

**ADDENDUM # 1**  
**February 20, 2024**

**Bon Heur Pump Station Rehabilitation**  
St. Clair Shores, Michigan

Project No. WWS-2022-007

To all bidders: On behalf of the OWNER, this ADDENDUM to the Bidding Documents is issued to you by the Engineer for the Project described above. Acknowledge receipt of this Addendum in the space provided in Article 5 of the Bid Form.

The following changes and/or clarifications shall be incorporated in the Bidding Documents of the Project and the cost, all inclusive, thereof shall be included in the associated amount shown on each Bidder's Proposal:

Item 1 – Bid Opening

The date for the bid opening is extended based on the following revision.

1. Page 00 11 13-1, Second Paragraph, beginning with “Bids for the construction of the Project will be received at the Chapaton Pump Station...” Delete “March 7, 2024,” and Replace with “**March 20, 2024**”.

Item 2 – Pre-Bid Meeting Sign-In sheet

Refer to Attachment #1 to this document for Pre-Bid Meeting Sign-In sheet.

Item 3 – Section 09 96 00

Refer to Attachment #2 to this document for Section 09 96 00.

Item 4 –Motor Specifications

Remove reference to Section 26 20 00 and 26 20 10

1. Page 41 22 23.19-5, Paragraph 2.10.A, Delete paragraph in its entirety and Replace with

**“Every motor shall be of sufficient capacity to operate the driven equipment under all load and operating conditions without exceeding its rated nameplate current or power or its specified temperature limit at rated voltage. Each motor shall develop ample torque for its required service throughout its acceleration range at a voltage 10 percent below nameplate rating.”.**

2. Page 43 21 00.18-8, Paragraph 2.10.A, Delete paragraph in its entirety and Replace with

**“Every motor shall be of sufficient capacity to operate the driven equipment under all load and operating conditions without exceeding its rated nameplate current or power or its specified temperature limit at rated voltage. Each motor shall develop ample torque for its required service throughout its acceleration range at a voltage 10 percent below nameplate rating.”.**

3. Page 43 21 00.18-8, Paragraph 2.10.D, Delete the following

“In addition to the requirements for bearings specified under Electric Motors in Section 26 20 10,”

and Capitalize the next word “**Provide**” following the deleted text.

Item 5 – Reference Drawings

Refer to 00 31 17-Available Information for list of supplemental as-builts, geotechnical reports, and inspection photos / videos. This information must be requested separately and is not being distributed as part of this Addendum.

Item 6 – RFI's/Pre-Bid Meeting Questions

Refer to Attachment #3 to this document for Requests for Information/Pre-Bid Meeting questions and responses.

**END OF SECTION 00 91 13-A**



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**Macomb County Public Works Office  
 Bon Hour Pump Station Rehabilitation  
 February 2024**

**AECOM PROJECT NO. 60696421**

Date: February 15, 2024

Time: 10:00 a.m.

Location: 23001 E 9 Mile Rd, St Clair Shores, MI 48080

**Pre-Bid Meeting - Attendance List**

Name	Representing	Telephone	Email
Hsing Chu	AECOM	312-373-6577	hsing.chu@aecom.com
Jim Raderbank	MCM Livings	(810) 777-2413	JIMRADERBANK@GMAIL.COM
Don Sutton	Weiss Construction	248 410 8698	dsutton@WeissConstruction.com
ERIC SCHIEBOLD	ENVIRONMENTAL SALES	248-761-7195	ESCHIEBOLD@AOL.COM
Dan Chenoweth	Reliance Bldg Co	(248) 374-3210	dan@reliancebc.com
Eric Chenoweth	Reliance Bldg Co	248-921-0435	Eric@reliancebc.com
Troy Dolkowski	Reliance Bldg Co	248-720-8213	troy@reliancebc.com
Sheryl Lammard	Heaney General Contracting	734-434-9300	sheryl@heaneygeneralcontracting.com
JOHN CONOLE	FISHBECK	(616) 464-3847	JACONOLE@FISHBECK.COM
Kevin Boyd	LEE MACHINERY	(248) 653-8335	KEVINBOYD@LEEMACHINERYMOVES.COM
ANN WATSON	TOTAL ENERGY SYSTEMS	248 974 9094	AWATSON@TOTALENERGYSYSTEMS.COM
Darwin Mentrudde	Delta Concrete and Industrial Contracting	810-650-2834	dmentrudde@deltacconcrete.com
Phil Brockway	OCG Industrial Services	810.626.8657	Pbrockway@OCGcompanies.com
Jim Grodz	MI Construction Group	734 905-4831	JIMG@CROSSCONSTRUCTIONGROUP.COM



## SECTION 09 96 00

## HIGH PERFORMANCE COATING

## PART 1 - GENERAL

## 1.01 DESCRIPTION:

- A. Provide high performance coating as indicated and in compliance with Contract Documents.
1. Section Includes:
    - a. High-performance coatings.
    - b. Surface preparation and field application of high-performance coatings (protective coatings).
    - c. Surface preparation and shop prime coating, when specified in other Sections of these Specifications.
    - d. A free choice of manufacturer's standard factory mixed or mechanically proportioned intermixed colors. A color schedule will be furnished after the manufacturer of the paint has been selected.

## 1.02 REFERENCES:

- A. ASTM International (ASTM):
1. B117: Standard Practice for Operating Salt Spray (Fog) Apparatus.
  2. D1730: Type D Method 2: Standard Practices for Preparation of Aluminum and Aluminum-Alloy Surfaces for Painting
  3. D4060: Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser
  4. D4141: Standard Practice for Conducting Black Box and Solar Concentrating Exposures of Coatings
  5. D4545: Standard Practice for Determining the Integrity of Factory Seams Used in Joining Manufactured Flexible Sheet Geomembranes
  6. D4585: Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation
- B. Federal Standards (Fed. Std.):
1. 141D: Paint, Varnish, Lacquer and Related Materials: Methods of Inspection, Sampling and Testing.
- C. Society for Protective Coatings (SSPC):
1. PA2: Measurement of Dry Coating Thickness with Magnetic Gages
  2. SP6: Commercial Blast Cleaning
  3. SP12: Surface Preparation of Metals by Waterjetting Prior to Recoating

## 1.03 DEFINITIONS:

- A. Definitions as used in schedules.
1. Chemical: Surface subject to corrosive chemical splash or fumes.
  2. Moist: Surface subject to wet areas such as shower rooms and rooms with open tanks.
  3. Normal: Surface subject to normal temperatures and humidity such as found in offices and corridors.
- B. First Coat: Field prime, factory prime, or shop prime. When only one coat is required, first coat is finish coat.
- C. Second or Third Coats: Successive finish coats applied over first coat.

## 1.04 SUBMITTALS:

- A. Submit the following shop drawings in accordance with Section 01 33 00.
1. Coating Manufacturer's Literature: Detailed descriptive data for materials specified including recommendations for surface preparation, mixing, thinning, application and curing.
  2. Custom Color and Gloss: Prepare three samples of aluminum railing by the applicator in accordance with the manufacturer's printed instructions and submit to the ENGINEER for acceptance. The sample shall represent the degree of specular gloss and color to be selected.

3. Color Charts: Three (3) color charts of coating manufacturer's full range of custom colors.
  4. Manufacturer's Certification: Coating manufacturer shall certify that products shall meet all requirements specified, including physical properties for primer and finish.
- B. Product Data on each specific product describing physical and performance characteristics and colors available.
1. Identify dissolving solvents, fluids, potential destructive compounds and VOC in pounds/gallon and grams/liter for each product.
- C. List each product and cross-reference the specific coating and finish system and application. Identify each material by the manufacturer's catalogue number and general classification. Samples and color charts showing full range of colors available for each product for selection purposes.
- D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- E. Provide **analysis and** testing of coating materials under provisions of Section **01 40 00**.
1. Test samples in accordance with **ASTM E84**.
- 1.05 QUALITY ASSURANCE:
- A. Comply with the requirements specified in Section 01 40 00.
  - B. Applicator Qualifications:
  - C. Single-Source Responsibility:
  - D. Manufacturer shall supply products that comply with local restrictions controlling use of volatile organic compounds (VOCs).
- 1.06 DELIVERY STORAGE AND HANDLING:
- A. Comply with the requirements specified in Section 01 60 00.
  - B. Deliver material in original, sealed, unopened packages and containers bearing manufacturer's name. Each container shall have manufacturer's printed label stating type of coating, color of coating, instructions for reducing, and spreading rate.
  - C. Protect and heat or cool material storage location to maintain temperature ranges recommended by coating manufacturer for most sensitive coating, but not less than 55 degrees F.
  - D. Keep storage area neat and clean and replace or repair damage thereto or to its surroundings.
  - E. Avoid danger of fire. Deposit cleaning rags and waste materials in metal containers having tight covers or remove from building each night. Provide fire extinguishers of type recommended by coating manufacturer in areas of storage and where finishing is occurring. Allow no smoking or open containers of solvents. Store solvents in safety cans. **Give special attention to possible hazards in areas of existing buildings.**
  - F. Coating materials shall be used within six months from the date shipped from the coating manufacturer.
  - G. Empty containers shall have labels canceled and be clearly marked as to use.
  - H. Upon Substantial Completion, remaining material will become property of OWNER. Seal material as required for storage, marked as to contents and shelf life, and store where required by OWNER.
- 1.07 PROJECT/SITE CONDITIONS:
- A. Apply coatings only under the following prevailing conditions:

Bon Heur Pump Station Rehabilitation

1. Air and surface temperatures are not below 50 degrees F (10 degrees C), or above 120 degrees F (48 degrees C).
  2. Relative humidity is not above 85 percent and the surface temperature is at least 5 degrees F (15 degrees C) above the dew point.
- B. Maintain this temperature range, 24 hours before, during, and **72** hours after installation of coating.
- C. Provide lighting level of **80 foot candles** measured mid-height at substrate surface.
- D. Maximum Moisture Content of **substrate: 14** percent, negative alkalinity.
- E. Ventilate area where coating is being applied. Post and enforce NO SMOKING or OPEN FLAME signs until coating has cured.
- F. Restrict traffic from area where coating is being applied or is curing.
- 1.08 WARRANTY:
- A. The Contractor shall warrant and shall obtain from the Subcontractor its' warranty that the high performance coating is in compliance with criteria specified in paragraph 2.02.C and will be free from defects in materials and workmanship for a period of 5 years from the date of final acceptance. Said Subcontractor's warranty shall be in a form acceptable to and for the benefit of the OWNER and shall be submitted by the Contractor as a condition of final payment. The Contractor shall repair or replace, at the sole option of and at no cost to the OWNER, any work found to be defective within said warranty period. Such repair or replacement shall include the cost of removal and reinstallation.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Manufacturers:
1. Tnemec Company, Inc.
  2. Carboline Co.
  3. Dupont Industrial Coatings
- B. Colors: To be selected by the ENGINEER.
- C. Comply with Federal Clean Air Act for Volatile Organic Compound compliance for applied materials.

2.02 PRODUCT REQUIREMENTS/QUALITY STANDARDS:

- A. Primer for Aluminum and Steel: Provide a Tnemec N69 two-component, thermosetting high solids polyamidamine epoxy primer as supplied by the manufacturer for the specified finish and with a minimum dry film thickness of 1.5 to 2.0 mils (38 to 50 um) for aluminum and 4.0 to 6.0 mils (100 to 150 um) for Steel.
1. Physical Properties of Primer:
    - a. Temperature resistance: Continuous 250 degrees F (121 degrees C) and Intermittent 300 degrees F (149 degrees C) (Dry).
    - b. Minimum Solids by Volume: 69 +/- 2.0% (mixed/unreduced).
    - c. Total Solids by Weight: 77.07 +/- 10% (mixed/unreduced).
    - d. Weight per Gallon: 14.48 +/- 0.25 lbs.
    - e. Mixing Ratio: 1 part base to 1 part catalyst.
    - f. Pot Life at 77 degrees F: Minimum 5 hours.
- B. Finish: Provide a Tnemec V1070/ V1071 high-performance, two-component, thermosetting, flouropolymer finish and with a minimum dry film thickness of 2.0 mils (50 um).
1. Physical Properties of Finish:
    - a. Temperature Resistance: Continuous 250 degrees F (121 degrees C) and Intermittent 300 degrees F (149 degrees C) (Dry).

- b. Minimum Solids by Volume: 62.0 +/- 2.0% (mixed/ unreduced).
- c. V.O.C. Max. – 100 grams/liter.
- d. Weight per Gallon: 11.25 +/- 0.25 lbs. (mixed/unreduced, value may vary with color).
- e. Pot Life at 77 degrees F: Minimum 2 hours.

C. Performance Criteria for Applied System – Systems shall meet or exceed the following performance criteria:

1. Exterior Exposure – ASTM D4141 C EMMAQUA– No change less than 80 percent Gloss(8.2 units gloss change ) and 0.29 DED Hunter lab Scale color change of 1260 MJ/m<sup>2</sup>
2. Adhesion: Not less than a rating of 916 psi, average of three tests (ASTM D4541).
3. Humidity Resistance: No blistering, softening or delamination of film after 3,000 hours exposure (ASTM D4585).
4. Salt Spray Resistance: No blistering, softening or delamination of film. No more than 1/16-inch creepage at scribe after 10,000 hours exposure (ASTM B117).
5. Abrasion Resistance: No more than 103 mg. loss after 1,000 cycles (ASTM D4060, CS-17 Wheel, 1,000 grams load).
6. Chemical Resistance: No blistering, softening, discoloration or other film defects after 24 hour exposure to the following reagents: 50 percent Sodium Hydroxide, 10 percent Sulfuric Acid, 20 percent Muriatic Acid, 5 percent Nitric Acid, Trichloroethylene, Toluene, Gasoline (Regular), Ethyl Alcohol, 6 percent Sodium Hypochlorite (Clorox), (Covered Spot Test).
7. QUV: For accepted colors no blistering, cracking or delamination of film and no less than 86 percent gloss retention and 0.54 DED FMCI ( MacAdam Unit ) color change after 3,000 hours exposure average of five tests

2.03 MATERIAL PREPARATION:

- A. Mix and thin materials according to coating manufacturer's current printed instructions.
- B. Do not use mixed material beyond coating manufacturer's recommended pot life.

PART 3 - EXECUTION

3.01 PRE-WORK INSPECTION:

- A. Examine surfaces to be coated in the presence of the coating manufacturer to identify any conditions that would adversely affect the appearance or performance of the coating system and which cannot be put into a condition accepted by the ENGINEER and coating manufacturer by the preparation work specified in paragraph 3.02. Replace rejected work at no additional cost to the OWNER.
- B. Do not proceed with surface preparation and application until surface is approved by and authorization to proceed, is given by the coating manufacturer.

3.02 SURFACE PRPARATION:

- A. Pre-Treatment for Aluminum – ASTM D1730 below :
  1. Chemically treat all surfaces in accordance with ASTM D1730, Type A Solvent cleaning , Method 1 followed by Type D Method 2 Sand Blasting per SSPC SP12.
  2. Finish: Primed surfaces must be clean, dry and free of oil, grease and other contaminants.
- B. Surface Preparation for Steel
  1. SSPC SP6 Commercial Blast clean with anchor profile of 1.0 to 1.5 mils (25 to 38 um).

3.03 APPLICATION:

- A. Methods: A system consisting of the primer and finish shall each be electrostatically spray applied by the accepted applicator at the factory, and force cured in accordance with the coating manufacturer's current printed instructions. A list of accepted applicators is available from the manufacturer. All film Thicknesses shall be measured dry over the desired profile specified per SSPC –PA 2.



3.04 QUALITY CONTROL/ INSPECTION:

- A. System Appearance: Provide coatings, when cured, visibly free of dust, dirt, flow lines, streaks, sags, holidays, blisters, pin-holes, runs, curtains or other surface imperfections. Applicator shall follow coating manufacturer's guidelines for quality control testing on a prescribed schedule during productions.
- B. Unacceptable Finishes: Unacceptable color or film characteristics shall be cause for rejection of the entire coated section, replace rejected section by another coated section at no additional cost to the OWNER. Determination of such conditions and final approval to be made by the ENGINEER.

3.05 CLEANING/ADDITIONAL REQUIREMENTS:

- A. Care and Handling: Care during fabrication, packaging of the finished product, shipping, unloading, onsite storage, installation prior to building completion and cleaning shall be in accordance with The Architectural Aluminum Manufacturers Association's publication "Care and Handling of Architectural Aluminum from Shop to Site."
- B. Field Touch-Up and Repair: When accepted by the ENGINEER brush apply minor touch-up in the field using no larger than a No. 2 Artist brush. Touch-up coating shall be the same as the formulation used for factory application.
- C. Fasteners: Where required for installation and exposed in finished surfaces, apply finish in the same manner as other aluminum surfaces and with color to match adjacent surfaces.
- D. Final Inspection: Correct, repair and touch-up work that is not acceptable to the ENGINEER and request final acceptance.

3.06 CONTRACT CLOSEOUT:

- A. Provide in accordance with Section 01 70 00.

END OF SECTION 09 96 00

## **Bon Heur PS Pre-bid Meeting**

**2/15/2024, 10:00 AM ET**

### **Chapaton Pump Station**

#### **Questions/Notes:**

**1. Do we know how the influent slide gates are not functional?**

Response: MCPWO is not certain of the functionality of the influent slide gates. MCPWO currently does not operate the gates as it is uncertain if they would reopen upon closure.

**2. What is the extent of the Motor City Technologies scope of work?**

Response: A copy of Motor City's proposal for the work they will provide is included immediately following the Agreement Between Owner and Contractor for Construction Contract (Stipulated Price), and before Section 00 55 00 – Notice to Proceed. In Section 01 20 00 – Price and Payment Procedure, under Part 1.12 – Schedule of Allowances, Bid Item 17 covers a \$127K allowance, which includes the work described in Motor City's proposal dated January 26, 2024.

**3. Specifications for the pump motors and painting are missing.**

Response: Refer to Addendum #1 items 3 and 4 and related attachment.

**4. Can a motor section view be provided?**

Response: No additional views of motors are available. Motor selection based on specified criteria will be finalized during construction.

**5. Is work in the channels (influent and discharge) considered a confined space requiring all the required safety measures and protocol?**

Response: Refer to paragraph 1.16, Confined Space, in Section 01 10 00 Summary of Work. The wet well, influent sewer, and effluent channel are classified as permit required spaces. Follow all confined space entry procedures, including standby rescue personnel, while work is performed in these areas. The Contractor may engage one of the following entities to provide rescue services for this project:

1. Macomb County Technical Rescue Team (MCTRT) via an executed Emergency Response Agreement. MCTRT is currently providing standby rescue services for other Owner projects.
2. Private entity subcontracted by the Contractor. The cost for these arrangements shall not be paid for separately but shall be included in the Contractor's bid price.
3. Self-Rescue. Proof of adequate training & certification must be provided.

**6. Can an extension of two weeks be provided for bid submittal?**

Response: Refer to Addendum #1 item 1 on Bid Opening.

**7. What is the address of the Bon Heur Pump Station?**

Response: The Bon Heur Pump Station is located at 26350 Harper Ave., St. Clair Shores, MI 48081.

**8. What is the ballpark estimate of the work for construction?**

Response: An estimate is not included in the bid documents.

**9. Is the bridge crane at the pump station available for use?**

Response: The existing bridge crane within the motor room can be made available for use in construction. Relevant maintenance records shall be provided to the selected contractor, if requested.

**10. Are the concrete motor stands to be demolished?**

Response: Yes, Refer to sheet D-002 for note on concrete base demolition.

**11. Can we include photos of the mobile crane set up for the previous roofing work performed?**

Response: Refer to Addendum 1 Item 5

**12. Can drawings of the existing roof be provided?**

Response: Refer to Addendum 1 Item 5

**13. Are drawings available for metal covers for pump shaft between the motor room and wet well?**

Response: No information exists apart from what may be found in the documents noted in 00 31 17- Available Information. Note that these covers will be clarified for replacement in a subsequent Addenda.

**14. Bypass pumping services/flow data:**

Response: MCPWO can accommodate redirecting dry weather flow (up to 2,500 gpm) during dry weather for up to 8 hours at a time to accommodate construction. Screw pump replacement, requiring longer shut downs shall be phased as described in Specifications. Note specified requirement to maintain existing pumps in service while pumps are replaced sequentially. Bypass pumping needs beyond this are the responsibility of the Contractor.

**15. Would an alternative liner system be approved in place of the epoxy lining for the concrete?**

Response: Please bid based on specified products.