



**MERIDIAN TOWNSHIP
WATER TOWER CONTRACT 2022**

MERIDIAN TOWNSHIP
DEPARTMENT OF PUBLIC WORKS
ENGINEERING OFFICE

INGHAM COUNTY, MICHIGAN

MERIDIAN TOWNSHIP WATER TOWER CONTRACT 2022

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ADVERTISEMENT

Separate sealed Bids are solicited for the following project:

Project Name: **Water Tower Contract 2022
500,000 Gallon Fluted Column
Exterior Overcoat
Dry Interior Repaint
and Miscellaneous Repairs**

Note: This project name shall be understood to include the entire scope of project as defined and detailed by these specifications and Contract Documents.

Separate sealed bids will be received by the Owner and then publicly opened and read aloud at:

Bids Sent To: **Meridian Township, Clerk's Office, 5151 Marsh Road, Okemos, MI
48864**

Bid Opening Date: **January 6, 2022**

Bid Opening Time: **1:00 P.M. (local time)**

Bid Opening Site: **Meridian Township, 5151 Marsh Road, Okemos, MI 48864**

The Bid Requirements and Contract Documents may be examined at the following locations:

Builders Exchange
1240 E. Saginaw St.
Lansing, MI 48909

Construction Association
43636 Woodward Ave.
Bloomfield Hills, MI 48302

Builders Exchange
678 Front Ave. NW, Suite 330
Grand Rapids, MI 49501

At the OFFICE of the ENGINEER and at the DEPARTMENT of PUBLIC WORKS,
ENGINEERING OFFICE.

Printed copies, Electronic copies, or Documents on Flash drives with the Bidding Documents may be obtained from the office of DIXON ENGINEERING, INC., 1104 Third Avenue, Lake Odessa, Michigan, 48849 (Issuing Office) upon payment for handling charge of each set in the respective format. Payment for handling charges should be made to Dixon Engineering, Incorporated. **There will be no refund of handling charge for return of specification packages, or in the digital format.**

Format	Cost
Bidding Requirements	\$95.00
Flash Drive containing Bidding Requirements in portable document format (PDF)	\$85.00
Electronic download of Bidding Requirements by email (PDF)	\$75.00

Note 1: The Engineer assumes no responsibility to supply Builders Exchanges and similar plan review rooms with all addenda issued. An attempt will be made to do so; however, only registered plan holders will be notified by email of expected or late term addendum with short preparation times.

Note 2: Prequalification of BIDDERS - Dixon Engineering will review qualifications of all Contractors and determine their status. Contractors will be prequalified for different sized tanks and towers based on experience, workmanship, successful Project completions with DIXON and Contractor's financial data. Prequalification protocol is in the Instructions to Bidders. Any Contractor who has any projects in dispute or unfinished because of Contract problems will be considered NOT prequalified. Disqualification will result in the return of any handling fee for Bidding Documents.

INSTRUCTIONS TO BIDDERS

1. PROPOSALS

Proposals must be made upon the forms provided, without modifications or changes, and all other data submitted as required.

The proposal must be enclosed in a sealed envelope marked "**Bid Proposal – Meridian Township Water Tower Contract 2022**" clearly indicating the name and address of the bidder, and filed at the place and by the time specified in the Advertisement.

2. BASIS OF PROPOSALS

Proposals may be submitted for any one or all of the projects or phases as may be applicable.

Proposals are solicited on the basis of unit prices for the entire work of the contract.

The right is reserved by the Owner to reject any and all bids, to award the Contract to other than the low bidder, to award separate Contracts for each project and/or phase, to waive irregularities and/or formalities, and in general, to make award in any manner deemed by it, in its sole discretion, to be in the best interest of the Owner.

3. BID DEPOSITS

Each proposal shall be accompanied by a certified check, or bid bond from a recognized surety company, in the amount of five percent (5%) of the total amount of the bid, payable to the order of the Owner, to be forfeited to the Owner in case of failure on the part of the successful bidder to enter into the attached form of Contract to do the work covered by such Proposal at the price and within the time stated therein. The bid deposit of all except the successful bidder will be returned within four weeks after opening of bids. The bid deposit of the successful bidder will be returned within 48 hours after the executed Contract has been finally approved by the Owner.

4. PREQUALIFICATION OF BIDDERS

Dixon Engineering will review qualifications of all Contractors and determine their status. Contractors will be prequalified for different sized tanks and towers based on experience, workmanship, successful Project completions with DIXON, and Contractor's financial data. Any Contractor who has any projects in dispute or unfinished because of Contract problems will be considered NOT prequalified. Disqualification will result in the return of any handling fee for Bidding Documents.

5. INTERPRETATION OF DOCUMENTS

If the bidder is in doubt as to the true meaning of any part of the plans, specifications or Contract Documents, he may submit to the Engineer a written request for an interpretation thereof. Any interpretation made in response to such query will be mailed or duly delivered to each prospective bidder. The Owner will not be responsible for any other explanation or interpretation of the Contract Documents.

6. REQUIREMENT OF SIGNING BIDS

Bids which are not signed by the individual making them shall have attached thereto a power of attorney evidencing authority to sign the bid in the name of the person for whom it is signed.

Bids, which are signed by a partnership, shall be signed by all of the partners or by an attorney-in-fact. If signed by an attorney-in-fact, there shall be attached to the bid a power of attorney evidencing authority to sign the bid, executed by the partners.

Bids which are signed for a corporation shall have the correct corporate name thereof and the signature of the president or other authorized officers of the corporation manually written below the corporate name following the word "By". If such a bid is manually signed by an officer other than the president of the corporation, a certified copy of a resolution of the board of directors evidencing the authority of such official to sign the bid shall be attached to it. Such a bid shall also bear the attested signature of the secretary of the corporation and the impression of the corporate seal.

INSTRUCTIONS TO BIDDERS

7. EXECUTION OF AGREEMENT

The bidder to whom an award is made will be required to enter into the written contract included herein, within ten (10) calendar days after being notified of the acceptance of his bid and receipt by him of the copies of the documents to be executed. In case of failure to comply with this requirement, he may be considered to have abandoned all his rights and interests in the award and his certified check or amount of bidder's bond may be declared to be forfeited to the Owner and the Contract may be awarded to another bidder.

8. INSURANCE (Ref. General Conditions - GC.2)

The contractor will be required to carry Worker's Compensation Insurance, Bodily Injury and Property Damage, Builder's Risk Insurance and Owner's Protective Liability in the amounts specified in the General Conditions. Certificates of such insurance must be attached to each copy of the executed Contract Documents.

9. BONDS (Ref. General Conditions - GC.1)

The successful bidder will be required to furnish for each set of executed Contract Documents and conformed copies thereof an original completed Performance Bond, and Labor and Material Bond with surety acceptable to the Owner as set forth in the General Conditions.

10. BIDDER'S RESPONSIBILITY FOR EXAMINING PLANS AND SITE

At the time of opening bids, each bidder will be presumed to have made a personal investigation of the site of the work and of existing structures, and to have read and be thoroughly familiar with the plans, specifications and Contract Documents (including all addenda). He shall determine to his own satisfaction the conditions to be encountered, the nature of the ground, difficulties involved in completing the Contract and all factors affecting the work proposed under this Contract.

The bidder to whom this contract is awarded will not be entitled to any additional compensation by reason of his failure to fully acquaint himself with the conditions at the site or by his failure to fully examine the plans, specifications and Contract Documents.

11. NON-DISCRIMINATION IN EMPLOYMENT

The Contractor shall adhere to all applicable Federal, State and local laws, ordinances, rules and regulations prohibiting discrimination with regards to employees and applicants for employment. The contractor and his/her subcontractors shall not discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions or privileges of employment, including a benefit plan or system or a matter directly or indirectly related to employment, because of race, color, religion, national origin, sex, age, height, weight, condition of pregnancy, marital status, physical or mental limitation, disability, source of income, familial status, educational association, sexual orientation, gender identity or expression, or HIV status. Breach of this section shall be regarded as a material breach of this Contract.

12. PREVAILING WAGES

Per Meridian Township Prevailing Wage Guidelines, all Township contracts with a value greater than fifty-thousand dollars (\$50,000) must comply with the relevant Prevailing Wage rates current at the time of the contract. This requirement includes the prime Contractor as well as all sub-contractors. Certified Payroll, on standard US Department of Labor forms, shall be submitted for the prime Contractor and all sub-contractors. Any employees found to be paid less than the relevant wage rate shall be made whole up to the prevailing wage prior to the release of any retainage on the contract. The wage rates for this contract can be found in the attached Appendices, or at <https://beta.sam.gov>.

SECTION 00 00 40
PROJECT SUMMARY

PART 1 – GENERAL

This Project Summary is an overview of the entire Project and is intended but is not guaranteed, to place all project specifics in one location to aid Bidders.

1.01 SCHEDULE, LIQUIDATED DAMAGES and SPECIAL DAMAGES

The Contractor shall abide by the following schedule:

Commence work on or after April 18, 2022.

Work hours are 7:00AM to 7:00PM Monday through Saturday, working outside this timeframe is possible with pre-approval from the Township Board.

Substantial Completion by June 30, 2022, including cure and disinfection time.

The tank may be out-of-service a maximum of 30 days.

Liquidated damages are applicable and begin after 30 days out-of-service or after Substantial Completion date whichever is the earlier date. Liquidated damages at \$1,250/calendar day shall apply after this date. Ready for Final Payment Date shall be thirty (30) days after date Substantial Completion Date based on out-of-service days or scheduled Substantial Completion, or as adjusted by Change Order, or actual Substantial Completion if earlier. Liquidated damages after Ready for Final Payment Date of \$250/day shall apply. Liquidated damages are cumulative if damages from Substantial Completion and Ready for Final Payment overlap. In addition, Special Damages, fines, or Set-offs may also apply per Bid/Agreement Form.

1.02 SCOPE of WORK

Tank Information:

The structure is a 500,000 gallon fluted column elevated water storage tank with a low-water level of 112 ft. and a diameter of 49.5 ft. located at 6217 Newton Rd., East Lansing, Michigan and owned by Meridian Township.

The work includes:

Exterior: High pressure water clean (5,000 to 10,000 psi), spot power tool clean to a SSPC-SP11 standard, and apply a three (3) coat epoxy urethane fluoropolymer system.

Dry Interior: Abrasive blast clean the spot coating failures throughout to a SSPC-SP6 commercial standard. Apply a spot two (2) coat epoxy system to the rest of the prepared surfaces. There are several coating failures on the platform tops, bowl, and in the access tube, though repair areas are not limited to these noted locations.

Foundation: Repair cracks. Water clean and apply a two (2) coat epoxy system.

Repairs:

- 1) Replace the bowl manway gasket.
- 2) Remove the davit arm from the wet interior bowl manway.
- 3) Install hinge on the two condensate platform hatches.
- 4) Install handholds at the roof hatches.
- 5) Replace vent with a frost-free roof vent.
- 6) Install a roof painter's railing.
- 7) Install a swing gate at the top platform opening.
- 8) Replace dry interior and aviation light bulbs.
- 9) Replace the sample tap on the fill/draw pipe.
- 10) Install a gasket on the wet interior roof hatch.
- 11) Replace the overflow screen.

There is additional work to be performed on the 500,000 gallon spheroid tank located at 2222 Fox Hollow Dr. in Okemos, Michigan.

Repairs:

- 1) Install a gasket on the wet interior roof hatch.
- 2) Replace the overflow screen.
- 3) Replace the vent screen.

1.03 MISCELLANEOUS

- A. Each proposal shall be accompanied by a certified check or a bid bond by a recognized surety company similar to a U.S. Government Standard form bid bond, in the amount of five percent (5%) of the bid, payable to the Meridian Township, Ingham County, Michigan as security for the acceptance of the Contract.
- B. Insurance and bonds are required from the successful bidder for this project; please see pages G-2 and G-3 for those requirements. Please note Owner/Contractors Protective Liability is required for all Meridian Township contracts.
- C. For this contract, Prevailing Wage rates are in effect. See the Wage Rate Tables in Appendix A

SECTION 00 54 00
SCHEDULE OF VALUES

PART 1

1.01 LINE ITEMS

A. Bidder agrees to perform all work in the following sections as described in the Contract Documents, including all labor and material for the following Schedule of Values – Section 03 00 00:

1. FOUNDATION CRACK REPAIR - 15 FT.
_____ \$ _____

B. Bidder agrees to perform all work in the following sections as described in the Contract Documents, including all labor and material for the following Schedule of Values – Section 05 00 00:

1. PLATFORM COVER HINGES
_____ \$ _____

2. ROOF VENT
_____ \$ _____

3. ROOF PAINTER’S RAILING
_____ \$ _____

4. SWING GATE
_____ \$ _____

TOTAL PRICE SECTION 05 00 00 INCLUDING #1 THROUGH #4:
_____ \$ _____

C. Bidder agrees to perform all work in the following sections as described in the Contract Documents, including all labor and material for the following Schedule of Values – Section 09 00 00:

1. EXTERIOR OVERCOAT
_____ \$ _____

2. DRY INTERIOR SPOT REPAINT
_____ \$ _____

3. LOGOS

_____ \$

TOTAL PRICE SECTION 09 00 00 INCLUDING #1 THROUGH #3:

_____ \$

TOTAL PRICE SECTION 03 00 00, 05 00 00 and 09 00 00:

SECTION 03 00 00: \$ _____

SECTION 05 00 00: \$ _____

SECTION 09 00 00: \$ _____

PROJECT TOTAL: \$ _____

D. ESTIMATED COST ALREADY INCLUDED IN EXTERIOR AND DRY INTERIOR
PAINTING TO PROTECT AND WORK AROUND ANTENNAS AND CABLES.
OWNER RESERVES THE RIGHT TO DELETE THIS AMOUNT IF THE ANTENNAS
AND CABLES ARE REMOVED.

_____ \$

MERIDIAN TOWNSHIP WATER TOWER CONTRACT 2022

THIS CONTRACT, dated _____, 2022, by and between _____, hereinafter called the "CONTRACTOR", and Meridian Township, 5151 Marsh Road, Okemos, MI 48864, hereinafter called the "OWNER".

WITNESSETH, that the CONTRACTOR and the OWNER for the consideration herein agree as follows:

ARTICLE I. SCOPE OF WORK.

The CONTRACTOR shall perform everything required to be performed and shall provide and furnish all labor, materials, necessary tools, expendable equipment and all utility and transportation services required to perform and complete in a workmanlike manner all the work required for constructing the project as described in the Advertisement and Bidding documents, and for performing all related work for the OWNER, required by and in strict accordance with the plans and specifications, including any and all addenda, and other Contract Documents mentioned and made a part hereof.

ARTICLE II. THE CONTRACT PRICE.

The OWNER shall pay for constructing the project complete with all labor, materials, equipment, appurtenances, surface restoration and related work in strict accord with the Plans and Specifications, ready for use, the unit prices as listed in the Schedule of Values and herein made a part of this Contract. Payment shall be made to the CONTRACTOR in accordance with and subject to the conditions specified under General Conditions.

ARTICLE III. TIME.

Time is of the essence in the performance of this contract. The CONTRACTOR agrees to start work within ten (10) days of issuance of the Notice to Proceed and to fully complete the work so as to permit use of the project by the OWNER by the completion date stated in the Advertisement or within the number of calendar days listed in the Advertisement.

ARTICLE IV. DELAYS AND DAMAGES.

If the CONTRACTOR refuses or fails to prosecute the work, or any separate part thereof, with such diligence as will insure its substantial completion, ready for use by the OWNER by the completion date stated in the Advertisement or within the number of consecutive calendar days stated in the Advertisement, or any extension thereof, or fails to complete said work within such time, the OWNER may, by written notice to the CONTRACTOR, terminate the CONTRACTOR's right to proceed with the work or such part of the work as to which there has been delay. In such event, the OWNER may take over the work and prosecute the same to completion by contract or otherwise, and the CONTRACTOR and his sureties shall be liable to the OWNER for any excess cost occasioned thereby. If the CONTRACTOR's right to proceed is so terminated, the OWNER will take possession of and utilize in completing work such materials, appliances, and plant as may be on the site of the work and necessary therefore.

If the OWNER does not terminate the right of the CONTRACTOR to proceed, the CONTRACTOR shall continue to work, in which event the actual damages for the delay will be impossible to determine and in lieu thereof the CONTRACTOR shall pay the OWNER the sum(s) as defined in Article 4.05 of the Additions to General Conditions, as fixed, agreed, and liquidated damages for each calendar day of delay until the work is substantially completed, ready for operation and the CONTRACTOR and his sureties shall be liable for the amount thereof. However, the right of the CONTRACTOR to proceed shall not be terminated or the CONTRACTOR charged with liquidated damages because of any delays in the completion of the work due to unforeseeable causes beyond control and without the fault or negligence of the CONTRACTOR, including, but not restricted to acts of God, or of the public enemy, acts of the OWNER, fires, floods, epidemics, quarantine restrictions, delays of subcontractors due to such causes, if the CONTRACTOR shall, within ten (10) days from the beginning of any such delay (unless the OWNER shall grant a further period of time prior to the date of final settlement of the Contract) notify the OWNER in writing of the cause of delay and extend the time for completing the work when, in OWNER's judgement, the finding of fact justify such an extension and OWNER's findings of fact thereon shall be final and conclusive on the parties thereto. In no event shall bankruptcy or labor disputes, or the like, either of CONTRACTOR or any of its subcontractors or suppliers, be considered as an unforeseeable cause beyond the control and without the fault or negligence of the CONTRACTOR.

ARTICLE V. COMPONENT PARTS OF THIS CONTRACT.

This Contract consists of the following component parts, all of which are as fully a part of the Contract as if herein set out verbatim, or, if not attached:

- | | |
|----------------------------|-----------------------------|
| 1. Advertisement | 8. General Specifications |
| 2. Instructions to Bidders | 9. Technical Specifications |
| 3. Project Summary | 10. Standard Specifications |
| 4. Schedule of Values | 11. Appendices |
| 5. Contract | 12. Addenda |
| 6. Bonds and Insurance | 13. Notice of Award |
| 7. General Conditions | 14. Notice to Proceed |

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed in three (3) original counterparts the day and year first above written.

CONTRACTOR

WITNESS:

By: _____

Title: _____

Date: _____

MERIDIAN TOWNSHIP
OWNER

WITNESS:

BY: _____

Derek N. Perry

TITLE: Deputy Township Manager
Director of Public Works & Engineering

DATE: _____

NOTICE OF AWARD

Dated: _____

TO: _____

ADDRESS: _____

CONTRACT: **MERIDIAN TOWNSHIP WATER TOWER CONTRACT 2022**

You are notified that your Bid dated _____, **2021** for the above Contract has been considered. You are the apparent Successful Bidder and have been awarded a Contract for **Meridian Township Water Tower Contract 2022.**

The Contract Price of your Contract is: \$ _____.

Three copies of each of the proposed Contract Documents accompany this Notice of Award.

You must comply with the following conditions within 10 days of the date you receive this Notice of Award.

1. Deliver to the OWNER **three** fully executed counterparts of the Contract Documents. (Each of the Contract Documents must bear your signature on page C-3.)
2. Deliver with the executed Contract Documents the Contract security (Bonds and Insurance) as specified in General Conditions (GC).

Failure to comply with these conditions within the time specified will entitle OWNER to consider your Bid in default, to annul this Notice to Award and to declare your Bid security forfeited.

Within ten days after you comply with the above conditions, OWNER will return to you one fully executed counterpart of the Contract Documents.

MERIDIAN TOWNSHIP

By: _____
Derek N. Perry
Deputy Township Manager
Director of Public Works & Engineering

NOTICE TO PROCEED

Dated: _____, **2022**

TO: _____

ADDRESS: _____

CONTRACT: **MERIDIAN TOWNSHIP WATER TOWER CONTRACT 2022**

You are notified that the Contract Times under the above Contract will commence to run on _____, **2022**. In accordance with the Project Summary for this contract, work may commence anytime on or after April 18, 2022. Substantial completion shall be achieved by June 30, 2022, including cure and disinfection time.

Deliver to **OWNER** an acknowledged copy of this Notice to Proceed.

MERIDIAN TOWNSHIP

By: _____
Younes Ishraidi, P.E.
Chief Engineer

ACKNOWLEDGEMENT OF ACCEPTANCE OF NOTICE TO PROCEED

CONTRACTOR acknowledges acceptance of this Notice to Proceed this _____ day of _____, 2022.

By: _____
Signature

Printed Name

Title

GENERAL CONDITIONS

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GENERAL CONDITIONS

GC.1 CONTRACT SECURITY

The Contractor shall furnish a surety bond, by a duly authorized surety company satisfactory to the Owner, in an amount equal to 100 percent (100%) of the Contract price as security for the faithful performance of this Contract. The Contractor shall also furnish a separate surety bond, by a duly authorized surety company satisfactory to the Owner, in an amount equal to 100 percent (100%) of the Contract price as security for the payment of all persons performing labor and/or furnishing materials.

The surety company writing the bid, performance, labor and material, and maintenance bond shall be: 1) acceptable to the Owner, 2) be listed in the Federal Register as published by the U.S. Department of Treasury under most recently revised Circular 570; 3) have an A.M. Best Company's Insurance reporting rating of no less than A- (Excellent); and 4) authorized to do business in the State of Michigan by the Michigan Department of Licensing & Regulatory Affairs Office of Financial and Insurance Regulations. Upon request, the Contractor shall submit evidence of such insurance.

GC.2 CONTRACTORS' AND SUBCONTRACTORS' INSURANCE

The Contractor shall not commence work under this Contract until he/she has obtained all the insurance required under this section and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence work on his/her subcontract until all similar insurance required of the subcontractor has been so obtained and approved. Contractors and subcontractors are required to file with the Owner completed certificates of insurance, as evidence that they carry adequate insurance to comply with the requirement of this section. New Certificates of Insurance shall be furnished to the Owner at the renewal date of all policies named on these certificates.

A. Policies, Coverages, and Endorsements

The Contractor agrees to maintain, or to cause its personnel providing services under this Contract to maintain, at its sole cost and expense or the cost and expense of his personnel, the following insurance policies, with the specified coverages and limits, to protect and insure the Owner and Contractor against any claim for damages arising in connection with Contractors responsibilities or the responsibilities of Contractors personnel under this Contract and all extensions and amendments thereto.

1. Commercial General Liability

a.	General Aggregate	\$2,000,000
b.	Each Occurrence	\$1,000,000

Such insurance shall include, but not be limited to, coverage for:
Comprehensive form, Premises-operations, Explosion and collapse hazard, Underground hazard, Products/completed operations hazard, Contractual insurance, Broad form property damage, Independent contractor, Personal injury

2. Workers' Compensation & Employer' Liability (if applicable)

a.	Medical & Indemnity	Statutory Requirements
b.	Bodily Injury by Accident	\$500,000 Each Accident
c.	Bodily Injury by Disease	\$500,000 Each Employee
d.	Bodily Injury by Disease	\$500,000 Policy Limit
e.	Employers Liability	\$500,000

3. Automobile Liability

Including hired and non-owned Automobiles \$1,000,000 (Combined Single Limit)
Such insurance shall include, but not be limited to, coverage for:
Comprehensive form, Owned vehicles, Hired vehicles, Non-owned vehicles

GENERAL CONDITIONS

GC.2 CONTRACTORS' AND SUBCONTRACTORS' INSURANCE (Cont'd.)

~~B. Builder's Risk Insurance (Fire and Extended Coverage)~~

~~Until the project is completed and accepted by the Owner, the Contractor is required to maintain Builder's Risk Insurance (fire and extended coverage) on a 100 percent completed value basis on the insurable portion of the project for the benefit of the Owner, the Contractor, and subcontractors as their interests may appear.~~

C. Owner's Protective Liability

The Contractor shall procure and shall maintain during the life of this Contract Owner's/Contractor's Protective Liability Insurance, listing the Owner as the named insured. The minimum limit of liability shall be not less than \$1,000,000.00 per occurrence/aggregate.

D. Insured Parties

All policies shall contain a provision naming the Owner (and its officers, agents, and employees) as Additional Insured parties on the original policy and all renewals or replacements during the term of this Contract.

E. Acceptable Insurance Companies

All insurance companies required by this section shall be: 1) acceptable to the Owner; 2) authorized to do business in the State of Michigan by the Michigan Department of Licensing & Regulatory Affairs Office of Financial and Insurance Regulations, and 3) have an A.M. Best Company's Insurance reporting rating of no less than A- (Excellent). Upon request, the Contractor shall submit evidence of such insurance.

F. Indemnification and Hold Harmless

The Contractor shall, at its own expense, protect, defend, indemnify and hold harmless the Owner and its elected and appointed officers, employees, and agents from all claims, damages, costs, lawsuits and expenses, including, but not limited to, all costs for administrative proceedings, court costs and attorney fees that they may incur as a result of any acts, omissions, or negligence of the Contractor, its subcontractors, sub-subcontractors or any of their officers, employees, or agents. This includes but is not limited to injury or death to any person or persons, including the contractors employees, and damage to property. The furnishing by the Contractor of any insurance required by this Contract, or the acceptance or approval thereof by the Owner as provided in this Contract, or otherwise, shall not diminish the Contractor's obligation to fully indemnify the Owner, its elected and appointed officers, employees, and agents as required in this section.

The Contractor shall not cancel or reduce the coverage of any insurance required by this section without providing 30-day prior written notice to the Owner. All such insurance must include an endorsement whereby the insurer shall agree to notify the Owner immediately of any reduction by the Contractor. The Contractor shall cease operations on the occurrence of any such cancellation or reduction, and shall not resume operations until new insurance is in force.

GC.3 QUALIFICATION FOR EMPLOYMENT

The Contractor shall employ competent laborers and mechanics for the work under this Contract, and shall comply with all applicable regulations of the United States Department of Labor and any other agencies having jurisdiction.

GC.4 PROGRESS SCHEDULE

The Contractor, if requested by the Owner, immediately after being awarded the Contract, shall prepare and submit to the Owner and its representative an estimated progress schedule for the work in relation to the entire project. This schedule shall indicate the dates for the starting and completion of the various stages of construction.

GENERAL CONDITIONS

GC.4 PROGRESS SCHEDULE (Cont'd.)

If the Contractor chooses to work overtime, they will be backcharged for inspection. Overtime is any Township recognized holiday and/or any time other than 8:00 a.m. to 5:00 p.m., local time, Monday through Friday. No work will be allowed at the site prior to 7:00 a.m. or after 7:00 p.m., or dusk, of any working day. No work will be allowed on Sundays with the exception of work necessitated by an emergency.

GC.5 ACCIDENT PREVENTION

Precaution shall be exercised at all times for the protection of persons (including employees) and property, and hazardous conditions shall be guarded against or eliminated. The Contractor is entirely responsible for all aspects of job safety and shall execute the work under this Contract in strictest conformance with all state and local safety codes, rules and regulations.

GC.6 CONTRACT PRICE SCHEDULE

The Contractor, if requested by the Owner, shall submit to the Owner a cost breakdown for the various items of the work. The schedule shall be prepared in a manner acceptable to the Owner as to both form and completeness and supported by data as necessary to substantiate its correctness.

GC.7 PAYMENT TO CONTRACTOR

The Contractor shall submit semi-monthly, or at longer intervals, if he so desires, an invoice covering work previously performed for which he believes payment, under the Contract terms, is due, and shall deliver said invoice to the Owner. Each request for payment shall be accompanied by a statement certifying that all bills for labor and materials have been paid up for all previous pay requests.

Each progress payment request shall be paid within one of the following time periods, whichever is later:

- A. Thirty (30) days after the Owner has certified that the work is in place in the portion of the facility covered by the applicable request for payment in accordance with the documents.
- B. Fifteen (15) days after the Owner has received the funds with which to make the progress payment from a department or agency of the federal or state government, if any funds for the facility are to come from either of these sources.

To assure proper performance of the Contract by the Contractor, the Owner shall retain ten percent (10%) of the dollar value of all work in place until the work is fifty percent (50%) in place. After the work is fifty percent (50%) in place, additional retainage shall not be withheld unless the Owner determines that the Contractor is not making satisfactory progress, or for other specific cause relating to the Contractor's performance under the Contract. In the event of such a determination the Owner may retain up to but not to exceed ten percent (10%) of the dollar value of the work more than fifty percent (50%) in place.

Any funds retained by the Owner shall not exceed the prorated share of the Owner's matching requirement if the project is funded, in part, with federal or state funds. Any retained funds shall not be commingled with other funds of the Owner and shall be deposited in an interest-bearing account in a regulated financial institution.

At any time after ninety-four percent (94%) of the work under the Contract is in place and at the request of the Contractor, the Owner shall release the retainage plus interest, only if the Contractor provides to the Owner an irrevocable letter of credit in the amount of the retainage plus interest, issued by a bank authorized to do business in the State of Michigan, containing terms mutually acceptable to the Contractor and Owner.

Retainage shall be released to the Contractor together with the final progress payment.

GENERAL CONDITIONS

GC.7 PAYMENT TO CONTRACTOR (Cont'd.)

Owner and Contractor agree that disputes concerning retainage, at the option of the Owner, shall be submitted to the decision of the agent as provided in Section 4 of Act 524 of the Michigan Public Acts of 1980 (MCLA 125.1564; MSA 5.2949 (104)) and that interest earned on retainage shall be released to the Contractor together with the final progress payment except as provided in said Section 4 of 1980 PA 524.

The final progress payment request by the Contractor shall include:

- A. A final invoice in a form satisfactory to the Owner.
- B. A sworn statement certifying that all bills for labor and materials have been paid by the Contractor.
- C. A sworn statement waiving any further claims (other than the final payment, retainage and interest, if any) by the Contractor against the Owner.
- D. A certificate from Contractor's bonding company approving issuance of final payment.

All payments shall take due account of additions to or deductions from the Contract price as herein provided.

The acceptance by the Contractor of payment on the final progress payment request shall be conclusive evidence of Contractor's acceptance and approval of estimates, accounting and deductions, and of full payment by the Owner for all work, labor, materials and services done or furnished hereunder, and a full satisfaction, discharge, release and waiver of all claims and demands of or on behalf of the Contractor, its agents or employees against the Owner arising out of this agreement.

GC.8 SUBCONTRACTING

The Contractor shall not award any work to any subcontractor, supplier, manufacturer or fabricator without prior written approval of the Owner, which approval will not be given until the Contractor submits a written statement to the Owner concerning the proposed award to the subcontractor. Said statement shall contain such information as the Owner may require.

The Contractor shall be as fully responsible to the Owner for the acts and omissions of his subcontractors and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions and other Contract documents insofar as applicable to the work of the subcontractors, and to give the Contractor the same power of terminating any subcontract that the Owner may exercise over the Contractor under any provision of the Contract documents.

Nothing contained in this Contract shall create any contractual relation between any subcontractor and the Owner.

GC.9 ASSIGNMENTS

The Contractor shall not assign the whole or any part of this Contract or any monies due or to become due hereunder without written consent of the Owner. In case the Contractor assigns all or any part of any monies due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior liens of all persons, firms and corporations for services rendered or materials supplied for the performance of the work called for in this Contract.

GENERAL CONDITIONS

GC.10 EXTRAS

Except as otherwise herein provided, no charge for any extra work or materials will be allowed unless the same has been ordered in writing by the Owner and the price stated in such order.

GC.11 CHANGES IN WORK/PAYMENT ADJUSTMENTS

Adjustments, if any, in the amounts to be paid by the Contractor by reason of changes in, additions to, or deductions from the work to be performed or the materials to be furnished under this Contract, shall be made on the basis of the acceptable unit prices or lump sums submitted by the Contractor covering such changes, additions or deductions.

Failing an acceptable lump sum or unit price basis for extra work caused by changes or additions, the Contractor may be directed to proceed with extra work on the basis of actual total cost of:

- A. Labor, including foremen (including fringe benefits);
- B. Materials entering permanently into the work;
- C. The ownership or rental cost of construction plant and equipment during the time of use on the extra work at a rate not to exceed AGC rates;
- D. Power and consumable supplies for the operation of power equipment;
- E. Insurance;
- F. Social Security and unemployment contributions.

To the cost of the six items above, there shall be added a fixed fee, to be agreed upon but not to exceed fifteen percent (15%) of the actual cost of the work. The single fee shall be compensation to both the Contractor and/or subcontractor to cover the cost of supervision, overhead, bond, profit and any other general expenses.

Failing an acceptable lump sum or unit price basis for adjustment for any decrease in work caused by changes or deductions, the amount of such adjustment may be determined on a similar basis to that described for extra work, with the Contractor furnishing all pertinent cost data from his/her books and records that may be available and necessary for determination of the amount of adjustment.

All changes in, additions to, or deductions from the work specified shall be made only by written order by the Owner or by an authorized representative of the Owner. No claim for extra work will be allowed, unless ordered in writing as above stated, and the claim therefore presented in writing by the Contractor on or before the fifth (5th) day of the month following that in which the work was done.

GC.12 TIME OF MAKING CLAIMS

If the Contractor shall claim compensation or extension of time for any losses, damages, or delays sustained by reason of the acts of the Owner or its agents or other causes, he/she shall make a written statement of the nature of the loss, damage, or delay sustained to the Owner, within ten (10) days after the sustaining of such loss, damage, or delay. At the time of delivery and as a part of the Contractor's Declaration as hereinafter provided, the Contractor shall file with the Owner an itemized statement of the details and amounts of the loss, damage, or delay, and unless the statement shall be made as thus required, the Contractor's claim for compensation or extension of time shall be forfeited and invalidated, and he/she shall not be entitled to payment or extension of time on account of any such loss, damage or delay.

GENERAL CONDITIONS

GC.13 MATERIALS, SERVICES, AND FACILITIES

It is understood that except as otherwise specifically stated in the Contract documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature and all construction facilities whatsoever necessary to execute, complete, and deliver the work within the specified time.

Any work necessary to be performed after regular working hours, or Sundays and legal holidays, shall be performed without additional expense to the Owner.

GC.14 TERMINATION FOR BREACH

In the event that any of the provisions of this Contract are violated by the Contractor or by any of his subcontractors, the Owner may serve written notice upon the Contractor and the Surety of its intention to terminate the Contract, such notice to contain the reasons for terminating the Contract, and unless within ten (10) days after the serving of such notice upon the Contractor, the violation shall cease and satisfactory arrangements for correction be made, the Contract shall cease and terminate. In the event of a termination of the Contract, the Owner shall immediately serve notice thereof upon the Surety and the Contractor, and the Surety shall have the right to take over and perform the Contract.

However, if the Surety does not commence performance thereof within 30 days from the date of mailing said Notice of Termination to such Surety, the Owner may take over the work and prosecute the same to completion by contract for the account and at the expense of the Contractor. The Contractor and his Surety shall be liable to the Owner for any excess cost incurred by the Owner in completing the work, and Owner may take possession of and utilize in completing the work, all materials, appliances and plants as may be on the site of the work and necessary therefore.

GC.15 OWNER'S RIGHT TO WITHHOLD CERTAIN AMOUNTS AND MAKE APPLICATION THEREOF

The Owner may withhold a sufficient amount of any payment otherwise due to the Contractor to cover:

- A. Payments that may be past due and payable for just claims for labor, materials, or equipment furnished in and about the performance of the work on the project under this Contract.
- B. For defective work not remedied.
- C. For failure of the Contractor to make proper payments to his subcontractors.

The Owner shall disburse and shall have the right to act as agent for the Contractor in disbursing such funds as have been withheld pursuant to this paragraph to the party or parties who are entitled to payment therefrom. Any payment so made by the Owner shall be considered as a payment made under the Contract by the Owner to the Contractor. The Owner will render to the Contractor a proper accounting of all funds disbursed in behalf of the Contractor.

GC.16 SUPERINTENDENCE

The Contractor shall give his/her personal superintendence to the work or have a competent foreman or superintendent, satisfactory to the Owner, on the worksite at all times during work progress, with authority to act for the Contractor.

GENERAL CONDITIONS

GC.17 NOTICE AND SERVICE THEREOF

Where in any of the Contract documents there is any provision in respect to the giving of any notice, such notice shall be deemed to have been given; as to the Owner, when written notice shall be delivered to the Owner, or shall have been placed in United States mails with first-class postage pre-paid addressed to the chief executive officer of the Owner at the place where the bids or proposals for the Contract were opened; as to the Contractor, when a written notice shall be delivered to the chief representative of the Contractor, at the site of the project or by mailing such written notice in the United States mails with first-class postage pre-paid addressed to the Contractor at the place stated in the papers prepared by him to accompany his proposal as to the address of his permanent place of businesses; as to the Surety, when a written notice is placed in the United States mails with first-class postage pre-paid addressed to the Surety at the home office of such Surety or to its agent or agents who executed bonds in behalf of such surety.

GC.18 COMPLIANCE WITH LAW, APPLICABLE LAW, AND VENUE

The Contractor shall comply with all applicable Federal, State, County, and Municipal laws, ordinances, rules and regulations.

This contract shall be construed according to the laws of the State of Michigan.

The venue for the bringing of any legal or equitable action under this contract shall be the County of Ingham, of the State of Michigan. In the event that any action is brought under this Contract in Federal Court, the venue for such action shall be the Federal Judicial District of Michigan, Western District, Southern Division.

GC.19 PERMITS

The Township will secure and pay for the Building Permit from the Meridian Township Building Department. All other permits or licenses which may be needed for prosecution of the work are to be obtained by the Contractor at the Contractor's expense.

GC.20 ROYALTIES AND PATENTS

The Contractor shall pay for all royalties and patents, and defend all suits or claims for infringement on any patent right, and shall save and hold harmless the Owner from loss on account thereof.

GC.21 INSPECTIONS

The Owner and its representative shall at all times have access to the work wherever it is in preparation or progress and the Contractor shall provide facilities for such access and for inspection.

The Owner and/or its representative shall have the right to reject materials and workmanship which are defective, or require their correction. Work on the project may be ordered terminated until correction is made. Rejected workmanship shall be satisfactorily corrected, and rejected materials shall be removed from the premises without charge to the Owner. If the Contractor does not correct condemned work and remove rejected materials within a reasonable time, fixed by written notice, the Owner may remove them and charge the expense to the Contractor.

Should it be considered necessary or advisable by the Owner at any time before final acceptance of the entire work to make an examination of work already completed, by removing or tearing out same, the Contractor shall on request promptly furnish all necessary facilities, labor, and materials. If the work is found to be defective in any material respect, due to fault of the Contractor or their subcontractors, they shall defray all the expenses of examination and satisfactory reconstruction. If, however, the work is found to meet the requirements of the Contract, the actual cost of labor and material necessarily involved in the examination and replacement, plus 15 percent (15%) shall be allowed the Contractor.

GENERAL CONDITIONS

GC.22 CORRECTION OF WORK AFTER FINAL PAYMENT

Neither the final payment nor any provision in the Contract documents nor partial or entire occupancy of the premises by the Owner shall relieve the Contractor of the responsibility for negligence or faulty materials or workmanship within the extent and period provided by law, and, upon written notice, he/she shall repair any defects due thereto and pay for any damage due to other work resulting therefrom, which shall appear within **one year** after date of completion and acceptance.

GC.23 PROTECTION OF WORK

The Contractor shall continuously maintain adequate protection of all his/her work from damage and shall protect the Owner's and adjacent property from injury arising in connection with this Contract, and shall be responsible for all damage and/or injury caused by or arising out of his operations.

GC.24 USE OF JOB SITE

The Contractor shall confine his/her equipment apparatus, the storage of materials and operations of his/her workmen to limits indicated by law, ordinances, permits or directions of the Owner and shall not encumber the premises with his materials.

GC.25 "OR EQUAL" CLAUSE

Whenever in any of the Contract documents an article, material or equipment is defined by describing a proprietary product, or by using the name of a manufacturer or vendor, the term "or equal" if not inserted, shall be implied. The specific article, material or equipment mentioned shall be understood as indicating the type, function, minimum standard of design, efficiency, and quality desired and shall not be construed in a manner so as to exclude manufacturer's products of comparable quality, design and efficiency. The Contractor shall comply with the requirement of the Contract documents relative to the Owner's approval of materials and equipment before they are incorporated in the project.

GC.26 PLANS AND SPECIFICATIONS

The Contractor shall keep on the worksite a copy of the drawings and specifications and shall at all times give the Owner access thereto. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like affect as if shown or mentioned in both. In case of difference between drawings and specifications the specifications shall govern. In any case of discrepancy in the figures, drawings or specifications, the matter shall be immediately submitted to the Owner, without whose decision said discrepancy shall not be adjusted by the Contractor, save only at his/her own risk and expense.

The Owner shall furnish from time to time such detail drawings and other information as he/she may consider necessary, unless otherwise provided. The Contractor shall keep such drawings at the site of the work.

GC.27 OWNER'S RIGHT TO DO WORK

If the Contractor should neglect to prosecute the work properly or fail to perform any provision of this Contract, the Owner three (3) days after given written notice to the Contractor and his/her Surety may, without prejudice to any other remedy the Owner may have, make good such deficiencies and may deduct the cost thereof from the payment due to the Contractor.

GENERAL CONDITIONS

GC.28 CLEANING UP

The Contractor shall at all times keep the premises free from accumulations of waste material or rubbish caused by his/her employees or work, and at the completion of the work he/she shall remove all his/her rubbish from and about the work and all his/her tools, equipment, scaffolding and surplus materials and shall leave his/her work clean and ready for use. In case of dispute, the Owner may remove the rubbish and surplus materials and charge the cost to the several Contractors in proportion to the amounts as shall be determined to be just.

GC.29 REPORTS, RECORDS AND DATA

The Contractor and each of his/her subcontractors shall submit to the Owner such schedules of quantities, costs, progress schedules, payrolls, reports, estimates, records, and other data as the Owner may request concerning work performed or to be performed under this Contract.

GC.30 NON-DISCRIMINATION IN EMPLOYMENT

The Contractor shall adhere to all applicable Federal, State and local laws, ordinances, rules and regulations prohibiting discrimination with regards to employees and applicants for employment. The Contractor, as required by law, shall not discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions or privileges of employment, or a matter directly or indirectly related to employment because of race, color, religion, national origin, age, sex, height, weight, marital status, or handicap that is unrelated to the individual's ability to perform the duties of a particular job or position. Breach of this section shall be regarded as a material breach of this Contract.

GC.31 DEFINITIONS

The following terms as used in these Contract documents are respectively defined as follows:

- (a) "Contractor" The person, firm or corporation to whom the within Contract is awarded by the Owner and who is subject to the terms hereof.
- (b) "Subcontractor" A person, firm or corporation other than a Contractor, supplying labor and materials or labor for work at the site of the project.
- (c) "Project" The total construction proposed by the Owner to be constructed in part or in whole pursuant to the within Contract.
- (d) "Work on the Project" Work to be performed, including work normally done, at the location of the project.
- (e) "Surety" Any person, firm or corporation that has executed, as surety, the Contractor's performance and/or labor and material bonds securing the attached Contract.
- (f) "Owner" The public body or authority for whom the work is to be performed and as identified in the advertisement and proposal.
- (g) "Engineer" The Director of Public Works and Engineering for the Meridian Township or their authorized representative.

SECTION 00 91 17
ADDITIONS TO GENERAL CONDITIONS

PART 1 – GENERAL

GENERAL PURPOSE OF THESE ADDITIONS TO GENERAL CONDITIONS

- A. These Additions to the General Conditions were prepared by Dixon Engineering, Inc. using paragraphs from Engineering Joint Contract Documents Committee (EJCDC) General Conditions GC-700 -18 which were modified by DIXON as they relate to the coating industry. The General Conditions of this Contract were prepared by the Owner. These Additional General Conditions are intended to supplement the Owner's General Conditions as they relate to this specific project. Two examples are:
1. The Owner's General Conditions detail the payment process, how to submit a Request for Payment application, what form to use and when and where to submit the application. These Additions detail how DIXON calculates approval of a pay request, no payment for stored materials, percentage complete calculation methodology, etc.
 2. In the General Conditions Liquidated Damages are defined, when, where and amount. In these Additions the method of calculating claimed wind and weather days is detailed.
- B. This Addition to General Conditions follow the EJCDC format and the Article numbers reflect the Article number in the 2018 edition of the EJCDC General Conditions. Note that not all Articles or subsections are referenced.

DISCREPANCIES BETWEEN OWNER'S GENERAL CONDITIONS AND THESE ADDITIONS.

- A. If the conflict is administrative in nature, then the Owner's General or Supplemental Conditions govern. Examples are Pay Request procedures, filing a Claim, etc.
- B. If the conflict is of a technical nature, then these Additions govern.
- C. An issue determined to be in conflict in a specific item does not void other non-conflicting paragraphs in the same Article number.
- D. Bidders are required to familiarize themselves with all the General and Supplemental Conditions of the contract, as well as these Additions.
- E. In all cases of discrepancies between the General Conditions, the Supplemental Conditions, these Additions, the Technical Specifications and/or the Drawings, the Engineer shall be notified. The specifications shall govern over the drawings.
- F. If Work proceeds without Contractor obtaining proper interpretations of the conflicting issues from the Engineer, any installed Work that is not in accordance with the specification, and best practices shall be replaced at no additional cost and

other costs that may occur are also the responsibility of the Contractor if they were aware of the conflict.

ARTICLE 1 DEFINITIONS AND TERMINOLOGY

1.01 DEFINED TERMS

- A. Construction Industry Definitions: These definitions are taken from the EJCDC General Conditions C-700-18, the 2018 edition and some were modified by DIXON to be specific to the coating industry.
1. *Bulletin*—If time permits, a Bulletin is issued prior to a Change Order. A Bulletin is an inquiry of the Contractor of the cost to complete the work described in the Bulletin. It is intended as the basis of a Change Order if all parties reach agreement. A Bulletin may be considered as the same as a Change Proposal except that a Bulletin is generated by the Engineer because it generally requires specifications to be addressed.
 2. *Change Order* is a written order to the contractor signed by the owner, issued after execution of the contract, authorizing a change in the work or an adjustment in the contract sum or the contract time. A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 3. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 4. *Constituent of Concern (CC)*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead based paint (as defined by the HUD/EPA standard) hazardous waste, and any substance, product, waste, or other material. Lead, chrome, and other by-products of paint removal, as well as strippers, new coatings, and thinners, are to be included in this definition. Coating industry related CC, from new or from previous projects cannot be the basis of Contract Termination or Change Proposal by the Contractor.
 5. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor. A Shop Drawing is not a Drawing and is not part of the Contract Documents.
 6. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
 7. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted

Electronic Document by the recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

8. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
9. *Hold Point*—A point in the construction sequence when the Contractor is required to stop work on that portion of the project until Work has been Site reviewed by RPR or Project Manager.
10. *Non-Conformance Report*—A report written by the Engineer or Resident Project Representative, to document the Contractor’s Work that does not meet requirements of the specifications or contract.
11. *Performance Specifications* –Specifications that require the manufacturer or supplier of equipment, materials, or systems to design, manufacture, deliver, and install products to achieve specific results under stipulated conditions of operation and in environments described in applicable Specification Sections.
12. *Ready for Final Payment* – This term is used to define a time when Liquidated Damages begin, separate from Liquidated damages for failure to meet Substantial Completion Date. Ready for Final Payment Date is generally listed 30 days after Substantial Date. All punch list items are to be completed, Site cleaned and restored, and equipment removed. At the option of the Owner this LD may be in addition (cumulative) with an LD for failure to meet Substantial Completion Date.
13. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or “RPR” includes any assistants or field staff of Resident Project Representative.
14. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment. The Schedule of Value Form is supplied in these Bidding Documents as Section 00 06 00. This Schedule is to be submitted with the Bid. Adjustment of Schedule of Values by Engineer will not change the total Bid as calculated by the Contractor completing the Schedule of Values.
15. *Set-Off*—Owner may withhold from payment including Final Payment an amount equal to additional expenses incurred by Owner which were the responsibility of the Contractor. Such expenses may include additional engineering expenses related to excess review of incomplete submittals of shop drawings, pay requests, or bonds and insurance, excess Requests for Information, excess tests and inspections and return visit to site to complete a reinspection of a previously failed inspection, increase inflation in Engineering fees that result from Contractor delaying project into the next season; additional expenses incurred by Owner resulting from Contractor failure to clean site, rehabilitate Site and other construction related expenses resulting from Contractor not completing their contractual obligations.

16. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
17. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
18. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals
19. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof. On tank projects, date of substantial completion is the date the tank is, or would have been returned to service, except for voluntary delay by Owner. Date of Substantial Completion is after complete cure, disinfection, and testing.
20. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

B. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).
 - d. All work completed that is rejected by an unresolved non-conformance report.

ARTICLE 2 PRELIMINARY MATTERS

2.04 PRECONSTRUCTION CONFERENCE

A. Preconstruction Meetings are herein called Preconstruction Meetings:

1. The Engineer will schedule a Preconstruction Meeting to be attended by Owner, Engineer, and Contractor. Prior to beginning any Work, Contractor shall submit to the Engineer, a Project Schedule and all other required Submittals for the project. If the schedule is aggressive, working overtime, weekends, and/or holidays, that time shall be reflected in the Project Schedule. Once the project has begun, the Contractor shall carry the Project Schedule to completion without delay.
2. Attend a Preconstruction Meeting that may be scheduled by the Owner at a mutually agreeable time after contract preconditions, bonds, certificates of insurance, and other requirements have been met.
3. A corporate officer, or someone with legal authority to obligate the company/corporation, project manager (if different from officer), and the intended superintendent shall attend. If project superintendent does not attend the meeting, it shall be the Contractor's responsibility to supply the information discussed at the meeting to the field superintendent.
4. The Owner will be represented by the project contact person, and the Engineer by the Project Manager, or a Contract Administrator.
5. All containment, personal hygiene, and lead control issues required in this contract will be reviewed. Be prepared to commit designated "Competent Person(s)" to responsibilities of confined space, scaffold rigging, lead, etc.

B. Progress Meetings:

1. The Project Manager or Owner will schedule Progress Meetings to be held on the job Site whenever needed to supply information necessary to prevent job interruptions, to observe the Work, or to inspect completed Work. The Contractor shall be represented at each progress meeting by persons with full authority to act for the Contractor in regard to all portions of the Work.

ARTICLE 3 CONTRACT DOCUMENTS: INTENT REQUIREMENTS, REUSE

3.01 INTENT

- A. The drawings and specifications are intended to include all Work and materials necessary for completion of the Work. Any incidental item of material, labor, or detail required for the proper execution and completion of the Work and omitted from either the drawings or specifications or both, but obviously required by governing codes, local regulations, trade practices, operational functions, and good

workmanship, shall be provided as a part of the contract Work without extra cost, even though not specifically detailed or mentioned.

ARTICLE 4 COMMENCEMENT AND PROGRESS OF THE WORK

4.01 COMMENCEMENT OF CONTRACT TIMES

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to such date except as recommended immediately following or by written authorization of the Owner AND the Engineer (Engineer must be able to schedule appropriate RPR for Project.) Contract time is governed by out-of-service time. The Contractor is encouraged to deliver equipment to the Site prior to Contract Start. The Site will be available up to two (2) weeks prior to agreed drainage date. Contractor is also encouraged to rig the structure, complete containment installation, and complete weld repairs that do not affect the wet interior prior to draining of the tank. The amount of Work completed shall have been approved at the Preconstruction Meeting. Since the tank is not out of service these dates do not apply against Out of Service time but may require scheduling RPR services (see Section 00 91 19.01 Scheduling for RPR Services.)
- B. Delaying Work start for the convenience of the Contractor may require Owner to Set off inflation increased Engineering or RPR expenses against Contractor's Request for Payment.

4.05 DELAYS IN CONTRACTOR'S PROGRESS

- A. Liquidated Damages
 - 1. Contract time is governed by out-of-service time.
 - 2. On tank projects, date of substantial completion is the date the tank is or would have been returned to service, except for voluntary delay by Owner. Date of substantial completion is after complete cure, disinfection, and testing. A voluntary delay in filling by Owner, or delay that is no fault of the Contractor may extend Substantial Completion date.
 - 3. Abnormal weather conditions are defined as weather conditions that are at variance with the routine. An example of the determination procedure and of the required claim format is:
 - Project length: 45 days
 - Substantial completion date: June 30th.
 - Start date: May 16th.
 - 3 years of data* 2018, 2019, 2020
 - Average number of rain/wind days: 9
 - Actual number of rain/wind days**: 12
 - Claim for time extension: 3 days

4. *Submit weather history from nearest weather reporting station for three (3) previous years from the same time period. Submit formal, by simple claim (use format above).
5. **Rain/wind day is a rain or wind day where either rain and/or wind conditions exceeded safe Work conditions or were outside the parameters of good paint practices. Wind days are winds in excess of 20 mph for over four (4) hours during normal Work hours, and rain days having measurable precipitation.
6. Weather Claim Evaluation: Engineer will evaluate claim and make sole determination as to whether days meet criteria. Engineer will disallow dates where Work could have been completed on the interior; dates that result from the Contractor's Work practices (i.e. complete wet interior first and then move to exterior). Good weather days not used will count against claim.
7. Claimed rain/wind days that occur after the scheduled Substantial Completion Date or an extended Substantial Completion Date will not be awarded. Days past Substantial Completion and good weather days that were not used for Productive Work will be considered "days within the control of the Contractor."

ARTICLE 5 SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENT CONDITIONS

5.02 USE OF SITE AND OTHER AREAS

A. Site:

1. Protection - The Contractor is responsible for the protection of property during the period of construction and shall exercise care to prevent damage to structures, utility services, storm and sanitary drainage systems, lawns, trees, plant material, fences, walks, drives, roadways, and other improvements in and adjacent to the area of Work under the contract. Any damage to property resulting from the Contractor's operations shall be repaired or replaced by the Contractor at their expense.
2. The Contractor shall be responsible for all injury to Work in process of construction, and for all property or materials stored at the premises that may be damaged or stolen while the Work is in his care, at Contractor's expense.
3. The Contractor shall confine the apparatus, the storage of materials, and the operations of his Workers to limits indicated by law, ordinance, permits, or direction of the Engineer, and shall not unreasonably encumber the premises with his materials.
4. Maintenance
 - a. Provide labor and material necessary to maintain the Site in a safe condition.
 - b. Keep the premises free from accumulation of waste materials, rubbish, and other debris resulting from the Work.

- c. At completion of the Work, remove all waste materials, rubbish, and debris from about the premises, as well as all tools, construction equipment, machinery, and surplus materials.
 - d. At the Contractor's expense, repair damage that may have occurred to any permanent structure completed under the contract Work, or to private or public property.
 - e. Notify the Owner of your intentions and the reasons why, if it is necessary to protect adjacent houses, cars, etc. During clean-up these areas will be considered as part of the Site and shall be cleaned accordingly.
 - f. Failure to continually maintain the Site or to immediately clean the Site after a complaint or project completion may result in the Owner completing the Work by hire or by the Owner's forces. All cost would be responsibility of the Contractor, subject to Set off.
 - g. Restore Site to preconstruction condition:
 - i. Refill holes and level area around the construction Site for the Site to the original grade.
 - ii. Bring soil to a friable condition by disking, harrowing, or otherwise loosening and mixing to a depth of 3 in. – 4 in. Thoroughly break all lumps and clods.
 - iii. Rake area to be seeded. Sow seed at a minimum rate of 220 lbs./acre.
5. Cleaning - Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work, but prior to Ready for Final Payment, Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

5.03 SUBSURFACE AND PHYSICAL CONDITIONS

- A. Locations of all buried utility service lines in or adjacent to the Work area that are not shown on the drawings will be located by the Contractor through the local utility locating agency and marked with warning stakes. The Contractor shall be responsible for the protection of all utility service lines that are to remain. Damage to any such utility service lines, pipes, etc. resulting from the Contractor's operations shall be repaired or replaced by the Contractor at their expense. Underground Work in the coating industry involves drilling for anchors for containment systems. The painting of pit piping will be considered subsurface Work. For this type of Work the Contractor must rely on Utility Locating Services and not Technical Data from Owner, or in the case of pits, a visual inspection. Contractor shall notify each utility before digging for anchors or for any reason. Before starting, call in advance or/as required by the individual agencies: Call 811 or appropriate agency in the state of the project.

5.06 HAZARDOUS ENVIRONMENTAL CONDITIONS AT SITE

- A. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition (Constituents of Concern) encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the Scope of the Work or eventually identified as being caused or created by the Contractor.
- B. Power Lines – Antennas – Electrical Wiring
 - 1. If overhead power lines present an unsafe Work condition as determined by OSHA, Owner or utility, the Contractor at their expense and coordination, shall have the utility temporarily relocate, move, or cover lines, eliminating the hazard.
 - 2. Unless stated differently in Contract Documents, protect all antennas, controls, cables, and associated property of Owner’s equipment or material on, in or near the structure during Work. Design construction procedures to maintain operation of antenna system. If antennas are removed from the structure protect all telecommunication equipment remaining in place.
 - 3. Unless stated differently in the Contract Documents, protect all electrical lines and controls including 110/220 V. service lines, cathodic wiring, lights, globes, outlets, and service boxes. Protect associated property of private telecommunication companies (911, school buses, etc.) from damage during Work. Design construction procedures to maintain operation of telecommunication systems.

ARTICLE 6 BONDS AND INSURANCE

6.01 PERFORMANCE, PAYMENT, AND MAINTENANCE BONDS (NOT BID BONDS)

- A. Supply a Maintenance (Warranty) Bond for two (2) years at 50% of the contract price, to ensure any repair work required or detected as a result of the (13) months (1 year) Post Construction inspection. The repair scheduling may be delayed several months for Contractor’s schedule or Owner’s operational requirements. This bond is to remain in effect until repairs have been completed and accepted. Per Technical Specifications, if repairs exceed 10% of any area, then the warranty and bond shall be extended another year. The maintenance (warranty) bond must be issued by the same surety that issues the performance bond required under Paragraph 6.01.A of the General Conditions.

ARTICLE 7 CONTRACTOR’S RESPONSIBILITIES

7.01 CONTRACTOR’S MEANS AND METHODS OF CONSTRUCTION

- A. Contractor shall supervise, direct, control, and have authority over or be responsible for Contractor’s means, methods, techniques, sequences, or procedures of construction, and the safety precautions and programs incident thereto.

- B. Any plan or methods of accomplishing the work suggested to the contractor by the Engineer or other representative of the Owner, but not specified or required, shall be used at the contractor's own risk and responsibility. The Engineer and Owner assume no responsibility.
- C. Contractor shall comply with Laws and Regulations applicable to the performance of the Work.
- D. Contractor's shall perform the Work in accordance with the Contract Documents. Contractor's obligation to perform under terms of Contract and complete the Work in accordance with the Contract Documents is absolute.
- E. Contractor shall be responsible for the acts or omissions of Contractor and of any Subcontractor, any Supplier, and of any other individual or entity performing any of the Work.

7.02 SUPERVISION AND SUPERINTENDENCE

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
 - 1. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.
 - 2. Resident superintendent shall be fluent in English to the level of competency to complete responsibilities of the Contractor and to communicate with the RPR. Superintendent shall also be fluent or have access to a translator on site, for the primary language of all of the Workers. Degree of fluency in English and language of workers to be sufficient so that superintendent's employees can adequately and safely complete their duties:
 - 3. No employee of Contractor, Subcontractor, or Supplier may be on the Project Site who cannot be directed by a Superintendent, or translator in regards to work assignments, safety issues, or who cannot understand safety signage.

7.03 LABOR; WORKING HOURS

- A. Provide equipment of sufficient size and power to expedite the project so that all deadlines are met. Personnel and crew size also shall be sufficient to meet required deadlines.
- B. If, in the sole opinion of the Engineer, there is insufficient equipment or personnel to complete the project, the Engineer will notify the Contractor and Owner, and a Project Meeting will be held within twenty-four (24) hours for the purpose of contract termination, unless a reasonable cause is given to the contrary.

7.05 “OR EQUALS”

- A. Whenever an article, material, or item of equipment is described by a performance specification, written as a proprietary product, or uses the name of a manufacturer or vendor, the term “or equal” if not inserted, shall be implied. The specific article, material, or item of equipment mentioned shall be understood as indicating the minimum requirements for fulfilling contract obligations in regard to type, function, standard of design and efficiency. See Section 09 97 13, Part 2, Substitution of Coatings, which shall govern over this clause where conflicting, relative to coatings, grouts, and fillers only. Other exceptions are when the specifications state that only the proprietary item will be permitted.

7.11 LAWS AND REGULATIONS

- A. Contractor is responsible for all permits and requirements of local, state, and federal agencies. This includes building, electrical, labor, OSHA, etc. The only permits not included are from health agencies for interior painting, cathodic protection installation and mixer installation which is the responsibility of the Owner.
- B. Display all wage requirements and other permits on a temporary board.
- C. Attach to the superintendent’s copy of the specifications copies of other permits that do not require display.

7.13 SAFETY AND PROTECTION

- A. Conform to the Occupational Safety and Health Standards of the United States Department of Labor and local safety agencies. This shall be made a condition of each subcontract as entered into pursuant to this contract.
- B. Removal of lead based paint and painting of structures are recognized as very dangerous Work, and it is further recognized the painting industry has extensive safety training programs available.
- C. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs. Contractor’s Safety Representative shall have the authority to supersede Contractor’s foreman and shall stop work if the Work being completed is in violation of Contractor’s or Owner’s safety program, or OSHA regulations.
- D. Monitor and be responsible for all safety practices.
- E. The Engineer and Owner shall have full access to the Site. Contractor shall make personnel and equipment available to the Owner and Engineer/RPR to expedite observations.
- F. While at the Site, Engineer’s employees and representatives will comply with the specific applicable requirements of Owner’s and Contractor’s safety programs (if any) of which Engineer has been informed.

- G. Contractor is responsible for security, safety, etc. on the Site until all his equipment is removed and all keys are returned.

7.17 CONTRACTOR’S GENERAL WARRANTY AND GUARANTEE

- A. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, or a release of Contractor’s obligation to perform the Work in accordance with the Contract Documents, or a release of Owner’s warranty and guarantee rights:
 - 1. Observations and/or Daily Observation Reports by Engineer/RPR;
 - 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. use or occupancy of the Work or any part thereof by Owner;
 - 5. any review and approval of a Shop Drawing or Sample submittal;
 - 6. the issuance of a notice of acceptability by Engineer;
 - 7. the end of the correction period;
 - 8. any inspection, test, or approval by others; or
 - 9. any correction of defective Work by Owner.

7.19 DELEGATAION OF PROFFESIONAL DESIGN SERVICES

- A. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor’s responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor’s expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor’s determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

ARTICLE 10 ENGINEER’S STATUS DURING CONSTRUCTION

10.07 LIMITATIONS ON ENGINEER’S AUTHORITY AND RESPONSIBILITIES

- A. Engineer’s Responsibilities
 - 1. Engineer will be Owner’s representative during the construction period.
 - 2. Engineer’s Project Manager (PM) will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of

Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work, and will endeavor to guard Owner against defective Work.

3. Engineer will identify all Set-off expenses incurred against Engineer in their invoice to Owner.
4. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

B. The Resident Project Representative's (RPR) Responsibilities

1. If the Owner retains Engineer to provide RPR services, the RPR will be Engineer's representative at the Site to assist in observing the progress and quality of the Work. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The authority of any RPR will be as directed by the Engineer.
2. Neither Engineer's authority or responsibility under any provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them. No Agreement between the Owner and Engineer and nothing in this Contract shall imply or construct a third party beneficiary status to the Contractor.

- C. Engineer/RPR shall have the authority to stop Work in the event continuation of Work under a noncompliance situation, such as incomplete containment, may result in the violation of environmental laws, create a potential tort, or may result in the covering of defective or unaccepted Work (Nonconformance) product. This authority to stop work transfers back to the Owner after the Owner has been notified and returns to the Site.

ARTICLE 11 CHANGES TO THE CONTRACT

11.02 CHANGE ORDERS

- A. A Change Order is a written order to the Contractor signed by the Owner, issued after execution of the contract, authorizing a change in the work or an adjustment in the contract sum or the contract time. The cost or credit to the Owner resulting from a change in the work shall be determined in one or more of the following ways:
 - 1. By mutual acceptance of a lump sum;
 - 2. By unit prices stated in the Contract Documents or subsequently agreed upon;
 - 3. By actual itemized cost and fixed fees as set forth in 2 above. Cost shall be limited to the following: cost of materials, cost of labor, and cost of overhead.
- B. A Bulletin will be issued in most cases before a Change Order. A Bulletin will request prices and other information from the Contractor. Prices requested in a Bulletin are subject to negotiation with the Owner.

11.04 FIELD ORDERS

- A. A field modification is written by the Engineer to the Contractor for purposes of clarification of the specifications or plans. A field modification is limited to items that do not change the scope of the project.
- B. Field modifications do not affect either the project cost or completion date.
- C. Field modifications become part of the Contract Documents and become binding upon the Contractor if they fail to object within three (3) working days after receiving the modification. A field modification may be used as the basis of a project cost change or contract extension if all parties agree on the field modification form to a potential future claim of either party or that the field modification will be complied with, but under protest.

ARTICLE 15 PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 AND 15.06 PROGRESS AND FINAL PAYMENTS

- A. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- B. Measurement of payment will be considered based on the Schedule of Values submitted with the Contractor's bid. The Schedule of Values will be reviewed by the Engineer prior to Notice of Award. If the Engineer determines the Schedule of Values is not acceptable, the Engineer will use the Contractor's Schedule to reallocate values. The Engineer's reallocation interest will be to maintain a sufficient value for Work

completed toward the end of the project, to avoid frontloading values. The Engineer will assign values high enough to bring in another Contractor to finish Work in case of default. When evaluating the Schedule of Values, the Engineer will consider that material delivered to the Site has no value until properly applied. The Contractor has five (5) days to appeal the reallocated Schedule of Values.

- C. Pay request(s) shall be made on form(s) supplied by the Owner or Engineer or required by Owner. If no form is supplied, use AIA form.
- D. Owner will make progress payments once each month during performance of the Work, in which the Contractor files an application for payment.
 - 1. All such payments will be compared with the Schedule of Values,
 - 2. or in the case of unit price Work, based on the number of units completed, or
 - 3. if lump sum item is less than 100% completed then allocated as follows:
 - a. On the exterior, surface preparation by high pressure cleaning or jetting and power tool cleaning will be considered equal to 40% of the line item Work and cost and full coat 15%. The remainder will be for lettering, demobilization, and clean-up.
 - b. Dry interior painting and repairs will not be broken down. 100% completion is required before they will be considered for payment.
 - c. Mobilization is included in the surface preparation allotment for items in 3 above.
 - 4. Owner is entitled to impose a set-off or withholding against payment based on any of the following:
 - a. Third party claims, have been made or there is reasonable evidence indicating probable filing of claims against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or
 - b. Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from Workplace injuries, adjacent property damage, non-compliance with Laws and Regulations (Special Damages, see Article 18 below), and patent infringement or,
 - c. Damage caused by the Contractor to the Owner or to another Site approved Contractor or;
 - d. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other Work at or adjacent to the Site or;
 - e. an event that would constitute a default by Contractor and therefore justify a termination for cause or;
 - f. defective Work not remedied;
 - i. requiring correction or replacement including additional inspection costs
 - ii. requiring correction or replacement

- iii. Owner has been required to correct defective Work or
 - iv. has accepted defective Work
 - g. persistent failure to carry out the Work in accordance with the Contract Documents.
 - h. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is contractually responsible or responsible for creating the condition;
 - i. the Contract Price has been reduced by Change Orders;
 - j. failure of the Contractor to make payments properly to subcontractors, or for labor, materials, or equipment or;
 - k. liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - l. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or Ready for Final Payment or;
 - m. reasonable evidence that the Work cannot be completed for the unpaid balance of the contract sum, or within the contract time or;
 - n. Contractor has failed to provide and maintain required bonds or insurance or;
 - o. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.
 - p. Owner has incurred extra charges or Engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to complete field observations that were determined to be failed;
 - q. other items entitling Owner to a Set-off against Payment
 - r. The Owner may also decline to make payment including an item previously approved for payment, because of subsequently discovered evidence or subsequent observations, as may be necessary in their opinion to protect against loss by Set-off amount previously recommended.
- 5. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment agreed to by Owner and Contractor, if Contractor remedies the reasons for such action.
 - a. The reduction imposed shall be binding on Contractor unless Contractor duly submits a Change Proposal contesting the reduction.
 - b. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss.

6. Owner may decide against Set-off as a remedy, but in so doing, Owner does not waive any remaining remedies.
7. Neither the Owner nor the Engineer are under any requirements or obligations to notify the bonding company at project conclusion of Set-offs or other remedies chosen.
8. If the Owner/Engineer prepare an accounting Change Order at Project Conclusion it will be considered signed by Contractor, unless the Contractor files a Change Proposal within five days protesting the Set-off. If appeal is rejected, the Change Order will be considered signed unless further appeals per the appeals process are claimed.

15.08 CORRECTION PERIOD

- A. Within thirteen (13) months from the date of substantial completion, the structure will be inspected by the Owner and/or their representative.
- B. The inspection will be performed in accordance with the applicable portions of AWWA D-102-17 Standard for Painting Steel Water Storage Tanks and industry standards.
- C. The Owner will establish a date of inspection and may or may not notify the Contractor in advance. The Contractor's attendance will not be required.
- D. The Owner will select a third party inspection firm (either Engineer or project representative) to document inspection.
- E. Any failed Work will be documented and the Contractor will be notified of necessary repair (method and extent). The Owner reserves the right to require inspection of the repair Work and possibly a second warranty inspection, dependent on degree of failure.
- F. This warranty will automatically be extended until the tank is ice-free (if applicable) and the warranty inspection can be performed. The Contractor guarantees that the system is free from defects due to faulty materials or Workmanship and the Contractor shall make the necessary correction to correct these defects. If the amount of rework exceeds ten percent (10%) of a portion of the project, then the Owner reserves the right to have the warranty period extended one (1) year for the entire portion of the Work.
- G. Cost for one (1) year warranty inspection will be the responsibility of the Owner.
- H. Cost for a second warranty inspection and repair inspections will be the responsibility of the Contractor and guaranteed by Contractor's Performance and Maintenance Bond (see Article 6)
- I. The Owner retains all contractual remedies. The warranty shall not be considered an exclusive remedy.
- J. If the Owner conditionally accepts Work which was observed or found to be in noncompliance, then the Owner has the right to withhold from final payment an amount

equal to the cost to redo the Work if it fails the subsequent Warranty Observation, as well as an additional amount for additional Engineering services.

- K. Contractor shall pay for additional expenses for RPR or Engineering or other Owner related expenses resulting from the failed Warranty. The Maintenance Bond shall remain in full effect, but Engineer will notify Contractor first. Failure to respond positively within two weeks will trigger notification and claim to bonding company.

ARTICLE 16 SUSPENSION OF WORK AND TERMINATION

16.02 AND 16.03 TERMINATION for CAUSE AND FOR CONVENIENCE

- A. The Owner may terminate the contract when the approved progress schedule is not met because of failure of the Contractor to exercise diligence and effectively perform all required work, or when the progress of the work is unacceptable to the owner.
- B. In the absence of a project Progress Schedule, the determination regarding the Contractor's diligence will be based on the Engineer's opinion, correspondence, and field reports.
- C. The Owner may terminate the contract when in the opinion of the Engineer the Non-conformance report(s) indicate the Contractor is unable or unwilling to complete the contract within the terms of the contract.

ARTICLE 18 MISCELLANEOUS

18.02 LIMITATION OF DAMAGES

- A. Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for Engineering, construction observation, inspection, and administrative services needed after the time specified in the Project Summary for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.
- B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for Engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), and if necessary to hire other Contractors to complete portions of the Work, until the Work is completed and ready for final payment.
- C. The special damages imposed in this paragraph are supplemental to any liquidated damages for delayed completion established in this Agreement.

GENERAL SPECIFICATIONS

GENERAL SPECIFICATIONS

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GS.1 DEFINITION

The Contractor shall furnish all materials specified herein, shown on the plans, and required to be incorporated in the work of the Contract. They shall furnish all labor, construction equipment, tools, supplies and facilities required to construct the elements designated by the Contract documents and shall construct all of the designated elements complete and in full conformance with the requirements of these documents. They shall comply with all regulatory provisions of the Contract, General Conditions and the Specifications.

GS.2 ELEVATIONS

All the elevations shown on the plans or referred to herein are in feet above mean sea level datum as established by the United States Geological Survey, unless otherwise noted. The Contractor shall verify all the existing structure locations and elevations at points of connection or possible interference between their work and the existing structures and shall report at once to the Engineer any interference's or discrepancies discovered.

GS.3 QUALITY OF MATERIALS AND EQUIPMENT FURNISHED

All materials and equipment furnished by the Contractor hereunder shall be new and conform to specifications herein.

Materials, supplies, and equipment, whether furnished by the Contractor or the Owner, shall be stored at the site of the work in such manner as not to interfere with traffic, convenience to public or other Contractors on the site or in the vicinity. The Contractor shall be responsible for any damage caused to new or existing structures by reason of such storage or handling of materials, supplies, or equipment.

Flammable materials in portable containers are not to be stored overnight on the site. This includes, but is not limited to, gasoline and diesel fuel for use in construction machinery. Portable containers suitably protected, will be allowed overnight at the site, if confined to permanent tanks which are a normal part of the construction machinery.

GENERAL SPECIFICATIONS

GS.3 QUALITY OF MATERIALS AND EQUIPMENT FURNISHED (Cont'd.)

Where the Contractor is required to do work within rights of way under the jurisdiction of governmental bodies, they shall meet the requirements of said governmental bodies for work and storage within their jurisdiction. Such requirements must be met as a minimum requirement, and if the specifications given herein impose further limitation on the work, they shall also be met as the required work standard.

The Contractor's attention is directed to the Ingham County Road Department permit specifications, Section 5. Restoration and Maintenance of Right-Of-Way (e.), for dust control requirements.

GS.4 CARE OF EXISTING STRUCTURES

The Contractor shall be solely responsible for any damage to any existing underground services or structures, or to structures and roadway above ground caused by their operations or those of their subcontractors and suppliers.

GS.5 CARE OF NEW STRUCTURES

The Contractor shall use every reasonable precaution to prevent injury to the new structures being constructed hereunder. They shall be responsible to correct all injury or damage resulting from their operations and/or occurring while the work is under their supervisory control. They shall furnish and install such guards, coverings and other protection as may be needed to ensure that the structures remain undamaged prior to completion of the entire work.

In the event damage does occur to the finished portions of the work, or to the work in progress, the Contractor shall take such corrective action and measures as may be necessary to repair the damage to the satisfaction of the Engineer.

GS.6 EXISTING PUBLIC UTILITIES

Existing public utilities and underground structures such as pipelines, electric conduits and sewers are shown on the drawings from available information. The Contractor shall, through Miss Dig and any other reasonable measures, verify the exact location of underground utilities for themselves.

The Contractor shall conduct their operations so as not to damage any existing utility whether or not shown on the plans. The Contractor shall correct, at their own expense, any damage or injury that may be caused by them during their operations or damage or injury caused during the operations of their subcontractors or suppliers.

The Contractor shall be responsible for coordinating relocation or repair of existing public and private utilities with the appropriate utility or owner. No extra payment will be allowed for repairs.

If the Contractor desires, or is required by the utility companies, to relocate any power or telephone poles to facilitate their work, any expense encountered from such relocation shall be borne by the Contractor.

GS.7 PROTECTION OF TREES AND SHRUBS

All trees and shrubs encountered along the route of the project shall be protected from damage by the Contractor and saved from harm resulting from any of their operations or operations of their subcontractors and suppliers. Only those trees and shrubs marked for removal on the plans shall be removed. All others will be saved from damage by tunneling or by slightly adjusting the alignment of the project as directed by the Engineer.

GENERAL SPECIFICATIONS

GS.8 SAFETY PRECAUTIONS

During the progress of the work, the Contractor shall maintain adequate facilities for the protection and safety of all persons and property. The Contractor and all their subcontractors and suppliers shall comply with the "Construction Safety and Health Standards" as published by the Michigan Occupational Safety and Health Administration, and to all other local, state and federal laws, ordinances, rules and regulations pertaining to safety of persons or property.

GS.9 SANITARY REQUIREMENTS

The Contractor shall provide adequate sanitary facilities for all persons employed on this Project. The sanitary facilities shall conform in every way to the requirements of the "Construction Health and Safety Standards" as published by the Construction Safety Standards Commission of the State of Michigan.

GS.10 UTILITIES

The Contractor shall make all necessary arrangements for the provision of all utility services required to prosecute the work under this Contract. The Contractor shall pay the costs for such connections and service. Where the Owner has utility service at the site, the Contractor may obtain service by connection to the Owner's service, subject to reasonable regulation of its use and satisfactory agreement as to charges. In the event that the Contractor's use of any or all of the Owner's utility services causes the Owner to have an inadequate supply of such service, the Contractor shall disconnect said service and provide their own separate supply at no cost to the Owner.

All utility services shall be inspected by and meet the requirements of the applicable local codes and governmental bodies.

GS.11 PUMPING AND DRAINAGE

Adequate pumping and drainage facilities shall be provided and water from whatever sources entering the work during any stage of construction shall be removed promptly and disposed of. All pumping and drainage shall be done with no damage to property or structures and without interference with the right of the public, owners of private property, pedestrians, vehicular traffic, or the work of other contractors. Dewatering shall be done in such a manner that the soil under or adjacent to existing structures shall not be disturbed, removed or displaced.

The overloading or obstructing of existing drainage facilities shall not be permitted, and the Contractor shall be solely responsible for damages caused to such existing drainage facilities by their operations. Additionally, sufficient measures shall be utilized to prevent migration of soil from the site due to any pumping or drainage activities.

GS.12 WINTER CONSTRUCTION

The Engineer has authority over approving the prosecution of work which is proposed to be done during the winter months. The Contractor shall provide adequate weather protection, temporary heating and take any other measures which are necessary to ensure that work performed during the winter months is properly installed and protected against damage from freezing.

Reference is made in Division 4 of the Technical Specifications to the requirements for performing concrete construction and masonry construction in cold weather.

GS.13 USE OF FACILITIES BEFORE FINAL COMPLETION

The Owner shall have the right to make use of, during construction, such portions of completed and acceptably tested facilities as it finds practicable. Such use by the Owner shall not relieve the Contractor from responsibility for any defective work which may be subsequently discovered.

GENERAL SPECIFICATIONS

GS.14 TEST OF MATERIALS

All laboratory tests, except as otherwise noted, are to be made at the expense of the Contractor as specified in the Technical Specifications. The Contractor shall furnish satisfactory containers for taking and shipping samples. The name of the laboratory making the test must be submitted by the Contractor to the Engineer for approval.

In all cases "laboratory" refers to an independent laboratory of recognized standing. Acceptance of materials tested shall be based upon compliance with the specifications hereinafter stated for the various items. Where no particular tests are specified, the tests shall be those normally made for determination of the fitness of the particular material. Certificates of tests shall be furnished by the testing laboratory or producer, in triplicate, to the Engineer.

The Owner may require, at its own option and expense, additional mill and/or shop inspection by competent parties. The Owner may require, at its own option and expense, additional field inspection by a qualified inspector.

All materials failing to meet the requirements of the specifications, as determined by test or otherwise, shall be rejected and not used in the work. The cost of testing materials which fail to meet requirements shall be paid by the Contractor. All follow-up testing required shall also be paid by the Contractor. Materials, if rejected at the site, shall be immediately removed therefrom and shall not be used in the work.

GS.15 OTHER WORK

The Contractor shall cooperate with other Contractors on the site or adjoining work to the end that the entire Project may proceed with the utmost harmony and with a minimum of delay.

Where the work under this Contract is to involve work completed under other contracts or existing facilities or structures, the Contractor shall investigate the condition of such other work or facility to determine its suitability for incorporation into the work of this Contract. Any defect or discrepancy in other work of facility making it unsuitable for proper execution of this Contract shall be immediately reported to the Owner who shall order such adjustments in the work of the project as necessary for proper completion, and unless such defect or discrepancy is reported promptly, the Contractor shall be solely responsible for any adjustments in the work as shall be found necessary to properly complete the work on this project.

GS.16 LINES AND GRADES

General control lines and grades will be established by the Owner. The Contractor shall notify the Engineer no less than 48 hours prior to requiring such control. The Contractor shall furnish all stakes and labor for driving them and rodmen to assist the Owner in this work. The Contractor shall carefully preserve the general control lines and grades established by the Engineer. The cost of replacement of stakes which are damaged or lost shall be borne by the Contractor.

Construction lines and grade shall be transferred and set by the Contractor from the control lines and grades established by the Engineer, and the Contractor shall furnish necessary instruments and competent personnel for performing such work, and they shall be responsible for the accuracy of the transferred line and grade. The Owner will check the work at intervals, as it deems necessary, and the Contractor shall make correction of error, if any, at their own expense, as may be required for the proper function and performance of the structure and installed equipment.

GS.17 COMPLETE WORK REQUIRED

It is the intent of the Contract documents to provide that the Project to be constructed under this Contract will be complete and ready for use. Any minor items not specifically called for on the plans or specifications, but which are clearly necessary, are to be included.

GENERAL SPECIFICATIONS

GS.18 PROPERTY MARKERS

The Contractor shall take precautions not to move or destroy any monuments or stakes marking the boundaries of property along or near the work. A licensed surveyor shall reestablish property irons in the proper location if disturbed. Buried property irons shall be extended 1/2" diameter rods. The Contractor shall pay for reestablishment.

GS.19 RECORDS AND MEASUREMENTS

The Contractor shall keep careful records showing measured overall length of underground facilities installed and distances of such from any available line as may be designated by the Engineer. Such records shall be turned over to the Engineer as the work progresses and the records must be accurate and complete.

GS.20 GUARANTEE

The Contractor shall guarantee and shall secure from the manufacturer of each item of manufactured equipment used in the project a written guarantee that all materials and equipment furnished by them shall be first class and free from defects, and the guarantor agrees that they will, upon notice and without delay, make good or repair without expense to the Owner the whole or any part of the equipment furnished by them hereunder, which within a year from date of acceptance of that portion of completed work incorporating such equipment shall fail or develop unfitness for the purpose for which it is intended as a result of any defect in design, material, workmanship, erection or construction.

SECTION 00 91 18

DEFINITIONS for TECHNICAL SPECIFICATIONS

PART 1 – GENERAL

1.01 DEFINITIONS FOR TECHNICAL SPECIFICATIONS

- A. Wet Interior: Internal surfaces, excluding inaccessible areas, to the roof, shell, bottom, accessories, and appurtenances that are exposed to the stored water or its vapor. Examples are the interior of the roof, sidewall, bowl, and exterior of the access tube within the tank.
- B. Dry Interior: Surfaces of the finished structure, excluding inaccessible areas, that are not exposed to the elemental atmosphere or the stored water or its vapor. Examples are the interior of the access tube, interior of the column, and underside of the bowl above the column.
- C. Exterior: External surfaces, excluding inaccessible areas, of the roof, sidewall, column, accessories, and appurtenances that are exposed to the elemental atmosphere.
- D. Inaccessible Areas: Areas of the finished structure that, by virtue of the configuration of the completed structure, cannot be accessed to perform surface preparation or coating application (with or without the use of scaffolding, rigging, or staging). Inaccessible areas include such areas as the contact surfaces of roof plate lap joints, underside of roof plates where they cross supporting members, top surface of rafters directly supporting roof plates, contact surfaces of bolted connections, underside of column baseplates, contact surfaces of mating parts not intended to be removed or disassembled during routine operation or maintenance of the structure and inside of risers less than a nominal 36 in. diameter.
- E. Sidewall: Vertical walls to the weld seam of the roof.
- F. Access Tube: Cylindrical tube extending from top of the column to the roof through the tank, including all steel appurtenances (i.e. ladder, overflow pipe, brackets, etc.)
- G. Condensate Platform: Platform that covers entire area of the dry column and used to collect and stop condensation from entering the bottom of the column.
- H. Top Platform: Landing area directly under tank's access tube.
- I. Roof: Very top of the structure, including top seam of sidewall.
- J. Bottom: Lower area of the tank proper shaped like a bowl. Also section that extends up to the sidewall.
- K. Column: Center support whether concrete or steel.

SECTION 00 91 19.01
SCHEDULING FOR RPR SERVICES

PART 1 – COMMUNICATION

1.01 RESIDENT PROJECT REPRESENTATIVE (RPR) SERVICES

- A. DIXON provides three types of RPR services or any combination of the three:
1. Hold Point Site Visits (sometimes called Critical Phase Visits) where RPR Services are for defined Hold Point, where Work stops until that portion of Work is reviewed on Site by a professional RPR.
 2. Full Time RPR is a professional RPR staying in lodging away from home and living on per diem expenses.
 3. Daily RPR is a professional RPR living at home and traveling to Site on a daily basis.
 4. Based on the type of project the RPR services may change from Daily or Full Time to Hold Point or from Hold Point to Daily or Full Time.
 5. Intended Beneficiary: The onsite observation services for this project are for the benefit of the Owner. There are no intended benefits to the contractor, or any other third parties. Contractor still provides quality control (QC).

1.02 HOLD POINT OBSERVATIONS AND MEETINGS

- A. Each hold point requires an onsite visit for Observation. Example: If the contractor coats over or otherwise makes work inaccessible for Observation, the Work will be considered failed. Remove Work and recoat or repair in accordance with this specification. At least two (2) new hold points, surface preparation and coating, may be created when work fails after the primer has been applied.
- B. Stop Work and schedule Observation times for the following Hold Points as a minimum. Additional Hold Points may be determined at the Preconstruction Meeting. Each Hold Point requires a Site visit and observation. Schedule of Hold Points – Preliminary:
1. Hold Point Meeting: The Preconstruction Meeting is the initial hold Point. The Preconstruction Meeting will not be scheduled until five (5) days after all required submittals are received and reviewed by the Engineer and no exceptions are taken to the shop drawings.
 2. Hold Point - Prior to draining tank:
 - a. To ensure all Section of 01 50 00 and 01 53 43 environmental requirements are met.
 3. Hold Points – 03 01 30 Maintenance of Cast-in-place Concrete.
 - a. To locate or quantify repairs as necessary.
 - b. To review surface preparation prior to concrete or grout installation and review all products prior to installation.

- c. After concrete or grout application is complete for quality assurance.
- 4. Hold Points – Section 05 00 00 – Metal Repairs:
 - a. To locate or quantify repairs as necessary.
 - b. To review surface preparation prior to welding and review all products prior to installation.
 - c. After welding is complete for quality assurance.
- 5. Hold Points – Sections 09 97 13 – Steel Coating and 09 97 13.10 Steel Coating Surface Preparation:
 - a. Prior to surface preparation to set the standard.
 - b. Prior to primer application to verify cleanliness, profile, thoroughness, and ambient conditions for coating application.
 - c. Prior to application of each successive coat for quality assurance and ambient conditions for the next coat.
 - d. Prior to final coat to verify all non-conformance issues have been resolved.
 - e. Scheduled pre-final Observation: Allow engineer access to all locations so a complete punch list can be prepared. Final coat on ladders or other access points can be delayed until after this Observation and included as a punch list item.
 - f. Scheduled final Observation: After ALL punch list items have been completed (including painting ladders), provide access to all items on the punch list.

1.03 SCHEDULING FOR RPR SERVICES FOR HOLD POINT OBSERVATIONS

- A. Prior to First Observation 48 hours advance Notice is required
- B. All Subsequent Hold Points shall be scheduled by 6:00 P.M (Eastern Time) the previous day.
 - 1. Scheduling with a Central Contract Administrator. Names and phone numbers of a Contract Administrator and a Second Contract Administrator will be given to the Contractor during the Preconstruction Meeting.
- C. The Contract Administrator may be contacted by cell phone. If no answer a voice mail may be left with all details of RPR request included, or
- D. The Contract Administrator may be contacted by text to their cell phone.
- E. If the Contract Administrator is not available, DIXON’s Corporate Office may be contacted during regular working hours at 1-800-327-1578.
- F. Scheduling through a Project Manager is not an alternative.
- G. Scheduling through an RPR is not an alternative for Hold Point Observation.

1.04 SCHEDULING FOR RPR SERVICES FOR FULL TIME OF DAILY OBSERVATIONS

A. Productive Work

1. Do not start, continue, or complete any Productive Work if RPR is not present on the project site.
2. Productive Work includes, but is not limited to, all elements of abrasive blast cleaning, power washing, high pressure water jetting or high/low pressure water cleaning, power tool cleaning, rigging, painting, metal repairs, concrete repairs, punch list items, and clean-up.
3. Preparation, mobilization, and containment erection, and other non-productive work does not require observation if completed before the structure is removed from service, nor does demobilization after tank is returned to service.
4. But if containment erection is completed while other productive work progresses, an RPR is required.
5. If welding is completed for contracted work (antenna rails, painter's rails, ladders, etc.) during containment erection welding, then contracted work is considered Productive Work and an RPR shall be present. Any spot painting during containment erection is also considered Productive Work.
6. After the project has been completed and after all punch list items have been completed, cure time and site clean-up, excluding any waste coating or abrasive issues, are not considered Productive Work.
7. After the Project has been completed; complaints from Owner or neighbors concerning health, environmental, or damage issues, or if there are still waste coating or waste abrasive issues, these are considered Productive Work requiring an RPR even after the structure is returned to service.
8. Essentially all work completed between out-of-service date and Substantial Completion Date, excluding cure and disinfection, is considered Productive Work and requires the presence of an RPR.

1.05 SCHEDULING WITH A CENTRAL CONTRACT ADMINISTRATOR

- A. The Contract Administrator may be contacted by cell phone. If no answer a voice mail may be left with all details of RPR request included or
- B. The Contract Administrator may be contacted by text to their cell phone.
- C. If the Contract Administrator is not available DIXON's Corporate Office may be contacted during regular working hours at 1-800-327-1578.
- D. Scheduling through a Project Manager is not an alternative.

1.06 SCHEDULING THROUGH ONSITE RPR

- A. Scheduling through on site RPR completing Full Time or Daily RPR Services may be considered a properly completed Request if completed by the foreman and RPR

before leaving site. If not completed on site then schedule through the Central Contract Administrator.

1.07 SUMMARY OF SCHEDULING HOLD POINT OBSERVATIONS

- A. Contract Administrator
 - 1. by phone
 - 2. by text
 - 3. by voice mail
- B. Second Contract Administrator
 - 1. by phone
 - 2. by text
 - 3. by voice mail
- C. Corporate Office during work hours
 - 1. by phone
 - 2. NO voicemail
- D. Do NOT contact Project Manager

1.08 SUMMARY OF SCHEDULING FOR FULL TIME OR DAILY OBSERVATIONS

- A. Contract Administrator
 - 1. by phone
 - 2. by text
 - 3. by voice mail
- B. Second Contract Administrator
 - 1. by phone
 - 2. by text
 - 3. by voice mail
- C. Corporate Office during work hours
 - 1. by phone
 - 2. NO voicemail
- D. RPR on site
- E. Do NOT contact Project Manager

1.09 CONTRACTOR'S RESPONSIBILITIES

- A. The Engineer and Owner shall have full access to the Site at reasonable times for their Observation, testing, and Contractor's personnel and equipment shall be available to the Owner and Engineer/RPR to expedite Observations. Provide Owner, Engineer/RPR proper and safe conditions for such access, including rigging, and advise them of contractor's site safety procedures and programs so that they may comply as applicable.
- B. Contractor is responsible for all of Contractor's manpower needs and scheduling and Work to be completed. RPR is to be available to expedite the project and complete

- their services with minimal interference of the Contractor's Work. Successful project completion is dependent on Contractor's proper scheduling and use of RPR services.
- C. Contractor is financially responsible for efficient scheduling of RPR services, See Section 00 91 19.02.

1.10 DELAY IN ARRIVAL OF RPR

- A. RPRs for Hold Point, Full – Time or Daily observations may be delayed by traffic or other reason from arriving at the scheduled time. Contractor shall contact Contract Administrator immediately if the RPR has not arrived at the scheduled time.
- B. The Contract Administrator will locate the missing RPR, return to the Contractor with a revised arrival time, and discuss with Contractor what other Work can be completed until RPR arrives for Observation.

1.11 REJECTED DEFECTIVE WORK

- A. All Productive Work completed without an RPR present shall be considered Defective Work and rejected per the General Conditions. This includes Work completed:
1. Without proper scheduling an RPR
 2. Prior to the scheduled arrival of the RPR
 3. When Day has been scheduled as a No Workday
 4. When RPR is delayed and Contract Administrator has not been notified.

1.12 NON-CONFORMANCE REPORTS (NCR)

- A. The RPR will issue a non-conformance report for every performance item, material, or equipment supplied, and/or environmental situation that fails to meet requirements of the specifications.
- B. All Work in non-conformance will be considered Defective Work to be replaced, repaired per terms of the General Conditions.
- C. Do not start Work until all required equipment and RPR is on-site.
- D. Immediately correct all environmental non-conformance to prevent an accident. If an incident has already occurred, contact the proper governmental environmental agency and conduct an immediate clean-up per their direction.
- E. If the Nonconformance is issued because of equipment specified but not delivered, repaired or replaced then the financial Set-off will be 140% * of the rental value of equipment in non-conformance (i.e. non-working decontamination trailer, hand wash facilities, are filtration units, etc.).
- F. If the Nonconformance issued is because of noncompliance with environmental equipment or practices the Set-off will be 140%* of the estimated cost of compliance. *The costs of items E. and F. above are damage estimates. The cost of equipment will be the rental charge from a reputable local dealer with 40% extra being for operation cost. Cost of environmental compliance is the estimated cost of

compliance. The extra 40% is potential risk to the owner for non-conformance. In no situation will the Owner assume liability.

- G. All additional Engineering/RPR expenses incurred because of a nonconformance report is subject to Set off by Owner.

SECTION 00 91 19 .02

CONTRACTOR'S FINANCIAL RESPONSIBILITY FOR RPR

PART 1 - PROGRESS SCHEDULE and RPR SCHEDULE

1.01 GENERAL

A. Contractor is financially responsible for the proper and efficient use of RPR services.

1.02 PROGRESS SCHEDULE

- A. Per the General Conditions a Progress Schedule is required to be submitted. At the Preconstruction meeting the Contractor shall submit a preliminary Progress Schedule. This General Conditions of this contract as-bid restricts Work to 40 hours/ 8 hours per day, 5 days per week. If the Owner has prior approved a more open schedule it is noted in the Project Summary. Either prior approved in the Project Summary or not; a Progress Schedule more aggressive than Monday through Friday, regular working hours, will require submittal and discussion, at Preconstruction Meeting.
- B. Once the Owner, at the Preconstruction meeting accepts a more aggressive schedule the Contractor is responsible for all of the Contractor's manpower scheduling and Critical Path Work to maintain the Schedule.
- C. Contractor shall complete a minimum 8 hours per day of Productive Work, which should be calculated into the Schedule.

1.03 HOLD POINTS AND RPR SERVICES

- A. Fees for Hold Point RPR Services are contracted with the Owner at a Unit Price and are calculated to include the following: travel time to and from Site, reimbursable expenses, observation and report time. Time required for Contractor to repair or redo small areas that failed Observation, are not included in the unit price. Failure may be minimal compared to all Work observed, but failed Work still must be observed before proceeding. For minor failures that can be quickly repaired, the Contractor may entirely at their option:
1. Accept a Non-Conformance for failed Observation.
 2. Request, the RPR wait for a reasonable period while repairs are completed.
 3. Proceed with the next phase for all areas which have not failed, and "work around" failed areas. The failed areas would then be observed at the next Hold Point.
- B. The Fee for extended onsite time, or a new Hold Point is the responsibility of the Contractor.

1.03.1 FULL TIME OR DAILY RPR SERVICES

- A. It is the intention of the Owner, that the RPR fees be used to observe Productive Work. Productive Work is defined in previous Section 00 91 19 .01 Scheduling for RPR Services, with examples. The Owner will pay for all RPR service fees generated observing Productive Work that meets specification requirements. Normally this will be the first time for most observations. But if Observation fails, then the Owner pays for second observation, if it passes.

- B. The Contractor will pay all RPR and/or Engineer fees generated by failed Observations of Productive Work.
- C. Availability of RPR and RPR's ability to timely perform the required Services are dependent on Contractor's communication. RPR is to be available to meet the Progress Schedule demands and complete RPR services with minimal interference of the Contractor's Work, if Contractor properly scheduled RPR Services.

1.03.2 FULL TIME OR DAILY RPR SERVICES

- A. Contractor Pays for RPR or Engineering Services resulting from:
 - 1. Productive Work on a Holiday
 - 2. Failed or Improper Scheduling,
 - 3. Failure to Request Observation per Section 00 91 19 .01,
 - 4. Less than 8 hours per day or On-Call Time as a result of:
 - a. Premature Request for RPR Services,
 - b. No show or late start,
 - c. Rejection of Work and/or Non-Conformance reports,
 - d. Equipment failure, insufficient manpower, materials or equipment
 - e. Weather reasons per 1.04.B.03

1.04 RPR FEE CALCULATIONS FOR FAILED OBSERVATIONS

- A. The basis for Fees assessed to Contractor is based on the Owner/DIXON contract. Fees will be calculated in the same manner as in Owner/Engineer Agreement, i.e. if the RPR is working at an overtime rate for Owner, then fee for unproductive services will be documented at the same rate
 - 1. Hold Point for Welding or Coating Observation, or extra Progress Meetings
 - a. The same Unit Price Fee as would be charged to Owner for each respective Observation or meeting. Note the fee will be determined by the Contract and may vary between types of Hold Point services.
 - b. Extended time at site charged at Regular Rate (See definition below)
 - 2. Daily Observation shall be the same fee as charged to Owner from the Owner/DIXON contract.
 - a. Minimum workday is 8 hours plus travel time
 - b. reimbursable mileage
 - 3. Fulltime Observation Fee shall be the same as charged to Owner for the same Service.
 - a. Minimum workday is 8 hours
 - b. Minimum work week is 40 hours
 - c. Reimbursable expenses/ Per Diem
 - 4. Fees common to Full Time, Daily and Hold Points with extended stays, and On-Call Time
 - a. Regular Pay for RPR is charged at the rate matching the RPR's experience and qualifications.
 - b. Overtime Rate is 1.5 times Regular Rate
 - 1) For all time worked on the actual holiday
 - 2) Weekend work by RPR

- 3) For time over 40 hours. (The standard work week for overtime (over 40) begins on Monday as Sunday is already paid at overtime rate.)
- B. Fees of misused or unnecessary Engineer/RPR Services will be documented and submitted to the Owner for Set off.
- C. The right to Set-off is a contracted right of Owner per the General Conditions, or Additions to General Conditions, and the right to enforce those rights are at the Owner's discretion.

1.05 ON-CALL TIME

- A. RPR's are professional personnel that get paid a minimum of 8 hours per day even though the Contractor's operations or methods results in less than an 8 hour day.
- B. If the Contractor has scheduled a Workday, and if RPR is not free to spend the day at RPR's discretion or to be reassigned; then the RPR will be considered On-Call.
 1. The RPR will be considered, if scheduled, on-call every morning and day unless work is cancelled per Section 00 19 91.01.
 2. For Daily observation the On - Call time will not exceed 8 hours, any travel time should occur within that 8 hours.
 - a. Late Starts - Agreed start time will be scheduled with the Contract Administrator at the Preconstruction Meeting.
 - b. The RPR's on-call time starts at the agreed start time, if RPR is on Site and available to Work, and On Call time continues until Work starts.
 3. For weather reasons
 - a. 8 hours if adverse weather conditions were clearly forecast
 - b. Two hours plus time worked up to 8 hours or actual time worked if greater; if forecast was less than 20% weather meeting definition of a weather day.
 4. For reasons other than weather, eight (8) hours will be considered minimum On-Call Time. This includes, but is not limited to, equipment failure, insufficient materials, damaged containment, etc.
- C. Actual charged on-call time will be eight (8) hours, minus the number of hours actually worked.
- D. Overtime, Weekend, Holiday pay requirements apply to all on-call time pay. On-call hours will count towards forty (40) hour week triggering overtime at forty (40) hours.
- E. If Work is cancelled per requirements in Section 00 19 91.01 (by prior night) in advance and RPR is notified in advance, there is no on call time.
- F. If contractor schedules days off per Scheduling requirements, the inspector will return to his/her home base and there will be no show time charges. Based on the Contract the RPR may be entitled to Mobilization or Demobilization.

SECTION 01 50 00

TEMPORARY CONSTRUCTION FACILITIES and UTILITIES

PART 1 - GENERAL

1.01 SUMMARY

- A. The Contractor is fully responsible to provide and maintain temporary facilities and utilities required for construction as described herein, and to remove the same upon completion of work.

1.02 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. National Fire Protection Association (NFPA): NFPA No.70-93
 - 2. National Electrical Code (NEC) and local amendments thereto.
 - 3. Comply with any and all federal, state, and local codes and regulations, and utility company requirements.

PART 2 - PRODUCTS

2.01 TEMPORARY ELECTRICITY and LIGHTING

- A. Supply temporary lighting sufficient to enable Contractor to safely access all work areas.
- B. Electrical requirements in excess of capacity of existing electrical service shall be responsibility of Contractor.
- C. Provide, maintain, and remove temporary electric service facilities.
- D. Facilities exposed to weather shall be weatherproof-type and electrical equipment enclosure locked to prevent access by unauthorized personnel.
- E. Contractor is to pay for and arrange for the installation of temporary services.
- F. Patch affected surfaces and structures after temporary services have been removed.
- G. Provide explosion proof lamps, wiring, switches, sockets, and similar equipment required for temporary lighting and small power tools.

2.02 WATER for CONSTRUCTION

- A. Owner will provide water required for cleaning and other purposes.
- B. Water use shall not exceed usage that might endanger the Owner's water system's integrity.

2.03 SANITARY FACILITIES

- A. Provide temporary sanitary toilet facilities conforming to state and local health and sanitation regulations, in sufficient number for use by Contractor's employees.

- B. Maintain in sanitary condition and properly supply with toilet paper.
- C. Remove from site before final acceptance of work.

2.04 TEMPORARY FIRE PROTECTION

- A. Provide and maintain in working order a minimum of two fire extinguishers and such other fire protective equipment and devices as would be reasonably effective in extinguishing fires.

2.05 DAMAGE to EXISTING PROPERTY

- A. Contractor is responsible for replacing or repairing damage to existing buildings, sidewalks, roads, parking lot surfacing, and other existing assets.
- B. Owner has the option of contracting for such work and having cost deducted from contract amount if the Contractor is not qualified to complete repairs, or fails to act in a timely manner.

2.06 SECURITY

- A. Security is not provided by Owner.
- B. Contractor shall be responsible for loss or injury to persons or property where work is involved, and shall provide security and take precautionary measures to protect Contractor's and Owner's interests.

2.07 TEMPORARY PARKING

- A. Parking for equipment and Contractor employees shall be designated and approved by Owner.
- B. Make arrangements for parking area for employees' vehicles.
- C. Any costs involved in obtaining parking area shall be borne by Contractor.

PART 3 - EXECUTION

3.01 GENERAL

- A. Maintain and operate systems to ensure continuous service.
- B. Modify and extend systems as work progress requires.

3.02 REMOVAL

- A. Completely remove temporary materials and equipment when no longer required.
- B. Clean and repair damage caused by temporary installation or use of temporary facilities.
- C. Restore existing or permanent facilities used for temporary service to specified or original condition.

3.03 BARRIERS and ENCLOSURES

- A. The Contractor shall furnish, install, and maintain as long as necessary, required adequate barriers, warning signs or lights at all dangerous points throughout the work for protection of property, workers, and the public. The Contractor shall hold the Owner harmless from damage or claims arising out of any injury or damage that may be sustained by any person or persons as a result of the work under the contract.

SECTION 01 53 43
PROTECTION of ENVIRONMENT

PART 1 - GENERAL

1.01 SUMMARY

- A. Contractor in executing work shall maintain work areas, on-and-off site, free from environmental pollution that would be in violation of federal, state, or local regulations.
- B. The Contractor is responsible for any and all clean-up that may be necessary and all applicable costs for the same.

1.02 LAWS and REGULATIONS

- A. Environmental regulations may be met with different available technologies. It is the Contractor's sole responsibility to comply with these and all applicable environmental regulations.
- B. If a contamination occurs work will stop until cleanup is complete.

1.03 PROTECTION of SEWERS

- A. Take adequate measures to prevent impairment of operation of existing sewer system. Prevent construction material, pavement, concrete, earth, or other debris from entering sewer or sewer structure.

1.04 PROTECTION of WATERWAYS

- A. Observe rules and regulations of local and state agencies, and agencies of U.S. government prohibiting pollution of any lake, stream, river, or wetland by dumping of refuse, rubbish, dredge material, or debris therein.
- B. Provide containment that will divert flows, including storm flows and flows created by construction activity, to prevent loss of residues and excessive silting of waterways or flooding damage to property.
- C. Comply with procedures outlined in U.S. EPA manuals entitled "Guidelines for Erosion and Sedimentation Control Planning and Implementation," Manual EPA-72-015 and "Processes, Procedures, and Methods to Control Pollution Resulting from all Construction Activity," Manual EPA 43019-73-007.

1.05 DISPOSAL of EXCESS EXCAVATED and OTHER WASTE MATERIALS

- A. Dispose waste material in accordance with federal and state codes, and local zoning ordinances.

- B. Unacceptable disposal sites include, but are not limited to, sites within wetland or critical habitat, and sites where disposal will have detrimental effect on surface water or groundwater quality.
- C. Make arrangements for disposal subject to submission of proof to Engineer that Owner(s) of proposed site(s) has valid fill permit issued by appropriate government agency and submission of haul route plan, including map of proposed route(s).
- D. Provide watertight conveyance for liquid, semi-liquid, or saturated solids that have potential to leak during transport. Liquid loss from transported materials is not permitted, whether being delivered to construction site or hauled away for disposal. Fluid materials hauled for disposal must be specifically acceptable at selected disposal site.

1.06 PROTECTION of AIR QUALITY

- A. Contain paint aerosols and VOCs by acceptable work practices.
- B. Minimize air pollution by requiring use of properly operating combustion emission control devices on construction vehicles and equipment used by Contractor, and encouraging shutdown of motorized equipment not actually in use.
- C. Trash burning not permitted on construction site.
- D. If temporary heating devices are necessary for protection of work, they shall not cause air pollution.

1.07 PROTECTION from FUEL and SOLVENTS

- A. Protect the ground from spills of fuel, oils, petroleum distillates, or solvents by use of containment system.
- B. Total paint, thinner, oils, and fuel delivered to and stored on-site cannot exceed supplied capacity of spill containment provided (i.e. fuel and oil to be sized to exceed possible spill).
- C. Provide proper containment unit under fuel tank and oil reservoirs for all equipment and fuel storage tanks.
- D. Barrels of solvents, even for cleaning, are prohibited. Do not deliver paint thinners in containers greater than five (5) gallons.
- E. Disposal of waste fluids shall be in conformance with federal, state, and local laws and regulations.

1.08 USE of CHEMICALS

- A. Chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant, or of other classification, must show approval of U.S. EPA, U.S. Department of Agriculture, state, or other applicable regulatory agency.

- B. Use of such chemicals and disposal of residues shall be in conformance with manufacturer’s written instructions and applicable regulatory requirements.

1.09 NOISE CONTROL

- A. Conduct operations to cause least annoyance to residents in vicinity of work and comply with applicable local ordinances.
- B. Equip compressors, hoists, and other apparatus with mechanical devices necessary to minimize noise and dust. Equip compressors with silencers on intake lines.
- C. Equip gasoline or oil-operated equipment with silencers or mufflers on intake and exhaust lines.
- D. Route vehicles carrying materials over such streets as will cause least annoyance to public and do not operate on public streets between hours of 6:00 P.M. and 7:00 A.M., or on Saturdays, Sundays, or legal holidays unless approved by Owner.

PART 2 - PRODUCTS

(Not Applicable)

PART 3 - EXECUTION

3.01 HAZARDOUS MATERIALS PROJECT PROCEDURES

- A. Applicable Regulations:
 - 1. RCRA, 1976 – Resource Conservation and Recovery Act: This federal statute regulates generation, transportation, treatment, storage and disposal of hazardous wastes nationally.
 - 2. Act 64, 1979 – Michigan’s Hazardous Waste Management Act: This statute regulates generation, transportation, treatment, storage, and disposal of hazardous wastes.
 - 3. Act 641 as amended 1990 – Michigan’s Solid Waste Act: This statute regulates generation, transportation, treatment, storage and disposal of solid wastes.
- B. Use the Uniform Hazardous Waste Manifest (shipping paper) to use an off-site hazardous waste disposal facility.
- C. Federal, State and local laws and regulations may apply to the storage, handling and disposal of hazardous materials and wastes. The list below includes the regulations which are most frequently encountered:

<u>Topic</u>	<u>Agency and Telephone Number</u>
Small quantity hazardous waste management, including hazardous waste stored in tanks	Hazardous Waste Division, EGLE (517) 373-2730 in Lansing, or District Office Certified County Health Department

Hazard Communication Standards
(for chemical in the workplace)

Occupational Health Division,
Michigan Department of Consumer
and Industrial Services (517) 373-
1410

Burning of waste oil and other
discharges to the air

Air Quality Division, EGLE (517)
322-1333 in Lansing, or District
Office

Local fire prevention regulations and
codes (including chemical storage
requirements)

Local fire chief or fire marshal

D. Department of Environment, Great Lakes, and Energy
Hazardous Waste Division
Compliance Section District Offices

Lansing District Office
525 W. Allegan
Constitution Hall - 4th Floor North
P.O. Box 30242
Lansing, MI 48909
(517) 335-6010
(517) 241-3571 (fax)

SECTION 03 01 30
MAINTENANCE OF CAST-IN-PLACE CONCRETE

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Repair of deteriorated and damaged concrete.

1.02 RELATED DOCUMENTS

- A. General provisions of the Contract, including General and Supplementary Conditions apply to this Section.

1.03 REFERENCES

- A. Codes, specifications, and standards referred to by number or title shall form a part of this specification to the extent required by the references thereto. Latest revisions shall apply in all cases.
 - 1. “Building Code Requirements for Structural Concrete (ACI 318) and Commentary (ACI 318R),” American Concrete Institute.

1.04 WORK INCLUDED

- A. Repair foundation cracks.

1.05 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review methods and procedures related to concrete maintenance including, but not limited to, the following:
 - a. Verify concrete-maintenance specialist's personnel, equipment, and facilities needed to make progress and avoid delays.
 - b. Materials, material application, sequencing, tolerances, and required clearances.
 - c. Quality-control program.
- B. Contractor shall notify engineer a minimum of twenty-four hours before placing concrete or grout repair material.
- C. Do not place any repair material until surface preparation has been reviewed and approved by engineer.

1.06 SUBMITTALS

- A. Submit the following ten (10) days prior to the preconstruction meeting:
 - 1. Safety Data Sheets (SDS) and Product Data Sheets:

- a. Furnish from all suppliers Safety Data Sheets and product data sheets for all applicable materials including, but not limited to, concrete, grouts admixtures, sealers.
- b. Provide for employees one (1) copy of all data sheets at the job site for employee access.
- c. Provide one (1) hard copy and an electronic copy to the engineer.
- d. No work may commence without the complete filing. All SDS shall conform to requirements of SARA (EPCRA) Right-to-Know Act.

1.07 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Each manufacturer shall employ factory-authorized service representatives who are available for consultation and Project-site inspection and on-site assistance.

1.08 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Comply with manufacturer's written instructions for minimum and maximum temperature requirements and other conditions for storage.
- B. Store cementitious materials off the ground, under cover, and in a dry location.
- C. Store aggregates covered and in a dry location; maintain grading and other required characteristics and prevent contamination.
- D. Promptly remove damaged or unsuitable products from the job site. Replace products with undamaged, suitable products.

1.09 FIELD CONDITIONS

- A. Cold-Weather Requirements for Cementitious Materials: Do not apply unless concrete-surface and air temperatures are above 40 deg F (5 deg C) and will remain so for at least 48 hours after completion of Work.
- B. Hot-Weather Requirements for Cementitious Materials: Protect repair work when temperature and humidity conditions produce excessive evaporation of water from patching materials. Use cooled materials as required. Do not apply to substrates with temperatures of 90 deg F (32 deg C) and above.

1.10 INSTALLATION REQUIREMENTS

- A. Apply all repair material within manufacturer's guidelines.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Source Limitations: For repair products, obtain each color, grade, finish, type, and variety of product from single source and from single manufacturer with resources to provide products of consistent quality in appearance and physical properties.

2.02 CAULKING FOR CRACK REPAIRS

- A. Caulking to be a single component, non-sag polyurethane sealant. Eucolastic 1NS as manufactured by Euclid Chemical, or approved equal.

PART 3 – EXECUTION

3.01 CONCRETE MAINTENANCE

- A. Comply with manufacturers' written instructions for surface preparation and product application.

3.02 EXAMINATION

- A. Notify Engineer seven days in advance of dates when areas of deteriorated or delaminated concrete and deteriorated reinforcing bars will be located.
- B. Locate areas of deteriorated or delaminated concrete using hammer or chain-drag sounding and mark boundaries. Mark areas for removal by simplifying and squaring off boundaries. At columns and walls make boundaries level and plumb unless otherwise indicated.
- C. Perform surveys as the Work progresses to detect hazards resulting from concrete-maintenance work.

3.03 PREPARATION

- A. Ensure that supervisory personnel are on-site and on duty when concrete maintenance work begins and during its progress.
- B. Protect persons, equipment and surrounding surfaces of the structure being repaired from harm resulting from concrete maintenance work.
 - 1. Comply with each product manufacturer's written instructions for protections and precautions. Protect against adverse effects of products and procedures on people and adjacent materials, components, and vegetation.
 - 2. Use only proven protection methods appropriate to each area and surface being protected.
 - 3. Contain dust and debris generated by concrete maintenance work and prevent it from reaching the public or adjacent surfaces.
- C. Preparation for Concrete Removal: Examine construction to be repaired to determine best methods to safely and effectively perform concrete maintenance work. Examine

adjacent work to determine what protective measures will be necessary. Make explorations, probes, and inquiries as necessary to determine condition of construction to be removed in the course of repair.

1. Inventory and record the condition of items to be removed for reinstallation or salvage.

3.04 CRACK REPAIR

- A. Router the crack to $\frac{1}{4}$ to $\frac{1}{2}$ in. wide x $\frac{1}{2}$ in. deep. Router to be a U-shape or square, V-notch is not acceptable. Remove all loose dirt and debris from the routed area by low pressure water cleaning at 4,000 psi.
- B. Apply product to a clean surface. Trowel the caulking into place.
- C. Payment is a separate line item "Crack Repair" based on the quantity of 15 lineal feet which the owner reserves the right to increase, decrease or delete.

SECTION 05 00 00 **METAL REPAIRS**

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Steel Repair.

1.02 REFERENCES

- A. AWWA D100 Weld Standard
- B. AWS Weld Standard
- C. API 650 Standard

1.03 OMISSIONS

- A. The specifications include all work and materials necessary for completion of the work. Any incidental item(s) of material, labor, or detail(s) required for the proper execution and completion of the work are included.

1.04 DEFINITIONS

- A. Ground Flush: Ground even with adjacent metal with no transition. This preparation is intended for all removed items.
- B. Ground Smooth: Ground welds to the point that no cuts or scratches occur when rubbing your hand over the weld. Rebuild with weld any concavity discovered during grinding. This preparation is intended for all newly added steel.

1.05 WORK INCLUDED

Newton Rd.

- 1) Replace the bowl manway gasket.
- 2) Remove the davit arm from the wet interior bowl manway.
- 3) Install hinge on the two condensate platform hatches.
- 4) Install handholds at the roof hatches.
- 5) Replace vent with a frost-free roof vent.
- 6) Install a roof painter's railing.
- 7) Install a swing gate at the top platform opening.
- 8) Replace dry interior and aviation light bulbs.
- 9) Replace the sample tap on the fill/draw pipe.
- 10) Install a gasket on the wet interior roof hatch.
- 11) Replace the overflow screen.

Fox Hollow

- 1) Install a gasket on the wet interior roof hatch.
- 2) Replace the overflow screen.
- 3) Replace the vent screen.

1.06 WORKMANSHIP

- A. Provide material and workmanship necessary to produce a first-class job.
- B. All weld spatter is to be removed prior to coating application.
- C. All removed steel items are to be ground flush with surrounding surface. All new welds are to be ground smooth.
- D. The Contractor is to properly dispose of all removed items.

1.07 WELDER QUALIFICATIONS

- A. Certified for type and position of weld specified.
- B. The welder shall be specialized in industrial or heavy commercial welding and experienced in rigging and elevated work.

1.08 SUBMITTALS

- A. Safety Data Sheets (SDS) – for all items as required by law.
- B. Welder's certification.
- C. Submit materials at least one (1) week prior to preconstruction meeting.

1.09 WORK SEQUENCING

- A. The following is NOT a ways-and-means decision of the Contractor. It is accepted and good painting practice and shall be completed by the Contractor in this specified fashion:
 1. Complete ahead of all cutting and welding all surface preparation, such as removal of heavy metal bearing coating in the immediate area.
 2. Complete all welding repairs prior to commencement of any power washing or abrasive blast cleaning.
 3. Do not install non-painted items (i.e. vents, etc.) or store on or in the tank until after painting has been completed.
 4. Remove existing items that are not to be painted after water cleaning, store in a secure location.
 5. Disassemble appurtenances with mating surfaces (i.e. overflow flap gate, vent flange, etc.), surface prepare and coat mating surfaces and reassemble after topcoat is dry.
 6. Remove fall prevention devices in areas to be coated before painting, and reinstall after completion. Supply temporary fall prevention devices with steel cables during blasting and painting.

1.10 NEW STEEL COATING

- A. The new carbon steel and weld burn surfaces are to be prepared and coated in accordance with Sections 09 97 13 and 09 97 13.10.

PART 2 – PRODUCTS

2.01 STEEL PLATING and OTHER STRUCTURAL SHAPES

- A. General Steel: ASTM – A36.
- B. General Stainless Steel: ASTM – 316.
- C. Threading on all couplings and plugs to meet NPT standards.

2.02 BOLTS and NUTS

- A. Stainless Steel
 - 1. ASTM F594G – 316 Stainless Steel Bolts.
 - 2. ASTM F594G – 316 Stainless Steel Nuts.
- B. Galvanized Steel
 - 1. ASTM A307 Grade A zinc coated Steel Bolts.
 - 2. ASTM A307 Grade A zinc coated Nuts.

2.03 WELDS

- A. Final – E70XX Electrodes.
- B. Root – E60XX Electrodes.
- C. Wire – ER70S Electrodes.

2.04 OVERFLOW SCREEN

- A. 316 stainless steel wire, twenty-four (24) mesh or smaller.
- B. Manufactured/supplied by McMaster-Carr. www.mcmaster.com (562) 692-5911 or approved equal.

2.05 VENT SCREEN

- A. Aluminum wire, maximum twenty-four (24) mesh or smaller.
- B. Manufactured/supplied by McMaster-Carr. www.mcmaster.com (562) 692-5911, McNichols www.mcnichols.com (877) 219-6821 or approved equal.

2.06 SWING GATE

- A. Universal Swing Gate as manufactured by SafeRack www.saferack.com (313) 246-9496 or approved equal.

PART 3 - EXECUTION

3.01 MANWAY GASKET

- A. Replace the bowl manway gasket with new $\frac{3}{8}$ in. flat neoprene gasket material.
- B. Gaskets to meet ASTM D2000-86E, Type BC with a 70A durometer rating.
- C. Payment is incidental to the project.

3.02 DAVIT ARM REMOVAL

- A. Remove the davit arm from the wet interior bowl manway.
- B. Grind the two connection points to the bowl flush with the bowl steel and remove the hook from the cover.
- C. Payment is incidental to the project.

3.03 CONDENSATE PLATFORM HATCH COVER HINGES

- A. Install hinges on the two condensate platform opening covers.
- B. See Drawing 01.
- C. Payment is a separate line item "Platform Cover Hinges" which the Owner reserves the right to delete.

3.04 HANDHOLDS

- A. Furnish and install a handhold on the roof at the access tube hatch and the wet interior roof hatch.
- B. Handhold to be a $\frac{3}{4}$ in. diameter rod shaped into a 16 in. x 3 in. "U". Weld using a $\frac{1}{4}$ -in. full fillet.
- C. The handhold is to be located on the ladder side of the opening.
- D. Payment is incidental to the project.

3.05 FROST FREE ROOF VENT

- A. Furnish and install a new frost-free roof vent.
- B. Install the vent on the existing bolted painter's hatch, the hatch cover to become the property of the Contractor for proper disposal.
- C. See Drawings 02a-02d.
- D. Payment is a separate line item "Roof Vent" which the Owner reserves the right to delete.

3.06 ROOF PAINTER'S RAILING

- A. Install a 27 ft. diameter painter's railing on the roof. Field verify dimensions prior to fabrication. The intention is that the painter's railing diameter be 3-4 ft. larger than the existing handrail around the entire circumference.
- B. All butt weld sections on the painters railing to be at a stand-off.

- C. Install couplings with brass plugs located at every other painter's railing stand-off. Caulk the underside of the coupling. All threaded fittings to be coated with pipe joint compound.
- D. See Drawing 03.
- E. Payment is a separate line item "Roof Painter's Railing" which the Owner reserves the right to delete.

3.07 SWING GATE

- A. Furnish and install a swing gate at the ladder opening at the top platform
- B. Install gate per manufacturers recommendations.
- C. Install a 3 in. x ¼ in. plate as a catch for the swing gate as needed. Round off the corners of the plate. Weld using 3/16 in. full fillet welds.
- D. Contactor is responsible for any installation of additional structure and welding needed for mounting. Any cutting will require approval from the Engineer.
- E. Payment is a separate line item "Swing Gate" which the Owner reserves the right to delete.

3.08 REPLACE LIGHT BULBS

- A. Replace all dry interior and aviation light bulbs with LED light bulbs.
- B. Dry interior bulbs to be bright white LED bulbs with a minimum brightness of 800 lumens and a color of light at a minimum of 5,000K and a minimum rated life of 25,000 hours., size A19.
- C. The aviation light bulbs to be LED with a minimum brightness of 1600 lumens and a color of light at a minimum of 5,000K, and a minimum rated life of 25,000 hours.
- D. Change bulbs after all blast and paint equipment has been removed from the tank.
- E. All bulbs to have the same color and brightness throughout the dry interior.
- F. Payment is incidental to the project.

3.09 SAMPLE TAP

- A. Replace the sample tap in the fill pipe at the base of the tank.
- B. Install copper adaptor to a downward facing smooth ended spout (size to be a minimum of ½ inch in diameter).
- C. All piping is to be soldered copper or threaded connections. All threaded connections are to be installed with PTFE sealant tape.
- D. Payment is incidental to the project.

3.10 ROOF HATCH GASKET – BOTH TANKS

- A. Install a gasket on the wet interior roof hatch cover.
- B. Gasket to be ¼ inch EPDM or neoprene.
- C. Install after the exterior coating is dry to the touch.

- D. Apply gasket using adhesive, 3M Super Weatherstrip and Gasket Adhesive or approved equal.
- E. Payment is incidental to the project.

3.11 OVERFLOW SCREEN – BOTH TANKS

- A. Remove the existing screen and furnish and install a new screen on the overflow pipe.
- B. Attach screens with the existing fasteners.
- C. Payment is incidental to the project.

3.12 ROOF VENT SCREEN – FOX HOLLOW

- A. Remove the existing screen and furnish and install a new screen on the roof vent.
- B. Attach screens with the existing fasteners.
- C. Payment is incidental to the project.

PART 4 – SPECIAL PROVISIONS

4.01 STEEL REPLACEMENT COATING

- A. All large pieces of steel to be shop primed using the specified prime coat over a SSPC-SP10 near white surface preparation.
- B. Do not prime 3 in. from area to be welded.
- C. After installation, spot clean welded areas to a SSPC-SP11 and apply coating as specified.
- D. Use only one manufacturer for repair coating.
- E. Payment is incidental to metal repairs.

4.02 WELD PREPARATION PRIOR to COATING

- A. Prepare all new welds per NACE RPO 0178 prior to coating application. Grind welds to category D.

4.03 COATING REPAIR – WET INTERIOR

- A. Complete all welding and cutting prior to any surface preparation for painting to avoid contamination of surfaces.
- B. Remove any residue and weld smoke by solvent cleaning.
- C. Power tool clean to a SSPC-SP11 finish all areas damaged by welding.
- D. Use 3M Scotch-Brite Clean'n Strip Discs.
- E. Feather edges of adjacent coating a minimum of ½ in. from exposed steel.

F. Apply repair system at 3.5 - 4.5 mils per coat as follows:

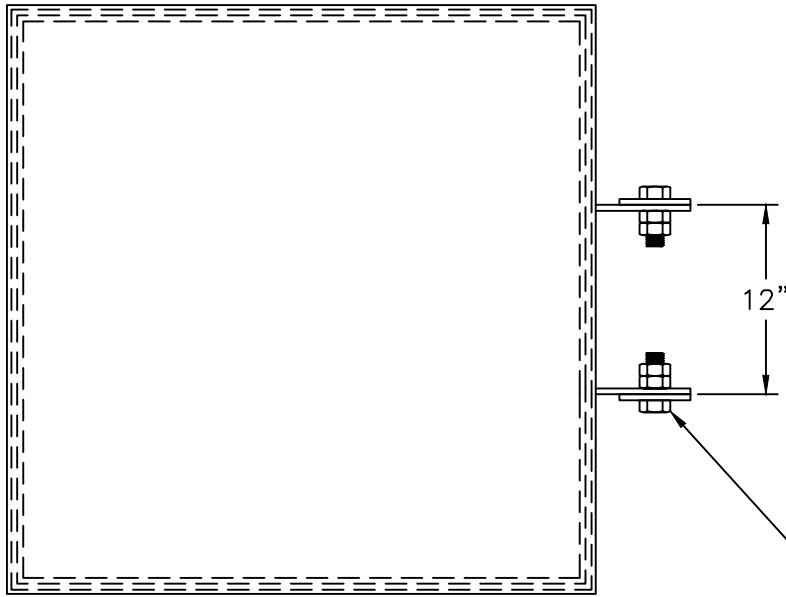
<u>Manufacturer</u>	<u>System</u>
Tnemec	20/20
Induron	PE-70/PE-70
PPG	Amerlock 2/Amerlock 2
Sherwin Williams	646PW/646PW

G. Contractor has the option to apply one (1) coat of Aquatopoxy A-61 at 6.0-10.0 mils in lieu of the two coat system.

H. System to meet all National Sanitation Foundation 61 certification standards for potable water contact.

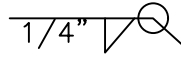
I. Contractor to follow the relevant items from Sections 09 97 13 and 09 97 13.10.

J. Payment is incidental to weld repairs.



SECURE HINGES WITH 3/4" STAINLESS STEEL BOLTS AND DOUBLE NUT TO PREVENT LOOSENING. PROVIDE A PVC OR PLASTIC WASHER BETWEEN HINGES TO PREVENT PAINT DAMAGE BY RUBBING. TENSION ON BOLT SHALL ALLOW EASY MOVEMENT OF COVER.

2" x 1/4" HINGE PLATE FIELD DETERMINE LENGTH (TYP. OF 2)

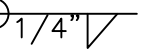


3" x 1/4" HINGE PLATE CUT IN AN "L" FIELD DETERMINE DIMENSIONS (TYP. OF 2)

8" MIN.

2" LIP

EXISTING MANWAY COVER

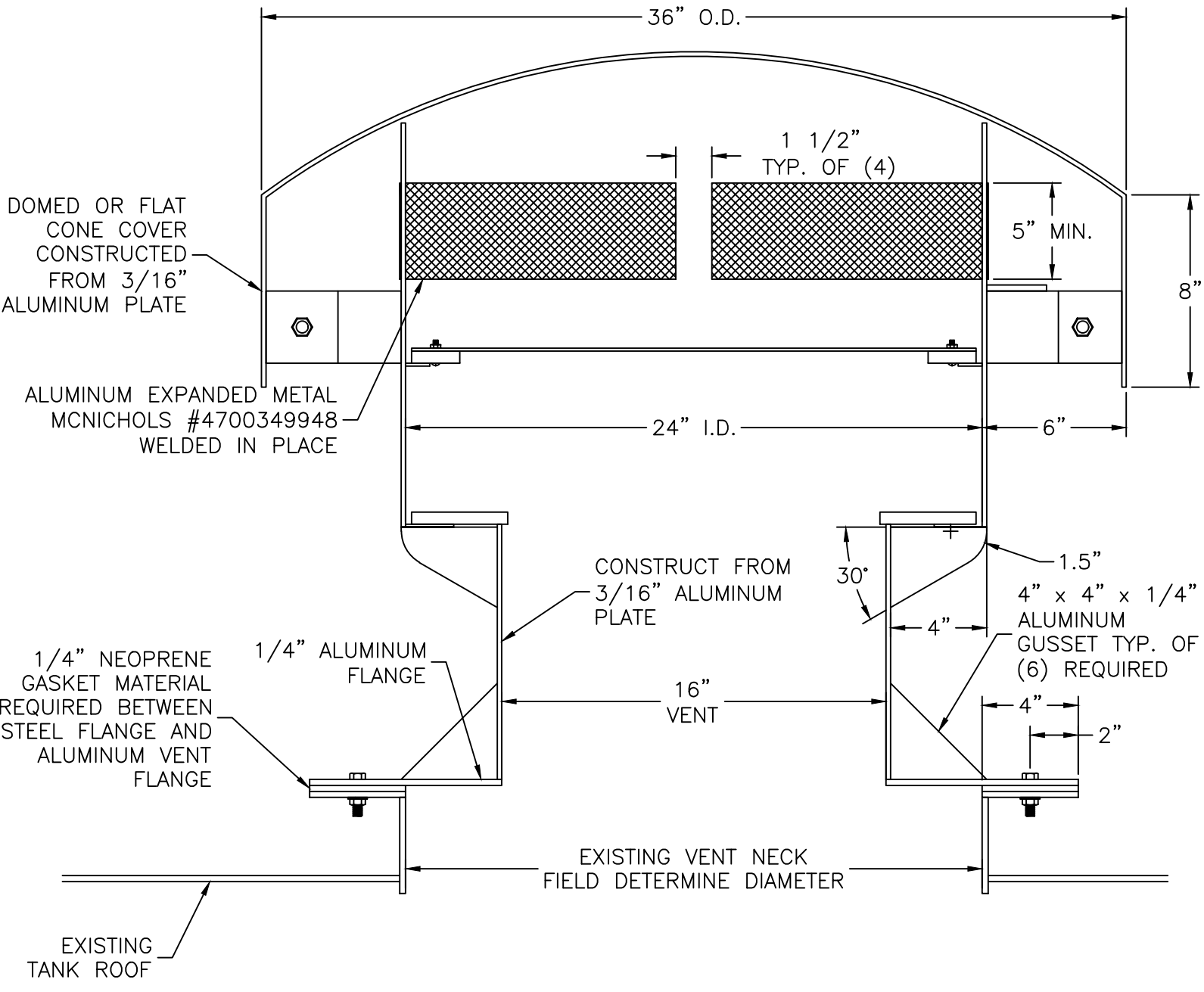


PLATFORM PLATE

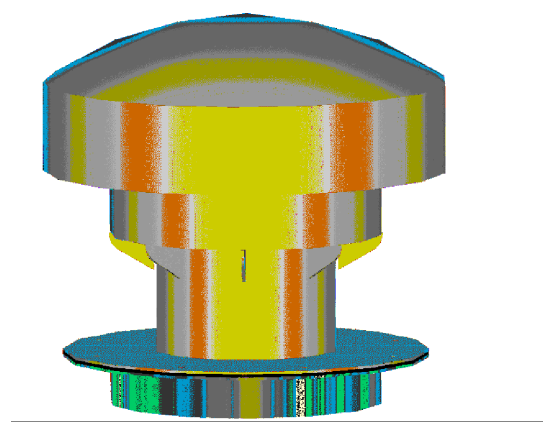
PLATFORM COVER HINGES

Note: Drawing not to scale.

Meridian Twp., MI 500,000 F.C.	
Platform Hatch Hinge	
Drawn By: TMF	Date: 09/29/21
Checked By: JVR	DWG: 01



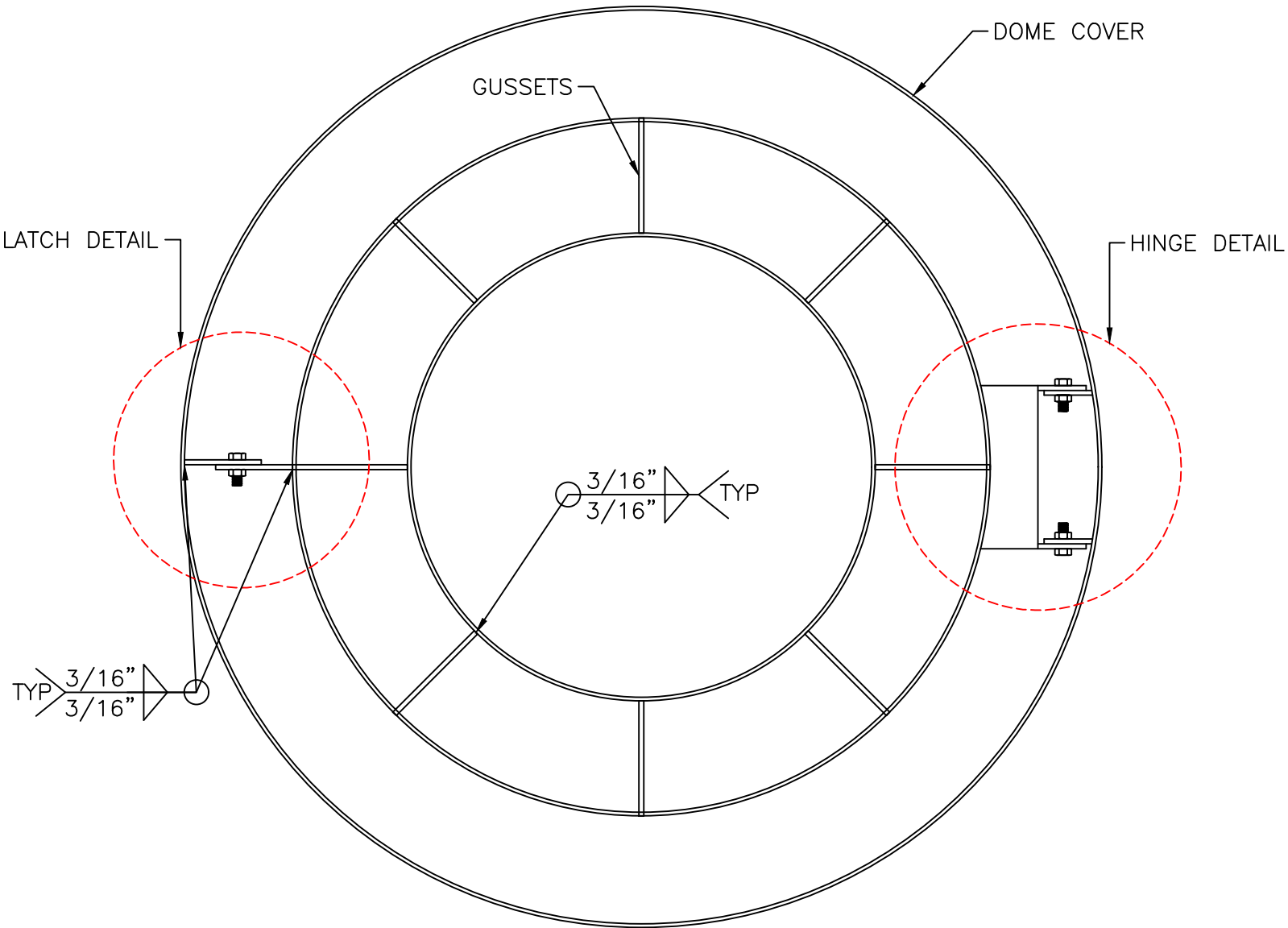
FROST FREE ROOF VENT on EXISTING PAINTER'S HATCH



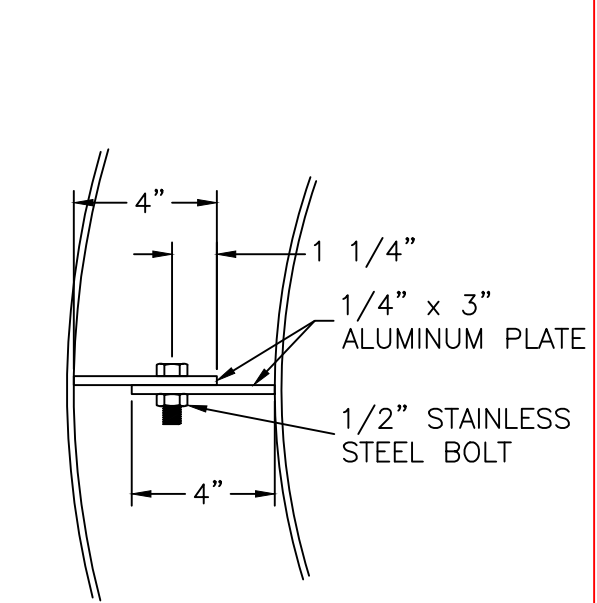
ISO VIEW

Note: Drawing not to scale.

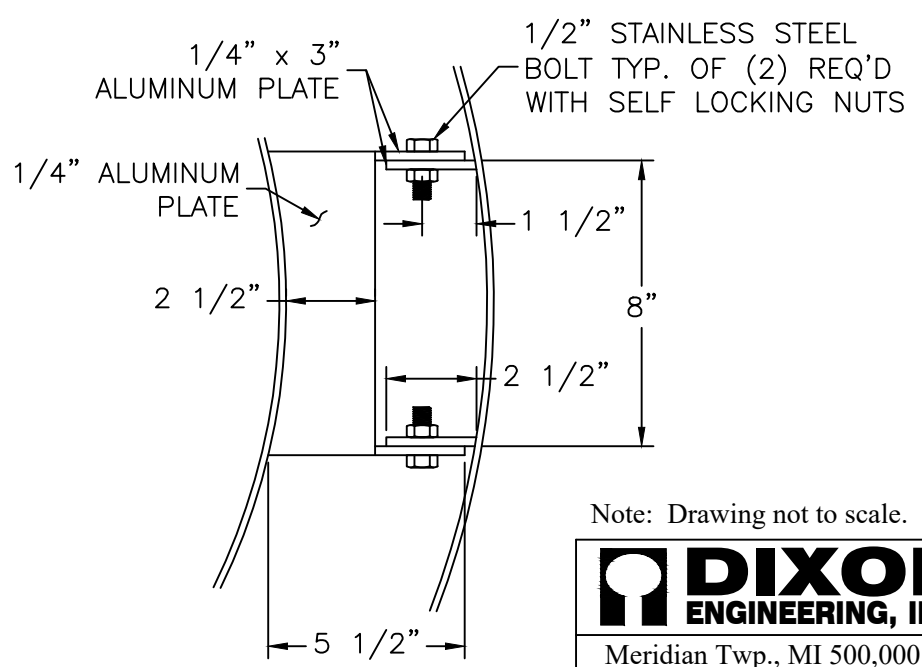
Meridian Twp., MI 500,000 F.C.	
16" Pressure Vacuum Roof Vent	
Drawn By: TMF	Date: 09/29/21
Checked By: JVR	DWG: 02a



PLAN VIEW



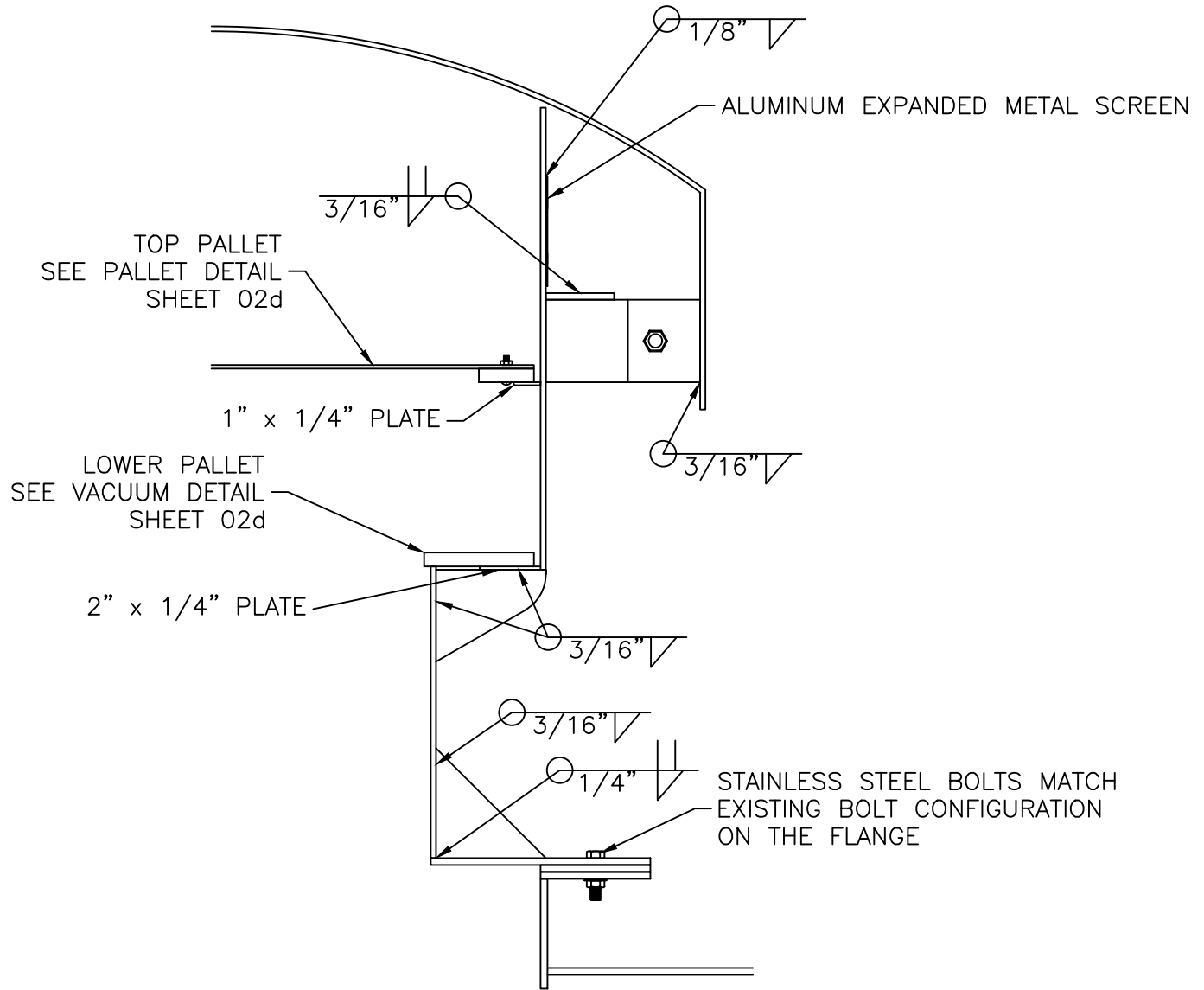
LATCH DETAIL



HINGE DETAIL

Note: Drawing not to scale.

DIXON ENGINEERING, INC.	
Meridian Twp., MI 500,000 F.C.	
16" Pressure Vacuum Roof Vent	
Drawn By: TMF	Date: 09/29/21
Checked By: JVR	DWG: 02b



WELDING DETAIL

Note: Drawing not to scale.

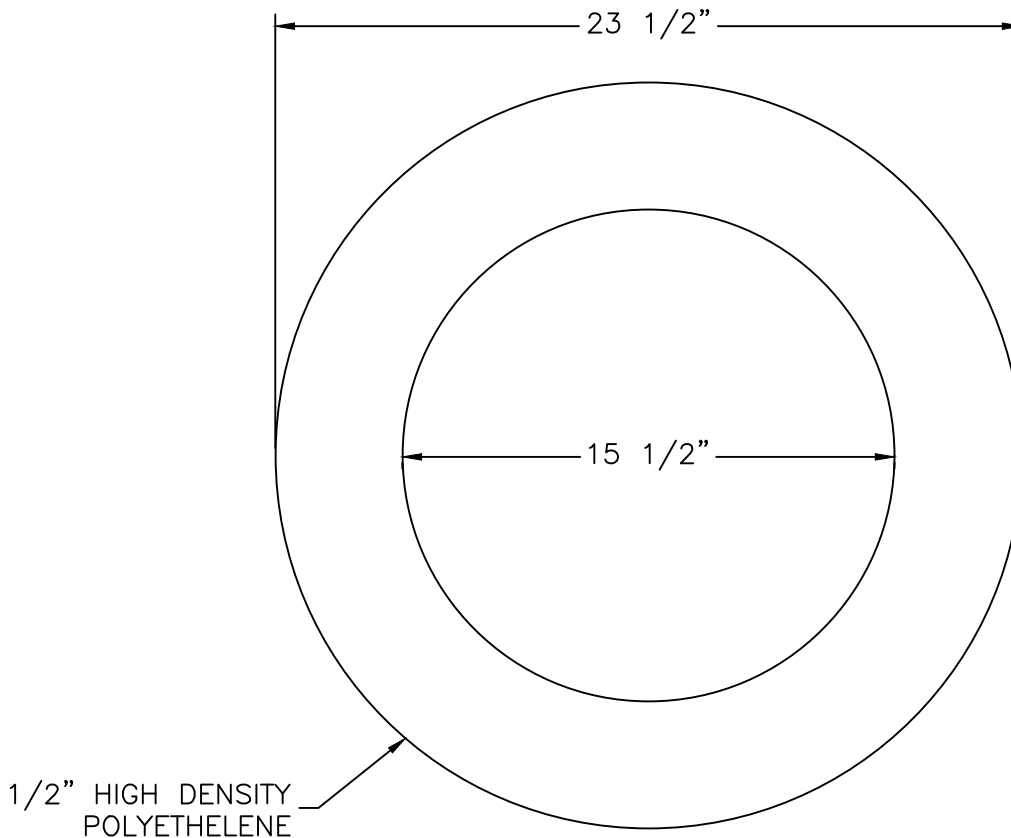
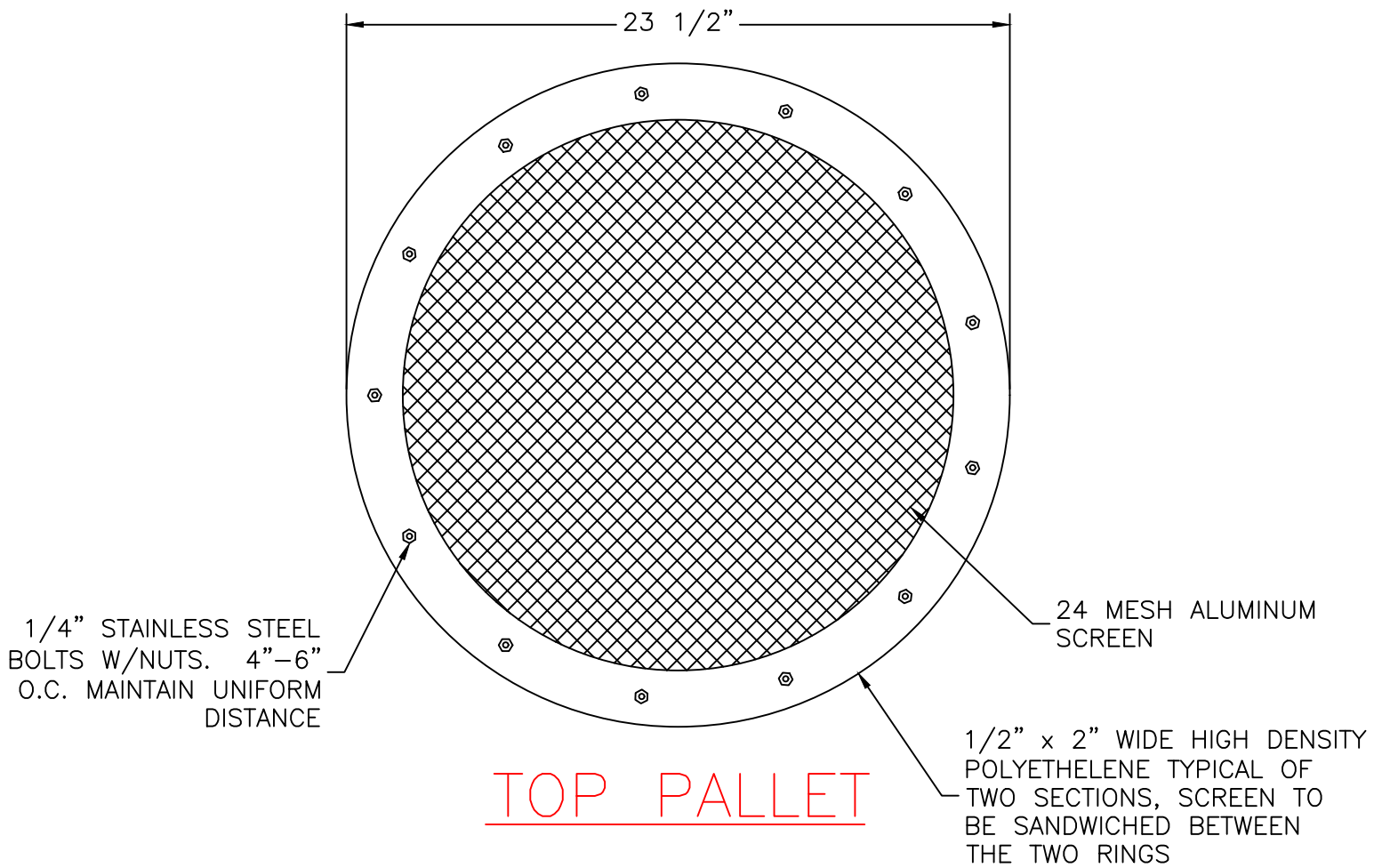


Meridian Twp., MI 500,000 F.C.

16" Pressure Vacuum Roof Vent

Drawn By: TMF | Date: 09/29/21

Checked By: JVR | DWG: 02c



Note: Drawing not to scale.

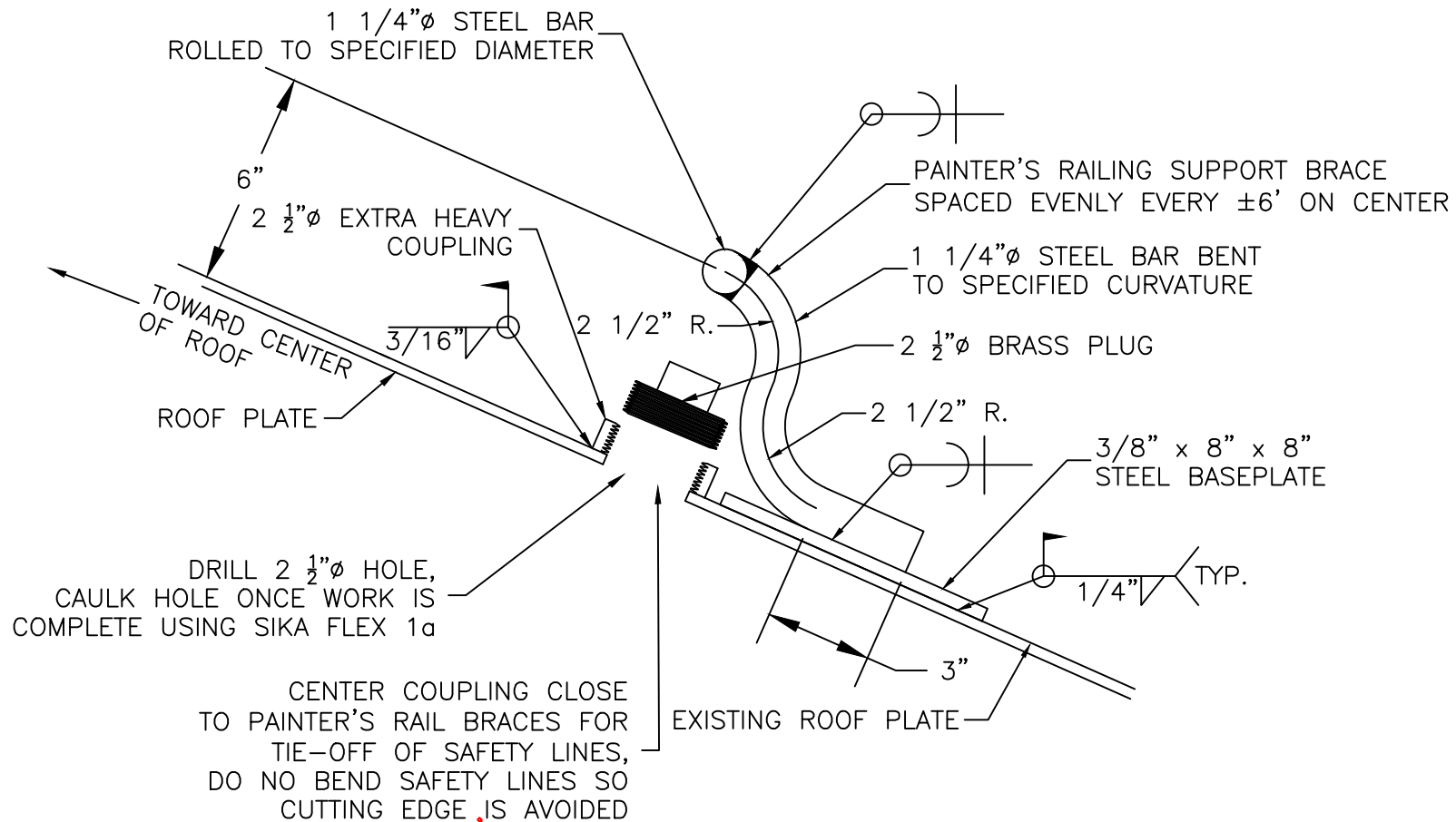


Meridian Twp., MI 500,000 F.C.

16" Pressure Vacuum Roof Vent

Drawn By: TMF Date: 09/29/21

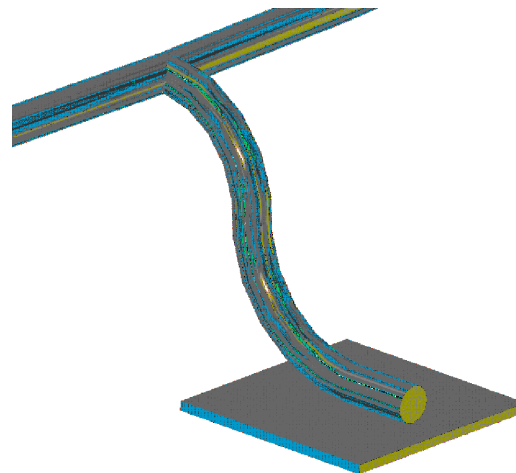
Checked By: JVR DWG: 02d



ROOF PAINTER'S RAIL WITH RIGGING COUPLINGS

NOTE:

1. PROVIDE COUPLING AT PAINTER'S RAIL BRACES (ONE AT EVERY OTHER BRACE).
2. ALL WELDED CONNECTION POINTS FOR THE 1 1/4" ROLLED STEEL BAR MUST BE COMPLETED AT A PAINTER'S RAIL BRACE.
3. THREADED CONNECTIONS ARE TO BE SEALED WITH PIPE JOINT COMPOUND (OATEY GREAT WHITE OR APPROVED EQUAL).



ISO VIEW

Note: Drawing not to scale.

DIXON
ENGINEERING, INC.

Meridian Twp., MI 500,000 F.C.

Painter's Railing

Drawn By: TMF Date: 09/29/21

Checked By: JVR DWG: 03

SECTION 09 97 13 **STEEL COATING**

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Painting of steel structures.
- B. Interior cleaning and disinfection.

1.02 REFERENCES

- A. AWWA Standards:
 - 1. D102 – 17 Painting Steel Water Storage Tanks.
 - 2. C652 – Disinfection of Water Storage Facilities.
 - 3. C655 – Field Dechlorination.
- B. NSF/ANSI
 - 1. NSF/ANSI 61

1.03 WORK INCLUDED

- A. Exterior: Apply a three (3) coat epoxy urethane fluoropolymer system.
- B. Dry Interior: Apply a spot two (2) coat epoxy system to the rest of the prepared surfaces. There are several coating failures on the platform tops, bowl and in the access tube, though repair areas are not limited to these noted locations.

1.04 EXISTING CONDITIONS

- A. Exterior: Urethane overcoat system applied in 2004, known to be free of heavy metals.
- B. Wet Interior: Epoxy system applied over a SSPC-SP10 blast in 2011.
- C. Dry Interior: Spot epoxy system applied in 2004, the original coating remaining tested for lead a 0.0079% and chromium at 0.0054% by weight.

1.05 OMISSIONS or INCIDENTAL ITEMS

- A. It is the intent of these specifications to coat the structure for the purpose of corrosion protection on wet interior surfaces. It is the intent to coat the exterior for corrosion protection and aesthetics.
- B. Any small or incidental items not specifically detailed in the schedule, but obviously a part of the work are included in the work at no additional cost to the Owner.
- C. Engineer, as interpreter of the specifications, will determine if disputed items fall under this category. Prevailing custom and trade practices will be considered in this determination.

1.06 PAINTER QUALIFICATIONS – NON-HEAVY METAL PROJECTS

- A. Contractor shall complete all coating and surface preparation.
- B. Painter shall be specialized in industrial or heavy commercial painting.
- C. ALL CONTRACTORS SHALL BE PREQUALIFIED with Dixon Engineering for projects of this size and complexity.

1.07 SUBMITTALS

- A. Submit the following with your annual prequalification:
 - 1. Occupational Safety and Health Programs and certification that all site personnel have been trained as required by law.
- B. Submit the following ten (10) days prior to the preconstruction meeting:
 - 1. Safety Data Sheets (SDS) and Product Data Sheets:
 - a. Furnish from all suppliers Safety Data Sheets and product data sheets for all applicable materials including, but not limited to, paints, thinners, cleaners, degreasers, and abrasive materials.
 - b. Provide for employees one (1) copy of all data sheets at the job site for employee access.
 - c. Provide one (1) hard copy and an electronic copy to the Engineer.
 - d. No work may commence without the complete filing. All SDS shall conform to requirements of SARA (EPCRA) Right-to-Know Act.
 - 2. Fall Prevention Plan and Site Specific Fall Hazard Evaluation:
 - a. Site specific plan to contain a generic drawing of the existing structure and appurtenances of this structure and reflect safety changes specified for this project.
 - b. Certifications for all spiders, scaffolding, stages, etc. to be used on the project. All certifications to be current, less than one year old.
- C. Submit the following at the preconstruction meeting:
 - 1. Designated OSHA Competent Person and qualifications, if not previously submitted.
- D. Submit the following within two (2) weeks of project completion with final pay request:
 - 1. Waste manifest, waste hauler and disposal facility. Required only if waste is hazardous.
 - 2. Waivers of lien.
 - 3. Copies of any formal worker safety or environmental citations received on the project.

1.08 OWNER RESPONSIBILITY

- A. Drain the structure with a seven (7) day notice after Contractor meets all precedent conditions of the contract.

- B. Fill the tank and draw samples and test after chlorination; responsibility of good results remains with the Contractor. Poor test results could result in added costs to Contractor, including re-chlorination, cost of water, plus possible liquidated damages.

1.09 DELIVERY and STORAGE of MATERIAL

- A. Submit manufacturer's invoice, with or without paint cost, to the Engineer for review. This submittal will be used to identify the quantity of paint recommended by the manufacturer for a job of this size and design and will be used to check the quantity actually delivered to the project.
- B. Cover bulk materials subject to deterioration because of dampness, weather, or contamination, and protect while in storage.
- C. Maintain materials in original, sealed containers, unopened and with labels plainly indicating the manufacturer's name, brand, type, grade of material, and batch numbers.
- D. Remove from the work site containers that are broken, opened, water marked, and/or contain caked, lumpy, or otherwise damaged materials. They are unacceptable.
- E. Store the material in a climate controlled designated area where the temperature will not exceed the manufacturer's storage recommendations. Heat the storage area to the manufacturer's recommended minimum mixing temperature.
- F. Keep equipment stored outdoors from contact with the ground, away from areas subject to flooding, and covered with weatherproof plastic sheeting or tarpaulins.
- G. Store all painting materials in a location outside the structure.
- H. Do not store or have on-site unapproved material, material from different manufacturers, or materials from different projects.

1.10 ACCESS and RPR SAFETY

- A. Provide access to all portions of the project where work is being completed. Access must be close enough and secure enough to allow RPR to use equipment without extensions.
- B. Provide personnel to assist with access and to ensure Contractor's access equipment is safely used.
- C. Provide separate fall protection devices and safety lines for the Owner and observers. Limit fall to 5 ft. vertically.
- D. New safety tie-off points have been added as part of this project, see Section 05 00 00 Metal Repairs. Do not rig equipment from these points. Provide separate fall protection cables and safety grabs for each tie-off point. The Contractor can install additional rigging couplings for staging. Coupling design for the additional couplings is to match those designed for safety lines.
 - 1. Tie-off points are located on the roof for wet interior safety.

- E. These specifications require the Contractor to supply a separate fall protection cable and safety grab for each tie-off point for the observer's use. The Contractor is encouraged to provide a separate cable and tie-off for each worker. The cables may be connected to the same tie-off point as the RPR, but a separate cable and safety grab are required for each user.

1.11 OBSERVATION and TESTING

- A. Prior to the scheduled observation, remove all dust, spent abrasive, and foreign material from the surface to be coated.
- B. The Contractor is to furnish an instrument for measuring the wet film thickness, and also a calibrated instrument for measuring dry film thickness of each field coat of paint. The dry film thickness testing gauge shall be the magnetic type as manufactured by Elcometer Co., or the Nordson Gauge Co.; spring loaded model with two percent (2%) accuracy margin over a range of one-to-twenty-one (1-100) mils or equal.
- C. The Engineer will furnish and operate observation equipment for their own use as quality assurance.
- D. Certify to the Owner that the specified paint has been applied at the paint manufacturer's recommended coverage, and to the specified thickness required. Also, certify that the paint has been applied in accordance with this contract.
- E. Take all necessary steps, including dry striping by brush or roller, to ensure a holiday-free coating system.
- F. The wet interior coating repairs are subject to low or high voltage holiday testing.
- G. The Owner and Engineer reserve the right to perform destructive testing under conditions deemed necessary. Testing may include, but is not limited to, the Tooke thickness test and adhesion testing. Any damage caused by these tests will be corrected to specifications at the Contractor's expense.

1.12 CLIMATIC CONDITIONS

- A. Do not apply paint when the temperature, as measured in the shade, is below the manufacturer's required ambient and surface temperatures.
- B. Do not apply paint to wet or damp surfaces, or during rain, snow, or fog.
- C. Do not apply paint when it is expected the relative humidity will exceed 85%, or the surface temperature is less than 5° above dew point, or the air temperature will drop below the manufacturer's requirements for proper cure. Anticipate dew or moisture condensation, and if such conditions are prevalent, delay painting until the observer is satisfied the surfaces are dry.

1.13 APPLICATION

- A. Complete all painting and surface preparation in strict accordance with these specifications, approved paint manufacturer's specifications, and good painting practices per SSPC.
- B. Apply each coating at the rate and in the manner specified by the manufacturer. Check the wet film thickness every 200 sq. ft. to ensure each coat applied meets the dry film thickness range requirements.
- C. Allow sufficient time for each coat of paint to dry and cure. Allow a minimum of twenty-four (24) hours between coats, unless product requirements have a maximum time less than 24 hours.
- D. Apply exterior coating by brush and roller only. Spray application is not permitted without prior approval of the Engineer. Even with prior approval, responsibility for damage still remains with the Contractor.
- E. Coatings shall be applied using methods to eliminate roller or spray marks in the finished product on the exterior.
- F. Painting may be delayed because of poor coverage or the potential damage from overspray and/or dry spray. In all cases, responsibility for damages rests with the Contractor.
- G. The Contractor is responsible for the appearance of the finished project and is warned to prevent contact with any freshly applied coating. Removal of rigging shall be completed so not to mar or damage the coating.
- H. Additional coats required for coverage or to eliminate roller marks, spray marks and to repair dry spray and overspray are the responsibility of the Contractor at no additional cost to the Owner.
- I. Use of pole extension on spray guns is prohibited for all paint application.
- J. Mixing of partial kits is not permitted. All partial cans of coating must be removed from the site.
- K. Mixing blades to be clean. The Engineer has the right to reject mixing blades based on cleanliness or paint build-up. Do not use the same mixing blade for different coatings (i.e. epoxy and urethane coatings).

1.14 PRESSURE RELIEF VALVES

- A. Furnish two (2) pressure relief valves.
- B. The valves shall be Aquatrol series 69F1 or approved equal.
- C. Valves will need to be fitted with hydrant thread adaptor. Valves to be adjustable with range a minimum of 30 to 90 psi. Set valve at 60 psi.
- D. Supply three (3) days prior to draining of the structure.
- E. After work to the structure and successful disinfection have been completed, the Owner will return the valves to the possession of the Contractor.
- F. Cost shall be incidental to project cost.

PART 2 – PRODUCTS

2.01 COLOR

A. Exterior Coatings:

1. Supply the Engineer with a color chart to allow the Owner ample time for the exterior topcoat color selection.
2. Factory tint the intermediate coat(s) for all areas of the structure if similar to the finish coat. Tinting shall be sufficient to allow visibility of the dissimilar color from 1 ft., and from 100 ft.
3. The Owner shall select or verify the topcoat color at the preconstruction meeting.
 - a. All bids shall be based on “white” color on the column, sidewall and roof and a “dark blue” on the bowl.

B. Dry Interior Coatings:

1. The color is to be a different tint between coats. Tinting to be performed in the factory. The final color is to be white. The topcoat color is to be verified at the preconstruction meeting.

2.02 SUBSTITUTIONS

- A. All coatings specified and approved herein have met or exceeded a specified list of ASTM standards. The materials specified are the standard to which all others shall be compared.
- B. The purpose is to establish a standard of design and quality, and not to limit competition.
- C. Manufacturers wishing to have their products approved are to have their coatings tested using the same test methods.
- D. Approval by ANSI/NSF Standard 61 is also a requirement for potable water contact coatings.
- E. The selection of coatings also has taken into consideration the manufacturer’s current and past performance on availability, stocking, and shipping capabilities, ability to resolve disputes, and any applicable warranties.

2.03 EQUIPMENT COVERING

- A. Use material that is 8 – 10 mils thick, and 100% impermeable to all vulnerable equipment.
- B. Use material resistant to tear and/or rip by mechanical action from abrasive blasting during blasting operations.
- C. Make coverings airtight by use of duct tape at the openings, or other suitable measures.

- D. Meet with representative of equipment Owner to verify covering will not damage equipment. Damage is the Contractor's responsibility. This includes not only the Owner's equipment, but also telecommunication antennas, cables, buildings, controls, etc.

2.04 AIR DRYER for COMPRESSOR

- A. Use air dryers sufficient to remove 98% of the moisture from the compressed air. Size the dryers on total cfm using manufacturer supplied charts. Upon request, supply charts to Engineer for verification.
- B. If the dryer fan is not operable, cease all blasting until the dryer is replaced or repaired.
- C. Supply air dryer with an air draw-off valve to check air for dryness, oil contamination, and cleanliness on the outlet side of the air dryer.
- D. For cleaning operations, draw clean air from the outlet side of the air dryer.

PART 3 – EXECUTION

3.01 DISINFECTION

- A. Disinfect the completely painted structure in accordance with AWWA Standard C652 Chlorination Method No. 3.
- B. Furnish the material and labor necessary to disinfect the structure in the required manner. Any chlorine products used are to be NSF 61 approved. Assist the Owner during filling and ensure that any manways are free of leaks after filling. Contractor is to adjust the manways and replace gaskets as needed to ensure there are no leaks.
- C. Do not allow water to enter the distribution system until satisfactory bacteriological test results are received.
- D. Owner is responsible to collect two consecutive bacteriological samples, 24 hours apart, following disinfection. Satisfactory results are required before the tank can be returned to service.
- E. Water drained to waste may not contain any substances in concentrations that can adversely affect the natural environment. No total residual chlorine may be measured in water discharged to surface water. It is recommended that the water be dechlorinated per AWWA C655F Field Dechlorination.
- F. Pay all additional expenses if it is necessary to repeat the testing and disinfection procedure as a result of defective work.

3.02 PROTECTION of NON-WORK AREAS

- A. Protect all non-blasted/painted surfaces prior to all abrasive blast cleaning/painting.

- B. Thoroughly cover the fill/drain pipe, overflow pipe, and all other openings. Do not permit abrasive or paint chips to enter into the piping or distribution system. Use watertight seals on the pipes.
- C. Protect and seal all controls and electrical components (even if they are not in the immediate work area) that are in danger from the project. Coordinate with the Owner so all controls are shut down and/or vented if necessary.

3.03 ANTENNA SYSTEM PROTECTION

- A. There are two (2) antennas mounted on the roof, and one (1) on the column. The number of antennas listed are from the last known condition, the Contractor is to field verify number of antennas.
- B. There are cables routed from the ground up to the antennas with miscellaneous sensitive equipment mounted on the structure and control equipment/buildings located on the ground.
- C. Use material that is 100% impermeable to cover and protect all antennas, antenna cables, and antenna controls/buildings.
- D. Use material resistant to tear by mechanical action from abrasive blasting, power washing and coating application.
- E. Payment for damage to antennas, antenna cables, miscellaneous equipment and/or antenna controls/buildings is the responsibility of the Contractor.
- F. Contact the Owner of each set of antennas one (1) week prior to the beginning of construction. Name of antenna companies will be available at the preconstruction meeting.
- G. Antennas may remain in service during the project. The Contractor is responsible for their own RF safety. Contractor to provide a minimum of one RF monitor for employees on site for the duration of the project.

3.04 ANTENNA EQUIPMENT COATING

- A. Antenna equipment is to be surface prepared and coated to match the exterior tank per these specifications including but not limited to: brackets and mounting poles.
- B. All previously coated items are to be coated per the exterior specifications. Any galvanized, stainless steel or other uncoated materials are to remain uncoated.
- C. Cost is incidental to the project.

3.05 DUST CONTAINMENT – INTERIOR

- A. Do everything within the Contractor's power to minimize dust as a nuisance.
- B. No visible dust release is allowed from openings.
- C. Seal or close all openings prior to blasting.

3.06 HAND WASH FACILITY

- A. Provide OSHA approved hand wash facility with running water. Hot water is not required.
- B. Stock facility with soap and towels and keep supply replenished.
- C. Test water and dispose of properly after job is completed.

3.07 LIGHTING of WORKSPACE

- A. Provide durable lighting fixtures designed for the intended work environment for use during blasting, painting, and during all observations.
- B. Encase portable lamps in a non-conductive, shatterproof material. Use only heavily insulated cable with an abrasive resistant casing.
- C. Install all temporary electrical items in accordance with all local, state, and federal codes, including OSHA.
- D. Protect from paint overspray and damage from abrasive materials.
- E. Measure required illumination during surface preparation and coating application at the work surface. Supply 20 ft. candles minimum illumination during blasting and painting, and 30 ft. candles minimum prior to and during observation, per SSPC-Guide 12. Inspect the prepared surface at the higher illumination prior to calling for observation. All work must conform to specification requirements prior to the scheduled observation.
- F. Measure the illumination at the work surface in the plane of the work.

PART 4 – SPECIAL PROVISIONS

4.01 SCHEDULING

- A. Complete all welding and any other work that damages the coating before paint operations begin, including surface preparation. The exception is paint removal in the weld area.
- B. If Contractor wants a variance in this schedule, request the change and give reason in writing to the Owner. The project manager will reply with a written Field Order if change is approved. Engineer reserves the right to put further restrictions in Field Order. If Contractor objects to restrictions, he may revert to the original specifications.

4.02 GRASS RESTORATION

- A. The Contractor is to report any damaged ground at the construction site in writing prior to mobilization of equipment, otherwise all repairs to the damaged ground will be the responsibility of the Contractor.
- B. Refill all holes, ruts etc. with clean topsoil, and level area around the construction site to the original grade.

- C. Fill material to be clean soil, no gravel, rocks or construction debris is to be used as fill material without the Owner's consent.
- D. Bring soil to a friable condition by disking, harrowing, or otherwise loosening and mixing to a depth of 3 in. – 4 in. Thoroughly break all lumps and clods.
- E. Rake area to be seeded. Sow seed at a minimum rate of 220 lbs/acre. Use seed intended for the climate.
- F. Work to be completed to the Owner's satisfaction.
- G. Cost is incidental to the project.

SECTION 09 97 13.10

STEEL COATING SURFACE PREPARATION

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Spot Field Abrasive Blast Cleaning.
- B. Power Tool Cleaning.
- C. High Pressure Water Cleaning.

1.02 REFERENCES

- A. AWWA Standards:
 - 1. D102-17 Painting Steel Water Storage Tanks.
- B. SSPC and NACE Standards:
 - 1. SP11 – Power Tool Cleaning to Bare Metal.
 - 2. SP6/NACE No. 3 – Commercial Blast Cleaning.
 - 3. SP12/NACE No. 5 – Surface Preparation and Cleaning of Metals by Waterjetting Prior to Recoating
 - 4. VIS 1 (Visual standard for abrasive blasted metal).
 - 5. VIS 3 (Visual standard for hand and power tool cleaned metal).

1.03 WORK INCLUDED – SURFACE PREPARATION

- A. Exterior: High pressure water clean (5,000 to 10,000 psi), spot power tool clean to a SSPC-SP11 standard.
- B. Dry Interior: Abrasive blast clean the spot coating failures throughout to a SSPC-SP6 commercial standard.

1.04 WASTE SAMPLING

- A. Sample spent abrasive waste from the project and send to a NLLAP certified lab and test for TCLP for eight (8) metals (Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver).
- B. The Owner reserves the right to collect samples and to send them to their selected lab. This will be determined at the preconstruction meeting.
- C. Pay all lab fees for eight (8) metals TCLP analysis on spent abrasive waste samples.

PART 2 – PRODUCTS

2.01 EXTERIOR CLEANER

- A. United 727 Weather-Zyme as manufactured by United Laboratories, 320 37th Ave., St. Charles, IL 60174 1-800-323-2594.

2.02 ABRASIVE – COAL SLAG

- A. The coal slag shall be 20-40 grade, or 30-60 grade.
- B. The abrasive shall be free of moisture, water soluble contaminants, dust, and oil.
- C. The abrasive shall be stored and covered to prevent moisture contamination.
- D. All leaking or spilling bags shall be removed, and affected areas properly cleaned.
- E. All slag abrasive shall meet the requirements of SSPC-AB1 “Mineral and Slag Abrasive” June 1, 1991-Grade 3.
- F. The use of silica sand, flint sand, and glass beads is prohibited.
- G. All abrasive and grit material used, and all equipment supplied shall be subject to approval of the Engineer. The abrasive or grit shall be sharp enough and hard enough to remove the mill scale, rust, and paint.

2.03 RECYCLABLE STEEL GRIT – ALTERNATE

- A. Use recyclable steel grit size G-25 or G-50.
- B. The abrasive is to be free of moisture, water soluble contaminants, dust, and oil.
- C. The abrasive is to be stored and covered to prevent moisture contamination.
- D. All leaking or spilling containers are to be removed, and affected areas properly cleaned.
- E. All recyclable steel grit shall meet requirements of SSPC-AB1 “Metallic Abrasive” June 1, 1991.
- F. All abrasive and grit material used, and all equipment supplied shall be subject to approval of the Engineer. The abrasive or grit shall be sharp enough and hard enough to remove the mill scale, rust, and paint.
- G. Using steel grit in the dry interior will require extra clean-up when there is insulation on the fill pipe. The insulation and insulation jacketing on the fill/draw pipe will need to be removed for the sections within 4 feet above each platform. The removed insulation and jacketing is to be cleaned and reinstalled to original conditions.

PART 3 – EXECUTION

3.01 WET INTERIOR CLEANING

- A. Low pressure water clean at 4,000 psi all surfaces and appurtenances to remove sediment, minerals, other contaminants, and any remaining water.
- B. Staining may remain in place, the Engineer to approve cleanliness.
- C. The cost is incidental to the project.

3.02 HIGH PRESSURE WATER CLEANING - EXTERIOR

- A. Solvent clean all visible grease, oil, salt, algae, and residue in accordance with SSPC-SP1.

- B. High pressure water clean all exterior surfaces and appurtenances at 5,000 – 10,000 psi to remove all dirt, chalk, algae, other foreign material, and all brittle or loose coating, rust, and mill scale. Operational pressure will be determined by the Engineer based on field conditions.
- C. Maintain a water jet nozzle distance of 2 in. – 10 in. away from the surface.
- D. Hold the water jet nozzle with 0° - 15° tip perpendicular (90°) to the surface at all times.
- E. Only use machines rated at and capable of achieving and maintaining 10,000 psi. Use of a rotating/reciprocating nozzle during water cleaning is permitted but not to increase the pressure of a washer rated lower than required.
- F. Do NOT exceed a rate of 10 sq. ft./minute.
- G. The gauge measuring time of use must be operational on the unit, if not operational the Contractor may be shut down and/or deducted price for rental of an operational unit from the final payment.
- H. Feather all edges using power tools per this specification.

3.03 COMMERCIAL BLAST (SSPC-SP6) SPOT – DRY INTERIOR

- A. Abrasive blast clean all spot coating failures including appurtenances where steel is exposed or rusted, or where coating is abraded as specified to a commercial finish (SSPC-SP6), latest edition thereof.
- B. Maintain a profile of 1.0 – 2.0 mils on abrasive blast cleaned surfaces.
- C. Feather all edges of adjacent coating a minimum of ½ in. from the exposed steel with 3M Scotch-Brite Clean'n Strip discs.

3.04 POWER TOOL CLEAN (SSPC-SP11) - EXTERIOR

- A. Solvent clean all visible grease, oil, salts, and residue.
- B. Power tool clean all surfaces and appurtenances to bare metal (SP11) in areas where steel is exposed or rusted, or where coating is abraded.
- C. Retain or produce a surface profile. Surface profile shall be greater than 1.0 mil.
- D. Edges of adjacent coating shall be feathered a minimum of ½ in. from the exposed steel with 3M Scotch-Brite Clean'n Strip discs.

3.05 WASTE DISPOSAL – NON-HAZARDOUS

- A. If after testing of the spent abrasive material the TCLP tests indicate the abrasive is not a hazardous waste, dispose the abrasive in a waste disposal facility.
- B. All waste shall be handled by a licensed hauler. Supply the Owner with all proper documentation of the final disposal site. The actual bill of lading and all manifests will be required prior to any payment.
- C. Payment for non-hazardous waste disposal is incidental to interior or exterior painting.

3.06 WASTE DOCUMENTATION

- A. Supply proper documentation of storage, transportation, and treatment, or disposal of the waste to the Owner. The Owner will retain sufficient funds from the Contractor to pay for hazardous waste transportation, treatment, and any possible fines until all documentation has been received. This retainage will be held, even if the waste has tested non-hazardous.

3.07 TESTING and CLEAN-UP of WASTE

- A. Daily collect all spent abrasive from the ground tarps and dispose in the required receptacles. Prior to receiving test results, spent abrasive shall be stored on ground tarps. The spent abrasive is to be covered and weighted down so no dust can be released.
- B. Furnish containers with proper labels for storage of the spent debris. Containers shall meet requirements of the EPA (or their local counterpart) for hazardous waste disposal. The spent abrasive will be moved directly from the tank into the waste containers. The containers will remain until final test results have been received. Furnishing containers with covers will be incidental to respective repaint and will not be affected by the Owner's final selection of respective interior or exterior disposal.
- C. Waste to remain on-site in covered receptacles until waste test results are received.

SECTION 09 97 13.19.01

DRY INTERIOR STEEL COATING – SPOT TWO COAT EPOXY

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Partial painting in the dry interior.

1.02 REFERENCES

A. SSPC and NACE Standards:

1. PA1 – Paint Application.
2. PA2 – Measurements and Calibration.
3. NACE RP 0178 Surface Finish Requirements.

1.03 WORK INCLUDED

A. Application of a spot two (2) coat epoxy system.

PART 2 – PRODUCTS

2.01 EPOXY – SPOT 2 COAT SYSTEM

A. Spot two (2) coat epoxy system.

B. Approved suppliers and system:

<u>Manufacturer</u>	<u>System</u>
Tnemec	66(spot)/66(spot)
Induron	PE-70(spot)/PE-70(spot)
PPG	Amerlock 2(spot)/Amerlock 2(spot)
Sherwin Williams	646(spot)/646(spot)

PART 3 – EXECUTION

3.01 EPOXY – SPOT 2 COAT EPOXY

A. Apply to all prepared areas a spot two (2) coat epoxy system.

B. Surface preparation has been previously defined in Section 09 97 13.10.

C. Apply each coat at the following rates:

<u>Coat</u>	<u>Minimum</u>	<u>Maximum</u>
	<u>D.F.T. (mils)</u>	<u>D.F.T. (mils)</u>
Primer (spot)	3.5	5.5
Topcoat (spot)	<u>3.5</u>	<u>5.5</u>
Total	7.0	11.0

- D. Each coat to be a different color from the previous coat and is to be approved by the engineer. No color bleedthrough should occur if proper application rates are observed.
- E. Apply all coats in uniform color and sheen without streaks, laps, runs, sags, cloudy, or missed areas. Correct all defects before application of the successive coat.
- F. Allow a minimum of twenty-four (24) hours between coats. Additional time may be necessary if low temperatures require an increase in the necessary cure time.

3.02 SCHEDULE of WORK

- A. Complete all exterior and interior welding prior to surface preparation.

SECTION 09 97 13.24.11
EXTERIOR STEEL COATING – THREE COAT EPOXY
POLYURETHANE FLUOROPOLYMER OVERCOAT

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Painting on the exterior.

1.02 REFERENCES

A. SSPC and NACE Standards:

- 1. PA1 – Paint Application.
- 2. PA2 – Measurements and Calibration.
- 3. NACE RP 0178 Surface Finish Requirements.

1.03 WORK INCLUDED

- A. Application of a three (3) coat epoxy polyurethane fluoropolymer system.
- B. Application of logos.

PART 2 – PRODUCTS

2.01 EPOXY POLYURETHANE FLUOROPOLYMER - 3 COAT OVERCOAT SYSTEM

- A. The coating shall be an epoxy polyurethane fluoropolymer system.
- B. The contractor is advised to follow all requirements for safety concerning isocyanates.
- C. Ultraviolet protection additives mixed at factory only. There will be no tinting or addition of any material other than the manufacturer's thinners.
- D. Approved suppliers and systems:

<u>Manufacturer</u>	<u>System</u>
Tnemec	66(spot)/66/1095/700
Induron	PE-70(spot)/PE-70/I-6600 Plus/Perma-Gloss
PPG	Amerlock 2-400(spot)/Amerlock 2-400/Amercoat 450H/ Cora Flon A D S
Sherwin Williams	646PW(spot)/646PW/Acrolon Ultra/Fluorokem HS

PART 3 – EXECUTION

3.01 EPOXY POLYURETHANE FLUOROPOLYMER - 3 COAT SYSTEM

- A. Apply to all prepared surfaces and appurtenances a three (3) coat epoxy polyurethane fluoropolymer system.
- B. Surface preparation and paint requirements have been previously defined in Section 09 97 13.10. Apply all coatings by brush and roller. Spray application is prohibited.
- C. Apply each coat at the following rates:

<u>Coat</u>	<u>Minimum</u>	<u>Maximum</u>
	<u>D.F.T. (mils)</u>	<u>D.F.T. (mils)</u>
Primer (spot)	2.0	3.0
Epoxy Intermediate	2.0	3.0
Urethane Intermediate	2.0	3.0
Topcoat	<u>2.0</u>	<u>3.0</u>
Total	8.0	12.0

- D. Each full coat to be a different color from the previous coat and is to be approved by the engineer. No color bleedthrough should occur if proper application rates are observed.
- E. Apply all coats in uniform color and sheen without streaks, laps, runs, sags, cloudy, or missed areas. Correct all defects before application of the successive coat.
- F. Allow a minimum of twenty-four (24) hours between coats. Additional time may be necessary if low temperatures require an increase in the necessary cure time.

3.02 LOGO

- A. Paint the logo per the attached rendering in two locations on the sidewall. Field verify locations and dimensions with the Owner prior to application.
- B. See the attached rendering and color guide.
- C. Approved Fluorourethane coating system.

<u>Manufacturer</u>	<u>System</u>
Tnemec	700
Induron	Perma-Gloss
PPG	Cora Flon A D S
Sherwin Williams	Fluorokem HS

- D. Apply logo coating at 2.0 to 3.0 mils.
- E. Payment is a separate line item “Logos” which the Owner reserves the right to delete.

3.03 SCHEDULE of WORK

- A. Complete all exterior and interior welding prior to surface preparation.

Color Palette

Meridian Navy

RGB | 0/93/130

CMYK | 100/0/0/52

Pantone | 2945 U



Meridian Green

RGB | 117/148/58

CMYK | 50/0/100/30

Pantone | 377 U



Meridian Orange

RGB | 213/103/44

CMYK | 0/74/100/0

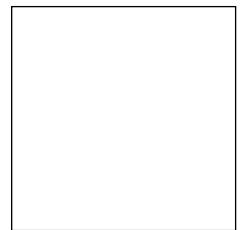
Pantone | 166 U

Meridian Gray

RGB | 67/66/68

CMYK | 0/0/0/90

Pantone | Neutral Black U



Black

RGB | 0/0/0

CMYK | 20/20/20/100

White

RGB | 255/255/255

CMYK | 0/0/0/0

*Based on Pantone + solid uncoated; numbers may vary from paper types. Always proof colors from printers.



SECTION 09 97 23.23.01

CONCRETE FOUNDATION COATING – TWO COAT EPOXY

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Painting of the concrete foundation(s).

1.02 REFERENCES

- A. SSPC and NACE Standards:
 - 1. PA1 – Paint Application.
 - 2. PA2 – Measurements and Calibration.

1.03 WORK INCLUDED

- A. Application of a two (2) coat epoxy system.

PART 2 – PRODUCTS

2.01 EPOXY – 2 COAT SYSTEM

- A. Two (2) coat epoxy system.
- B. Approved suppliers and manufacturers:

<u>Manufacturer</u>	<u>System</u>
Tnemec	66/66
Induron	PE-70/PE-70
PPG	Amerlock 2/Amerlock 2
Sherwin Williams	646PW/646PW
Carboline	635/635

PART 3 – EXECUTION

3.01 EPOXY – 2 COAT EPOXY

- A. Apply to all prepared areas a two (2) coat epoxy system.
- B. Remove dirt 3” below grade around the entire foundation prior to coating, backfill once topcoat is dry to the touch.
- C. Foundations to be water cleaned at 3,500 to 5,000 psi to remove all contaminants.
- D. Abrasive blast clean to a SSPC-SP13/NACE 6 Standard to create a profile per ICRI – CSP3.

E. Apply each coat at the following rates:

<u>Coat</u>	<u>Min. D.F.T. (mils)</u>	<u>Max. D.F.T. (mils)</u>
Primer	3.5	5.5
Topcoat	<u>3.5</u>	<u>5.5</u>
Total	7.0	11.0

F. Allow the manufacturer's minimum time between coatings.

G. Cost is incidental to exterior painting.

"General Decision Number: MI20210058 11/12/2021

Superseded General Decision Number: MI20200058

State: Michigan

Construction Type: Heavy

County: Ingham County in Michigan.

Heavy, Includes Water, Sewer Lines and Excavation (Excludes Hazardous Waste Removal; Coal, Oil, Gas, Duct and other similar Pipeline Construction)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/01/2021
1	06/25/2021
2	07/16/2021
3	09/03/2021
4	10/01/2021
5	10/22/2021
6	10/29/2021
7	11/12/2021

* CARP1004-017 06/01/2021

	Rates	Fringes
CARPENTER, Includes Form Work....	\$ 27.39	20.73

ELEC0252-007 06/01/2021

Townships of Bunker Hill, Leslie, Onondaga & Stockbridge

	Rates	Fringes
ELECTRICIAN.....	\$ 48.48	27%+12.25

 ELEC0665-015 05/31/2021

Townships of Alaiedon, Aurelius, Delhi, Ingham, Lansing, Leroy, Locke, Meridian, Vevay, Wheatfield, White Oak and Williamson

	Rates	Fringes
ELECTRICIAN.....	\$ 37.50	24.04+5.5%

 ENGI0325-009 09/01/2021

POWER EQUIPMENT OPERATORS: Underground Construction (Including Sewer)

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1.....	\$ 35.92	24.85
GROUP 2.....	\$ 31.03	24.85
GROUP 3.....	\$ 30.53	24.85
GROUP 4.....	\$ 30.25	24.85

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Backhoe/ Excavator, Boring Machine, Bulldozer, Crane, Grader/ Blade, Loader, Roller, Scraper, Trencher (over 8 ft. digging capacity)

GROUP 2: Trencher (8-ft digging capacity and smaller)

GROUP 3: Boom Truck (non-swinging, non- powered type boom)

GROUP 4: Broom/ Sweeper, Fork Truck, Tractor, Bobcat/ Skid Steer /Skid Loader

 ENGI0326-011 06/01/2021

EXCLUDES UNDERGROUND CONSTRUCTION

	Rates	Fringes
OPERATOR: Power Equipment		
Group 1.....	\$ 42.38	24.85
Group 2.....	\$ 39.02	24.85
Group 3.....	\$ 36.43	24.85
Group 4.....	\$ 34.72	24.85
Group 5.....	\$ 34.72	24.85
Group 6.....	\$ 28.86	24.85

FOOTNOTES:

Crane operator with main boom and jib 300' or longer: \$1.50 per hour above the group 1 rate.
 Crane operator with main boom and jib 400' or longer: \$3.00 per hour above the group 1 rate.

PAID HOLIDAYS: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Crane operator with main boom and jib 400', 300', or 220' or longer.

GROUP 2: Crane operator with main boom and jib 140' or longer, tower crane, gantry crane, whirley derrick

GROUP 3: Backhoe/Excavator; Boring Machine; Bulldozer; Crane; Grader/Blade; Loader; Roller; Scraper; Tractor; Trencher

GROUP 4: Bobcat/Skid Loader; Broom/Sweeper; Fork Truck (over 20' lift)

GROUP 5: Boom truck (non-swinging)

GROUP 6: Fork Truck (20' lift and under for masonry work)

 IRON0025-006 06/01/2019

	Rates	Fringes
IRONWORKER		
Reinforcing.....	\$ 30.98	27.99
Structural.....	\$ 36.77	29.03

 LAB00334-013 09/01/2018

SCOPE OF WORK:
 OPEN CUT CONSTRUCTION: Excavation of earth and sewer, utilities, and improvements, including underground piping/conduit (including inspection, cleaning, restoration, and relining)

	Rates	Fringes
LABORER		
(1) Common or General.....	\$ 21.94	12.85
(2) Mason Tender-Cement/Concrete.....	\$ 22.08	12.85
(4) Grade Checker.....	\$ 22.25	12.85
(5) Pipelayer.....	\$ 22.39	12.85

 * LAB00499-024 06/01/2021

EXCLUDES OPEN CUT CONSTRUCTION

LABORER

Common or General; Grade
Checker; Mason Tender -
Cement/Concrete; Pipelayer..\$ 27.56 12.95

PAIN0845-017 05/21/2014

Rates Fringes

PAINTER: Brush, Roller and
Spray.....\$ 21.89 11.85

PLAS0016-027 04/01/2014

Rates Fringes

CEMENT MASON/CONCRETE FINISHER...\$ 24.64 12.88

PLUM0333-020 06/01/2020

Rates Fringes

PLUMBER/PIPEFITTER.....\$ 38.79 23.08

TEAM0007-011 06/01/2020

Rates Fringes

TRUCK DRIVER

Lowboy/Semi-Trailer Truck...\$ 28.05 .50 + a+b
Tractor Haul Truck.....\$ 27.80 .50 + a+b

FOOTNOTE:

- a. \$470.70 per week.
- b. \$68.70 daily.

SUMI2010-056 11/09/2010

Rates Fringes

LABORER: Landscape.....\$ 12.25 0.00

TRUCK DRIVER: Dump Truck.....\$ 18.00 6.43

TRUCK DRIVER: Off the Road
Truck.....\$ 20.82 3.69

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave
for Federal Contractors applies to all contracts subject to the
Davis-Bacon Act for which the contract is awarded (and any
solicitation was issued) on or after January 1, 2017. If this
contract is covered by the EO, the contractor must provide

employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and

non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor

200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"