's Contingency Allowance 1 (OC-1).

Pursuant to Paragraph B. **Payment Procedures**, submit the following specific items.

- Certified Payroll documentation per statutory requirements
- Copy of cashed check paid and copy of receipts for Traffic Police Details invoices paid showing: the Project name; the officers' names; location of assignment; date of assignment; hours of assignment; and number of hours being invoiced

Pursuant to Paragraph C. **Change Procedures**, comply with MassDEP-DMS requirements for change orders in Section 00 73 10 utilizing the SRF Change Order form included as form C-006363A (in addition to the Project Change Order Form C-006363) and substantiate quantities for change orders per MassDEP-DMS Policy Memorandum CG-16 included as an attachment to this Section.

Pursuant to Paragraph D. **Measurement and Payment Procedures** comply with the following per MassDEP-DMS.

- Documentation required to substantiate Final Payment: per MassDEP-DMS Policy Memorandum CG-16 included as an attachment to this Section.

- The following items have limitations on financial participation under the State Revolving Loan Fund Program. See the following MassDEP-DMS Policy Memoranda included as attachments to this Section.

  Permits – applicable portion of CG-2
  Mobilization – CG-7
  Pavement – CG-8
  Rock Excavation – CG-14
  Traffic Police – CG-15

1.03 ADMINISTRATIVE REQUIREMENTS

Pursuant to Paragraph A. **Project Management and Coordination; Meetings**,

subparagraph 1., **the Project contact list** will be provided at the Preconstruction Meeting.

subparagraph 4, **identify documents** and items for the Project as follows.

Contract No. 2-DWSRF #3531
Water System Improvements – City of Lowell, MA

Pursuant to Paragraph B. **Documentation of Progress**,

subparagraph 1. **Progress Schedules**, reflect special sequencing required in Section 01 11 00.

subparagraph 4. **Reports**, submit the following additional reports.

- Updates to the Construction Operations Plan approved pursuant to SC 2.07 of Section 00 73 10 when it is modified

Pursuant to Paragraph C. **Submittal Procedures**, subparagraph 1., address submittals as follows.

Engineer:
Woodard & Curran
40 Shattuck Road - Suite 110
Andover, MA 01810
Attn: Nate Little
Phone: (978) 557-8150
Email: nlittle@woodardcurran.com

Pursuant to Paragraph C. **Erosion and Sediment Control**, comply with the following additional requirements.

- Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas, prepared by the MassDEP

Pursuant to Paragraph F. **Traffic Regulation**,

subparagraph 1. regarding a **plan for traffic control**, also submit a schedule of road closures/detours and obtain a road closure and road blockage permit for every location where Work is being performed. Detours and street closures are subject to the approval of the Lowell City Engineer who will strictly control the periods when traffic is being detoured or streets can be closed.

subparagraph 2. regarding the **MUTCD**, comply with the following additional requirements.

- Applicable portions of the "Massachusetts Amendments to the 2009 Manual on Uniform Traffic Control Devices and the Standard Municipal Traffic Code" published by the Massachusetts Department of Transportation Highway Division

subparagraph 4. regarding **use of police officers**, comply with the following additional requirements.

- Coordinate schedule of police details with Owner which will be direct billed to the Owner per Section 01 20 25.
- Relevant provisions of Section 7.00 of the MassDOT Standard Specifications and Supplements, and the following.
  - The intent of posting police details is to ensure public safety and protection of property through appropriate traffic control. Police personnel are not to be employed as watchmen to protect the Contractor's equipment and materials.
  - All uniformed traffic police personnel required for traffic control for construction shall be authorized by Owner's Safety Officer and/or the Engineer.
  - Payment will be made by Owner for uniformed traffic police only.
  - Submit a forecast weekly traffic police detail schedule, at least 72 hours prior to the start of the Work describing: the nature and location of the Work, the number of police personnel, the estimated number of police hours required for each location, and justification for each uniformed officer being requested. Payment to the police for work under this Contract shall be in accordance with the Massachusetts General Laws, Chapter 149, Section 34B and paid directly by Owner.
  - If uniformed police have been arranged to work, and weather or some other situation prohibits the Work, notify the Police Department Detail before 5:30 a.m. on the day of intended Work to cancel the work order. Unless the work order is canceled in time, the Contractor shall be charged at the rate of

minimum four hours for each officer included in the detail and shall be fully responsible for payment of all charges thus incurred.

SECTION 01 70 00 - EXECUTION AND CLOSEOUT REQUIREMENTS

1.02 OVERALL EXECUTION REQUIREMENTS

Pursuant to Paragraph A. **Coordination**,

- Coordinate permitting through the City of Lowell.
- Coordinate with Owner and Engineer prior to performing any Work that will impact the treatment plant or pump station. Refer to Section 01 11 00 for requirements for maintaining operation of facilities and special sequencing.
- General Contractor shall pay for the electric utility (National Grid) to provide required electrical work at Stackpole Street Pump Station, as specified in Section 01 11 00 (Work by Others) and coordinate with Electrical Subcontractor for this work. Electrical Subcontractor shall coordinate with the electric utility (National Grid) to provide required electrical work at Stackpole Street Pump Station.

Pursuant to Paragraph B. **Existing Conditions**,

subparagraph 2. regarding **subsurface/physical conditions**, the reports identified in SC-4.02 of Section 00 73 10 are included as an attachment to this section.

subparagraph 3. regarding **underground utilities**, comply with the following additional requirements.

- Contact DIGSAFE (www.digsafe.com) by dialing 811.

subparagraph 5. regarding **Hazardous Environmental Conditions**, the reports identified in SC-4.06 of Section 00 73 10 and is included as an attachment to this section.

ATTACHMENTS

A. DEP-DMS Policy Memorandum CG-16

B. DEP-DMS Policy Memoranda CG-2, CG-7, CG-8, CG-14, and CG-15

C. AIS Certifications

D. List of MassDOT Highway Division documents

E. Geotechnical Report

F. Notice of Intent and Order of Conditions

G. City of Lowell Zoning Board of Appeals Special Permit

H. City of Lowell Draft Driveway Permit Application (Contractor to submit final application and obtain Driveway Permit)

SECTION 01 15 30

PAYMENT AND ADMINISTRATIVE PROCEDURES AND QUALITY REQUIREMENTS

PART 1 – GENERAL

1.01 SUMMARY

A. This Section specifies administrative and procedural requirements relating to payment, the process of contract administration, and the methods of communicating, controlling, and assuring quality, and applies to all Specifications and Drawings.

1. In certain Paragraphs, checked items indicate those requirements applicable to the Project.

2. Provisions of this Section may be supplemented in the **Specific Project Requirements and Procedures** or other sections of Division 01.

B. Section Includes

1.02 PAYMENT PROCEDURES
Schedule of Values
Payment Procedures
Change Procedures
Measurement and Payment Procedures
Correlation of Submittals

1.03 ADMINISTRATIVE REQUIREMENTS
Project Management and Coordination; Meetings
Documentation of Progress
Submittal Procedures
Closeout Procedures

1.04 QUALITY REQUIREMENTS
Reference Standards and Regulatory Requirements
Qualifications

1.05 ATTACHMENTS

1.02 PAYMENT PROCEDURES

A. **Schedule of Values**: in accordance with Article 2 of the Standard General and Supplementary Conditions, if any.

1. Provide sufficient detail to allow for determination of the value of the Work at any degree of completion.

☒ For each line item, identify number and title of specification section in accordance with the Table of Contents.

☒ See **Specific Project Requirements and Procedures** for additional requirements.

B. **Payment Procedures:** in accordance with Article 14 of Standard General and Supplementary Conditions, if any.

1. Submit 6 copies of each Application for Payment using the form included in the Project Forms section. Utilize latest approved Schedule of Values for listing items in Application for Payment. Provide supporting documentation for items included in the Application for Payment.

2. Payment Period: at intervals stipulated in the Agreement.

3. Submit an updated Progress Schedule with each Application for Payment.

C. **Change Procedures**: in accordance with Articles 10 and 12 of Standard General and Supplementary Conditions, if any, and forms included in the Project Forms section.

1. Field Order: issued by Engineer or Owner to advise of minor changes in the Work not involving an adjustment to Contract Price or Contract Time as authorized by Paragraph 9.04 of the Standard General and Supplementary Conditions, if any.

2. Change Request: issued by Engineer, Owner or Contractor to request or authorize minor variations and deviations, amendments or supplements to the Contract Documents per Paragraph 3.04 of the Standard General and Supplementary Conditions, if any. Initiate requests for substitute items per Paragraph 6.05 of the Standard General and Supplementary Conditions, if any, using a Change Request.

a. Engineer or Owner to include a detailed description of a proposed change with supplementary or revised Drawings and Specifications, including a change in Contract Times related to the change (with a stipulation for any overtime work required) and the period of time during which the requested price will be considered valid. Prepare and submit an estimate within 15 days.

b. Contractor to describe the proposed change and its full effect on the Work. Describe the reason for the change and the effect on the Contract Price and Contract Time with full documentation (and a statement describing the effect on Work by separate or other contractors). Document any requested substitutions in accordance with the Standard General and Supplementary Conditions, if any.

3. Work Change Directive: issued by Engineer or Owner, signed by Engineer or Owner and instructing Contractor to proceed with a change in the Work. Work authorized in a Work Change Directive will be included in a subsequent Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Price or Contract Time. Promptly execute the change.

4. Change Order: issued by Engineer or Owner in accordance with Articles 10 and 12 of the Standard General and Supplementary Conditions, if any.

a. *Stipulated Price Change Order*: based on Contractor's maximum price quotation or Contractor's request for a Change Order as approved by Engineer or Owner.

b. *Unit Price Change Order*: for pre-determined unit prices and quantities and executed on a fixed unit price basis. Execute Work under a Work Change Directive for unit costs or quantities of work not pre-determined. Changes in Contract Price and Contract Time to be computed as specified for Time and Material Change Order.

c. *Time and Material Change Order*: based on itemized account and supporting data after completion of change within time limits indicated in the Standard General and Supplementary Conditions, if any. Engineer or Owner and Contractor to determine the change allowable in Contract Price and Contract Time as provided in the Standard General and Supplementary Conditions, if any. Maintain detailed records of work done on this basis, provide full information required for evaluation of proposed changes, and substantiate costs for changes in the Work.

5. Substitutes and "Or Equals": Request substitute items as a Change Request in accordance with subparagraph C.2. above, with complete data substantiating compliance of proposed substitution with Contract Documents.

   a. Substitute items will be processed in accordance with Paragraph 6.05 of the Standard General and Supplementary Conditions, if any, and subparagraph 1.03.C.6 below.

   b. Substitute items will not be considered when indicated or implied on Shop Drawing or material and equipment data submittals without separate written request, or when acceptance will require revision to the Contract Documents.

D. **Measurement and Payment Procedures**

1. Payment includes full compensation for required labor, material and equipment, tools, plant, transportation, services and incidentals; erection, application or installation and construction of an item of the Work; and overhead and profit, unless otherwise indicated.

   ☒ See **Specific Project Requirements and Procedures** for additional requirements.

☒ Unit Prices

   a. Unit quantities and measurements indicated in the Bid Form and Bid Form Supplements, if any, are for Contract purposes only. Actual quantities and measurements supplied or placed in the Work determine amount of payment.

   b. Take measurements in presence of Engineer and compute quantities. Engineer or Owner to verify and also take measurements and quantities. Notify Engineer or Owner in advance when measurements must be taken.

☒ See **Specific Project Requirements and Procedures** for additional requirements.

E. **Correlation of Submittals**

1. Promptly revise Schedule of Values and Applications for Payment to record each authorized Change Order as a separate line item and adjust the Contract Price.

SECTION 26 05 00

COMMON WORK RESULTS FOR ELECTRICAL (FILED SUB-BID REQUIRED)

PART 1 – GENERAL

1.01 SUMMARY

A. Sections Includes

1. Provide electrical work in accordance with this section and applicable reference standards listed in Article 1.03.

2. Examine all Drawings and Specifications for requirements that affect the Work of this section.

3. Coordinate the Work of this section with related Work of other trades and cooperate with such trades to assure the steady progress of the Work.

4. The term "Contractor" in this Section(s) and all referenced Drawings and Specifications shall mean the ELECTRICAL Subcontractor except where "General Contractor" is specified.

5. Electrical Work includes, but is not limited to, the following.

   a. Motor wiring, safety disconnects, and motor starters unless integral with equipment
   b. Temporary construction power and Contractor Trailer Power.
   c. Power distribution equipment
   d. Power outlets and equipment connections
   e. Wiring devices
   f. Motor controls and control wiring not provided under other Specifications (other than Division 26 sections of the Specifications)
   g. Complete grounding system
   h. Motor control center
   i. Service entrance work
   j. Building interior and exterior lighting
   k. Raceways.
   l. Support material and hardware for raceway and electrical equipment
   m. Branch circuit wiring

n. Electrical Contractor shall furnish and install manholes, handholes, conduit, and conduit spacers/supports for underground electrical systems; trenching, concrete ductwork and backfill provided by the General Contractor.

o. Installation and termination of control and signal wiring for instrumentation and process control equipment. Installation and mounting of new control panel hardware and mounting and connection of panels and instruments furnished under Division 40 sections of the Specifications

p. Sealing of all conduit that enters the building wall, floor and roof penetrations for raceways

q. Start up, acceptance testing, test reports and instruction of electrical systems equipment.

r. Core drilling all electrical conduit penetrations.

s. Coordinate with electric utility (National Grid) for installation of new electric service and demolition of existing electrical service at Stackpole Street Station.

~~r.~~t. Obtain and pay for required electrical permits. Cost for required electrical permits excludes costs for work performed by the utility company.

B. Related Requirements

1. Section 26 05 19 - Low-Voltage Electrical Power Conductors and Cables
2. Section 26 05 26 - Grounding and Bonding for Electrical Systems
3. Section 26 05 34 - Raceways, Boxes and Supporting Devices
4. Section 26 05 43 - Underground Ducts and Raceways for Electrical Systems
5. Section 26 21 00 - Low-Voltage Electrical Service Entrance
6. Section 26 27 00 - Low-Voltage distribution Equipment
7. Section 26 27 26 - Wiring Devices
8. Section 26 28 16 - Enclosed Switches & Circuit Breakers
9. Section 26 29 13 - Enclosed Controllers
10. Section 26 29 23 - Variable Frequency Motor Controllers
11. Section 26 32 13.13 - Automatic Transfer Switch
12. Section 26 33 63 - Uninterruptible Power Supply
13. Section 26 50 00 - Lighting

1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and payment requirements: per Division 01 General Requirements.

C. Metering

1. Provide utility meter and meter enclosure for the building service as required by the local utility company.

2. Coordinate all metering requirements with utility company for a complete installation in accordance with the utility company's specifications.

D. Manholes, Handholes and Pullboxes

1. Provide in accordance with Division 26 05 43 "Underground Ducts and Raceways for Electrical Systems".

PART 3 – EXECUTION

3.01 INSTALLATION

A. Provide and install required conduit wire, pullboxes, and accessory items to accomplish the Work involved in providing the electrical service as shown on the Drawings.

B. Coordinate service work with the Owner and utility company to insure proper timing of installation and connection of equipment.

~~C. Obtain all permits, pay all fees and provide all materials and labor necessary for interfacing with utility equipment to install electric service.~~

~~D.~~C. Furnish and install all electrical conduits for low voltage cables and low voltage wire and accessory items necessary to accomplish the Work detailed herein or in the Drawings.

~~E.~~D. Furnish and install utility meter, meter enclosure, and all associated metering conduits in accordance with the utility company's requirements.

~~F.~~E. All conductors shall be terminated at the pad-mounted transformer secondary by the contractor per local utility company requirements.

END OF SECTION

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