REQUEST FOR PROPOSALS AND STATEMENT OF QUALIFICATIONS

FOR THE PRE-SELECTION OF A

Prestressed Concrete Storage Tank

For the Oak Creek Water and Sewer Utility

2016 Water Treatment Plant Improvements Project

Prepared By:

CH2MHILL®

April 2015

For Information Regarding This Project, Contact: Tony Myers, CH2M HILL, 135 S. 84th Street, Suite 400, Milwaukee, WI 53214, Phone: (414) 847-0238, Email: Tony.Myers@ch2m.com

OAK CREEK WATER AND SEWER UTILITY

OAK CREEK, WISCONSIN

REQUEST FOR PROPOSALS
AND
STATEMENT OF QUALIFICATIONS

For the Pre-Selection of a

PRESTRESSED CONCRETE STORAGE TANK

For the Oak Creek Water and Sewer Utility

2016 Water Treatment Plant Improvements Project

CH2M HILL®

APRIL 2015

Project No. 653463

TABLE OF CONTENTS

END OF SECTION

SECTION 00 11 15
ADVERTISEMENT TO BID

The Oak Creek Water and Sewer Utility is advertising this Request for Proposals and Statements of Qualifications for qualified Suppliers to furnish and construct the following equipment:

A two million gallon prestressed concrete potable water storage tank for installation at the existing Oak Creek Water and Sewer Utility Water Treatment Plant. The prestressed concrete storage tank supplier will be selected by the Oak Creek Water and Sewer Utility, and the scope of work and price will be assigned to a general contractor who will construct the remainder of the 2016 Water Treatment Plant Improvements Project.

Sealed proposals and statements of qualifications for the 2016 Oak Creek Water Plant Treatment Improvements Project, Prestressed Concrete Storage Tank, addressed to the Oak Creek Water and Sewer Utility, 170 W. Drexel Ave., Oak Creek, WI 53154, will be received at the office of the Oak Creek Water and Sewer Utility, (Owner), until 2:00 p.m., local time, on the 30th day of April, 2015. Any Proposals received after the specified time will not be considered. The cost of the Prestressed Concrete Storage Tank will then be publicly opened and read aloud.

Proposal envelope to: 1) identify project, 2) identify bidder, and 3) be marked "PROPOSAL AND STATEMENT OF QUALIFICATIONS." Proposal envelope not properly marked will be cause for rejection. Project is identified as:

PRE-SELECTION OF A
PRESTRESSED CONCRETE STORAGE TANK
FOR THE OAK CREEK WATER AND SEWER UTILITY
2016 WATER TREATMENT PLANT IMPROVEMENTS PROJECT

Proposals and statement of qualifications shall include required forms furnished by the Owner in the Request for Proposals and Statement of Qualifications (RFP-SOQ). Paper copy or electronic PDF file of the RFP-SOQ must be requested through the Owner's Engineer: CH2M HILL, 135 S. 84th Street, Suite 400, Milwaukee, WI, 53214, Attn: Sharon Laurent, (414) 847-0231, Sharon.Laurent@ch2m.com. Paper copies may be picked up at the CH2M HILL office between 8am and 3pm, Monday through Friday. Limit one (1) paper copy and one (1) electronic copy per bidder.

Address correspondence to:

CH2M HILL
Attn: Sharon Laurent
135 S. 84th Street, Suite 400
Milwaukee, WI 53214

No proposal shall be received unless accompanied by a certified check or a bid bond equal to five percent of the cost of the Prestressed Concrete Storage Tank, payable to the Oak Creek Water and Sewer Utility as a guarantee that if the proposal is accepted, the bidder will execute and file the proper contract and bond with the Installing Contractor. If the bidder fails to file such contract and bond within the time set by the Owner, the check or bid bond shall be forfeited to the Owner as liquidated damages.

This project is being financed in whole or in part by the Wisconsin Department of Natural Resources (WDNR) through the Safe Drinking Water Loan (SDWL) program. Municipalities constructing projects designated as federal equivalency must comply with the following federal laws and all applicable state and federal laws, rules, and regulations, and must ensure that their contractor(s) also comply with these laws, rules and regulations.

1) Title VI of the Civil Rights Act of 1964 (P. L 88-352), the Rehabilitation Act of 1973 (P.L. 931123, 87 Stat. 355, 29 U.S.C. Sec. 794), the Older Americans Amendments of 1975 (P.L. 94-135 Sec. 303, 89 Stat. 713, 728, 42 U.S.C. Sec. 6102), and subsequent regulations, ensures access to facilities or programs regardless of race, color, national origin, sex, age or handicap.

2) Executive Orders 11246, as amended by Executive Orders 11375 and 12086 and subsequent regulations. Prohibits employment discrimination on the basis of race, color, religion, sex or national origin. Inclusion of the seven clauses in Section 202 of Execute Order 11246 as amended by Executive Orders 11375 and 12086 are required in all project related contracts and subcontracts for municipalities over 3,300 population.

3) Executive Orders 11625, 12138 and 12432; 40 CFR part 33; Section 129 of P. L. 100-590 Small Business Reauthorization & Amendment Act of 1988; Public Law 102-389 (42 U.S.C. 437d); a 1993 appropriations act (“EPA’s 8% statute”); Public Law 101-549, Title X of the Clean Air Acts Amendments of 1990 (42 U. S. C. 7601 note) (“EPA’s 10% statute”). Encourages recipients to award construction, supply and professional service contracts to minority and women’s business enterprises (MBE/WBE) and small businesses and requires recipients to utilize affirmative steps in procurement.

4) 40 CFR part 33 Participation by Disadvantages Business Enterprises in Procurement under Environmental Protection Agency (EPA) Financial Assistance Agreements

5) Executive Order 12549, 3 CFR, 189 and 40 CFR PART 32, Subparts B and C. Prohibits entering into contracts or sub-contracts with individuals or businesses who are debarred or suspended. Borrowers are required to check the status of all contractors (construction and professional services) and must require contractors to check the status of subcontractors for contracts expected to be equal to or over $25,000 via this Internet address: http://epls.arnet.gov/.

6) Executive Order 13202, as amended by Executive Order 13208, does not allow bid specifications, project agreements or other controlling agreements to require or prohibit bidders, contractors or subcontractors to enter into or to adhere to project labor agreements.

7) Section 1450(e) of the Safe Drinking Water Act (41 USC 300j-9(e)), which requires that all laborers and mechanics employed by contractors and subcontractors on projects funded directly by or assisted in whole or in part by and through the Federal Government pursuant to this Act shall be paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by the Secretary of labor in accordance with subchapter IV of chapter 31 of title 30, United States code. With respect to the labor standards specified in this section, the Secretary of Labor has the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (64 Stat. 1267;5 U.S.C. App.) and section 3145 of title 40, United States Code. **Please note this provision (Davis-Bacon) applies to ALL loan recipients.**

For Work completed at Oak Creek site, Bidder shall be required to pay not less than the prevailing wage rates on the Project as established by the State of Wisconsin, Department of Workforce Development, and the Federal Davis Bacon and Related Acts, whichever is higher. Copies of these wage rates are on file in the office of the Oak Creek Water and Sewer Utility and incorporated into the Contract Documents.

Any Contract awarded under this Official Invitation to Bid is expected to be funded in part by a loan from the Wisconsin Safe Drinking Water. Neither the WDNR, nor its agencies or employees, is or will be a party to this Official Invitation to Bid or any resulting contract.

Any failure by the Bidder to comply with these paragraphs shall permit the WDNR to recover as damages against the Bidder any loss, expense or cost (including without limitation attorney's fees) incurred by the WDNR resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part).

In order to perform public work, Successful Bidder and Subcontractors prior to contract award shall hold or obtain such licenses and registrations as required by State Statutes and Codes, and federal and local Laws and Regulations.

Bidders are required to comply with requirements of WSA 111.321 concerning discrimination in employment.

For information concerning the proposed Work, contact Tony Myers at CH2M HILL, email Tony.Myers@ch2m.com or telephone 414-847-0238.

For an appointment to visit the Site, contact Mr. Pat Francis at the water plant, telephone 414-768-7060. Site visits will be scheduled on Wednesdays, during the Bid period.

Owner’s right is reserved to reject all Bids or any Bid not conforming to the intent and purpose of the Bidding Documents.

END OF SECTION

SECTION 00 11 57

**REQUEST FOR PROPOSALS
AND STATEMENTS OF QUALIFICATIONS**

Oak Creek Water and Sewer Utility
Prestressed Concrete Storage Tank

1. INTRODUCTION

The Oak Creek Water and Sewer Utility (Owner) is advertising this Request for Proposals and Statements of Qualifications for qualified Suppliers to furnish and deliver the following item: Prestressed Concrete Storage Tank suitable for potable water storage and chlorine contact for installation at the existing Oak Creek Water and Sewer Utility Water Treatment Plant.

Unless otherwise specified, the Supplier shall be responsible for the provision of all engineering, labor, equipment, and materials as required for the manufacture, provision and delivery of a fully functional Prestressed Concrete Storage Tank as described in these Drawings and Specifications. It is anticipated the Prestressed Concrete Storage Tank will be purchased by the Installing Contractor selected separately by the Oak Creek Water and Sewer Utility, to construct the 2016 Water Treatment Plant Improvements Project.

2. SCOPE OF WORK

2.1. The scope of work is detailed in the drawings and specifications. A general description of the scope of work follows:

1. Furnish and install all work shown in the drawings and detailed in the specifications. Work shall include but not be limited to:

    a. Prestressed concrete storage tank.

    b. Associated storage tank hatches, vents, rain gutters, ladders, platforms, coatings, architectural cast stone and concrete features.

    c. Piping inside the tank, concrete pipe encasement under the tank, and piping to the next joint outside of the tank foundation. Anchoring and bracing piping inside the tank.

    d. Baffles inside the tank and associated anchoring and bracing.

2. Installing Contractor will provide:

    a. Earthwork including excavation, fill, compaction.

b. Sidewalk around the tank when tank is finished.

c. Gate valve on the tank drain line.

d. Cathodic protection.

e. Any electrical appurtenances and wiring on or inside the tank.

f. Disinfection.

3. PRIMARY PROJECT CONTACT

Ron J. Pritzlaff, P.E.
Utility Engineer
Oak Creek Water & Sewer Utility
170 W. Drexel Avenue
Oak Creek, WI 53154
rpritzlaff@water.oak-creek.wi.us
(414) 570-8200 x24
(414) 570-8215 (fax)

Tony Myers, P.E.
Senior Project Manager
CH2M HILL
135 S. 84th Street, Suite 400
Milwaukee, WI 53214
Phone: (414) 847-0238
Email: tony.myers@ch2m.com

4. UTILITY PRE-SELECTION PROCESS

Selection and execution of any agreement for equipment and services will be accomplished in accordance with the Owner's policies and procedures. The Owner will pre-select the Prestressed Concrete Storage Tank which best serves the interest of the Owner long-term with consideration for the proposed Prestressed Concrete Storage Tank that meets all the specifications, meets the minimum experience requirements, has a competitive cost, minimizes capital expenditures in the future, and offers the most long term benefits/flexibility to the Owner. It is anticipated the Prestressed Concrete Storage Tank will be purchased by the Installing Contractor selected separately by the Owner for the construction of the 2016 Water Treatment Plant Improvements Project.

4.1. Instruction for Responding Suppliers

1. Review the Request for Proposals and Statement of Qualifications in its entirety and become familiar with its contents. Incomplete or incorrect responses or proposals may be discounted or disqualified.

2. Specifications are attached hereto. All responses must be specific and directly related to the project's Specifications.

3. Responding Suppliers must respond to all items and include any additional material required by this Request for Proposals and Statement of Qualifications.

4. Additional information may be requested from the Suppliers during the Bid Evaluation period.

5. The Owner shall not be liable for any cost incurred by any Supplier in response to this solicitation or any requests for information from the Owner or Engineer as defined in General Conditions.

6. The Owner expressly reserves the right to reject any and all proposals and to not enter into agreement with the Supplier, if the Owner determines, in its sole judgment that such action is in the Owner's best interest.

7. Refer to 00 72 10, General Conditions for a list of definitions and acronyms used in this Request for Proposals and Statement of Qualifications.

4.2. Submittals

To be considered, respondents must deliver Proposal to the address stated herein on or before the deadline, and in the number of copies indicated below.

1. PROPOSAL DEADLINE: As shown in Section 01 11 15, Advertisement. Proposals not received by the deadline, regardless of cause, will not be considered.

2. SUBMIT PROPOSALS TO:

   Ronald J. Pritzlaff, P.E.
   Utility Engineer
   Oak Creek Water and Sewer Utility
   170 West Drexel Avenue
   Oak Creek, WI 53154

3. MARK PROPOSALS AS FOLLOWS:

   Project:
   PRE-SELECTION OF A
   PRESTRESSED CONCRETE STORAGE TANK
   FOR THE OAK CREEK WATER AND SEWER UTILITY
   2016 WATER TREATMENT PLANT IMPROVEMENTS PROJECT

Bidder:

Name and address of the Bidder

Proposal and Statement of Qualifications

Due Date: *As listed in Advertisement*

4. REQUIRED COPIES OF SUBMITTALS: Five (5) copies.

4.3. Requests for Information

Any Supplier with questions, exceptions, objections, qualifications or clarifications on the technical requirements and content of this Request for Proposals and Statement of Qualifications must submit them in writing to both of the primary project contacts. Acceptable formats for question submission shall include E-mail and Letter. E-mail with return confirmation is the preferred method.

The project contacts will compile these questions and periodically distribute summaries of the submitted questions and responses by Addendum to all Suppliers under consideration for this project. The Addenda distributed to the Suppliers will be done via E-mail. The final date for submitted questions shall be five (5) working days before the proposal due date. All addenda will be incorporated into the final Request for Proposals and Statement of Qualifications.

4.4. Assignment of Contract

The Work hereunder will be assigned by the Owner to an Installing Contractor at the time the construction contract (under which the equipment and materials specified herein will be installed) is executed.

In the application of the terms and conditions of these Contract Documents after the Work has been assigned to the Installing Contractor, Supplier shall function as a subcontractor or a supplier to the Installing Contractor and all obligations of Supplier to the Utility shall, after assignment, become obligations of Supplier to Installing Contractor.

Risk of loss as it relates to the equipment and materials provided hereunder shall be borne by Supplier until delivery to the project site and acceptance by the Installing Contractor, and thereafter shall be borne by the Installing Contractor until final acceptance by the Owner.

4.5. Bid Security

Proposals must be accompanied by bid bond, or a certified check in an amount of 5 percent of the cost of the Prestressed Concrete Storage Tank payable to the Oak Creek Water and Sewer Utility. This bid security shall be given as a guarantee that the Bidder will not withdraw his Proposal for a period of 365 days after bid opening, and that if selected for the

Work, the successful Bidder will execute a subcontract with the Installing Contractor within that period of time.

4.6. Selection of Supplier

Within 60 calendar days after the opening of Proposals, the Owner will select one of the Proposals in accordance with Section 6 – Proposal Content. The selection of the Proposal will be by written notice of selection via electronic or paper mail to the office/location designated in the Proposal from the Prestressed Concrete Storage Tank Supplier. In the event of failure of the selected Supplier to sign an agreement to supply the proposed Prestressed Concrete Storage Tank to the Owner's Installing Contractor, the Owner may select the second ranked responsible Supplier. Selection of the Proposal does not guarantee assignment to the Installing Contractor.

4.7. Return of Bid Security

Within 30 days after selection of Supplier, the Owner will return the bid securities to all Bidders whose Proposals are not to be further considered in selecting the Work. All other retained bid securities will be held until the subcontract with the Installing Contractor has been finally executed, after which all bid securities, other than Bidders' bonds and any guarantees which have been forfeited, will be returned to the respective Bidders whose Proposals they accompanied.

4.8. Failure to Execute Subcontract

It is anticipated the Prestressed Concrete Storage Tank will be purchased by the Installing Contractor selected by the Owner. The selected Supplier who fails to promptly and properly execute a subcontract with the Installing Contractor shall forfeit the bid security that accompanied his bid, and the bid security shall be retained as liquidated damages by the Owner, and it is agreed that this said sum is a fair estimate of the amount of damages the Owner will sustain in case the Supplier fails to enter into a subcontract with the Installing Contractor.

4.9. Performance Bond

The Supplier whose bid has been accepted will be required to furnish a bond in the amount of One Hundred percent (100%) of the total bid amount listed on the Bid Form within three (3) business days from the date of the service of a notice to that effect, delivered to it or them in person, or mailed to the address given in the bid. In the case of failure to do so, it or they will be deemed to have abandoned the contract, and the amount of the bid bond made by it or them will be forfeited to and retained by the Oak Creek Water and Sewer Utility as liquidated damages for such failure, but if it or they shall execute the contract and bond within the time aforesaid, the amount of its or their bid bond will thereupon be returned to him or them.

5. SCOPE OF SERVICES

Services of the Supplier shall include, but not necessarily be limited to, those described in the Specifications. Cost of these services shall be included in the capital cost in Section 00 41 13, Bid Form.

6. PROPOSAL CONTENT

Suppliers wishing to offer their equipment and services must submit Proposals and Statements of Qualifications to the Owner to be considered. The proposal must contain the following information:

6.1. Acknowledgment of Terms and Conditions

The Proposing Supplier shall acknowledge and accept all terms and conditions contained in the Request for Proposals and Statement of Qualifications and its attachments. Any exceptions or qualifications must be submitted in writing prior to Proposal submission, as described in Section 4.3 – Requests for Information. Any exceptions of the bid not addressed by Addenda could result in disqualification of the proposal if, in the judgment of the Owner or its Engineer, the exception does meet the intent of the terms and conditions contained in the Request for Proposals and Statement of Qualifications and its attachments.

Complete the Non-Collusion Affidavit provided in Bid Form Supplement.

6.2. Compliance with General Criteria

General criteria regarding proposal content is defined below:

1. Refer to Specification, 33 16 13.15, Prestressed Concrete Tank With Steel Diaphragm, for the required Prestressed Concrete Storage Tank to be provided by the Supplier. Refer to Specification, 33 05 01.02, Ductile Iron Pipe and Fittings for the required piping to be provided by the Supplier. Supplier Proposals shall address the items listed in all specification sections. Suppliers should note that it is suggested that the Proposals be presented in such a manner as to allow the reviewer to expeditiously learn the key features of the Supplier's system. Concise answers to all questions are desired.

2. Proposals without sufficient submittal data to provide a complete evaluation will not be considered.

3. Use of information provided: The Supplier shall agree that any and all information provided in the Proposal shall serve as the basis for evaluation of Proposals and all or portions of the proposal can be shared with any approving agency.

4. Selection of Supplier does not constitute approval of any materials or deviations from the Specifications.

5. Each Supplier is required to describe and provide details on their proposed product and services for the Owner.

6. The Supplier shall present any objections or exceptions to any provision of this Request for Proposals and Statement of Qualifications and its attachments not addressed by Addenda.

7. Prestressed Concrete Storage Tank must fully meet all State of Wisconsin code requirements and also meet all state and federal regulatory requirements for the storage of filtered surface water for a municipal potable water supply.

8. Any deviation from the Specifications MUST be noted in detail, and submitted in writing and attached to the Bid Form. Completed specifications should be attached for any substitutions offered, or when amplifications are desirable or necessary. The absence of the specification deviation statement and accompanying specifications will hold the Supplier strictly accountable to the specifications as written herein. Failure to submit this document of specification deviation, if applicable, shall be grounds for rejection of the item when offered for delivery. If specifications or descriptive papers are submitted with Proposals, the Supplier's name should be clearly shown on each document.

6.3. Technical Information

The following summarizes the technical information to be provided in the Proposal. Failure to provide technical information regarding the proposed Prestressed Concrete Storage Tank may result in rejection of the Submittal from further consideration and evaluation.

a. Typical tank construction details including foundation, walls and roof.

b. Roof hatch and side hatch details.

c. Pipe penetration details.

d. Overflow pipe support details.

e. Baffle wall anchoring and bracing details.

f. Roof drain details

g. Cast stone and decorative concrete anchoring details.

h. Coating system details.

i. Foundation and soil preparation requirements. Indicate maximum allowable differential settlement of the structure.

Advantages and disadvantages of specific features should be highlighted.

6.4. Compliance with Mandatory Experience Criteria

Failure to comply with any of these mandatory experience criteria may result in rejection of the Proposal from further consideration and evaluation.

1. Prestressed Concrete Storage Tank proposed meets performance criteria of the Technical Specifications and all federal and State of Wisconsin code and regulatory requirements.

2. Experience of Supplier. The Supplier shall have a minimum of 20 years' experience in the design, fabrication, assembly, and construction of storage tanks that are similar size and type as that specified. The Supplier must have a minimum of 25 similar operating public utility drinking water storage tanks in North America. Provide 10-year experience list for similar systems **with baffle walls**. Include facility location, installation date and storage volume provided at each facility. Supplier shall provide information on the construction supervisors who will be assigned to this project and their experience.

3. References. Provide references from at least five similar operating public utility drinking water storage tanks **with baffle walls** in North America, including the contact's name, company, title, address, telephone number, and email address.

4. System proposed shall be completely functional and operable within specified design conditions.

5. Storage tank proposed shall be fully compliant with the requirements of AWWA standard D110.

6.5. Warranty Information

Provide warranty information and any specific company warranties over the life of the storage tank. Provide the contact person for warranty issues and their resume and history with the company.

Provide service locations in North America, and specifics on the service location that would handle this project including: number of persons employed at each service location, skills of personnel, equipment and capabilities to make tank repairs, track record of repairs.

6.6. Project Cost

For purposes of consistent evaluation, the Utility requires that all Suppliers present their costs in the same format. **Project Costs shall be submitted in Section 00 41 13, Bid Form included in Part 1 of this Request for Proposals and Statement of Qualifications**. If Supplier is selected for further negotiation with the Owner, this Bid Form will be used as the basis for negotiations.

1. The contract for services requested by this Request for Proposals and Statement of Qualifications shall be administered using procurement regulations of the Owner.

2. By signing the **Bid Form** (**00 41 13)** the Supplier certifies that if selected the Supplier will sign the Agreement provided in the Request for Proposals and Statement of Qualifications.

6.7. Supportive Information (as Appendix to Proposal)

Submittal of this information is optional and may include graphs, charts, photos, resumes, firm profiles, etc. Information included in the supportive information section will be considered in the evaluation of the submittals. The Owner requests that respondents keep this section brief and relevant.

7. PROPOSAL EVALUATION

The pre-selection evaluation process will consider the following factors:

1. Compliance with technical specifications and minimum experience criteria.

2. Non-monetary and monetary criteria as listed below.

Non-Monetary criteria included in the Prestressed Concrete Storage Tank Proposal, including:

1. Quality of Product and Materials:

    a. Site and soil preparation requirements.

    b. Materials and methods of construction.

    c. Prestressed Concrete Storage Tank baffle anchoring and support systems.

    d. Pipe mounting and bracing systems.

    e. Access hatch details.

2. Experience and References:

    a. Compliance with Mandatory Experience Criteria.

    b. Past performance and references.

    c. Construction staff experience and capabilities.

3. Warranty Conditions:

    a. Warranty coverage and duration.

    b. Person responsible for warranty issues and experience.

    c. Service network, experience of personnel, capabilities of staff, location.

It is the intention of the Owner that the Prestressed Concrete Storage Tank pre-selection will be based on compliance with the technical specifications, mandatory experience criteria, project references, capital costs, long term value and Prestressed Concrete Storage Tank characteristics.

The Owner reserves its right to reject any and all Proposals, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Proposals. The Owner further reserves the right to reject the Proposal of any Supplier whom it finds, after reasonable inquiry and evaluation, to be nonresponsive. The Owner may also reject the Proposal of any Supplier if the Owner believes that it would not be in the best interest of the Owner to make an award to that Supplier.

In evaluating Proposals, the Owner will consider whether or not Proposals comply with prescribed requirements, and such alternatives, and other data, as may be requested in Proposal Form or may be requested from Suppliers prior to a Notice of Award.

In evaluating Proposals, the Owner will consider the qualifications of the Suppliers and their proposed storage tank appurtenances.

The Owner may conduct such investigations it deems necessary to establish responsibility, qualifications, and financial ability of Supplier's proposed subcontractors, suppliers, individuals, or entities to furnish parts of Goods and Special Services in accordance with the Request for Proposals and Statement of Qualifications. Supplier references will be contacted and poor performance on operation, maintenance and support Services can disqualify a proposer from award.

The Owner's evaluation results will be final. The Owner is not obligated to further explain or clarify the evaluation results.

8. PROPOSED PROJECT SCHEDULE

The Prestressed Concrete Storage Tank will be pre-selected by the Owner in advance of final design of the project. The project will be designed to accommodate the pre-selected Prestressed Concrete Storage Tank. The schedule below provides a general guideline for the project but does not constitute contractually binding dates. Milestone and equipment delivery dates will be negotiated between the Supplier and Installing Contractor. The dates included in the schedule above should be used as a basis for the purposes of preparing the bid. The Supplier will be responsible for coordinating Work activities with the Installing Contractor at that time.

Proposal Due Date/Bid Opening	As stated in Advertisement
Estimated date of Proposal Selection	May 19, 2015
Estimated Installing Contractor Construction Contract Award	October 15, 2015
Storage Tank Submittals Due	2 months after Construction Contract Award
Substantial Project Completion	March, 2017
Final Project Completion	July, 2017

END OF SECTION

INSTRUCTIONS TO BIDDERS

1. DEFINED TERMS

1.1. Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

1.1.1. *Issuing Office*—The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

2. COPIES OF BIDDING DOCUMENTS

2.1. Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the Advertisement to Bid may be obtained from the Issuing Office.

2.2. Complete sets of Bidding Documents shall be used in preparing Bids. Neither Owner nor Engineer assumes responsibility for errors or misinterpretations resulting from use of incomplete sets of Bidding Documents.

2.3. Drawings bound in the Bidding Documents are photographic reductions of original tracings. Amount of reduction is indicated by a note or scale bar on Drawing. Full-size Drawings may be obtained from Engineer at cost of reproduction and handling, plus postage for mailing (if mailing is requested). Drawings will only be made available to firms listed as having complete sets of Bidding Documents. No return of full-size Drawings is required, and no refund will be made.

2.4. Owner and Engineer, in making copies of Bidding Documents made available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license or grant for any other use.

3. QUALIFICATIONS OF BIDDERS

3.1. In order to perform public work, Bidder and its Subcontractors, prior to award of Contract or as otherwise required by the jurisdiction, shall hold or obtain such licenses as required by State Statutes, and federal and local Laws and Regulations.

3.2. Bidder is advised to carefully review those portions of the Bid Form requiring representations and certifications.

4. LICENSE REQUIREMENTS

4.1. In order to perform public work, Successful Bidder and Subcontractors prior to Contract award shall hold or obtain such licenses as required by State Statutes, and federal and local Laws and Regulations.

5. EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

5.1. Subsurface and Physical Conditions:

5.1.1. A geotechnical engineering technical memorandum by CH2M HILL (March 2015) and a geotechnical engineering data report by Terracon Consultants of explorations and tests of subsurface conditions at or contiguous to the Site, is available upon request.

5.1.1.1. Those drawings known to Owner of physical conditions relating to existing surface and subsurface structures at the Site (except Underground Facilities).

5.1.2. Copies of reports and drawings referenced will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings. Costs associated with making available copies of reports and drawings shall be borne by Owner.

5.2. It is responsibility of each Bidder before submitting a Bid to:

5.2.1. Examine and carefully study the Bidding Documents, other related data identified in the Bidding Documents, and any Addenda.

5.2.2. Become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

5.2.3. Carefully study all:

5.2.3.1. Reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified as containing reliable "technical data".

5.2.3.2. Cost, progress, and performance of the Work.

5.2.3.3. Means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents.

5.2.3.4. Bidder's safety precautions and programs.

5.2.4. Agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) Bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

5.2.5. Become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

5.2.6. Promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in Bidding Documents and confirm that written resolution thereof by Engineer is acceptable to Bidder.

5.2.7. Determine Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance of the Work.

5.3. Submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this article; that without exception the Bid is premised upon performing and furnishing the Work required by Bidding Documents and applying specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by Bidding Documents; that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder; and that Bidding Documents are generally sufficient to indicate and convey understanding of terms and conditions for performing and furnishing the Work.

6. SITE AND OTHER AREAS

6.1. The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner, unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor.

7. INTERPRETATIONS AND ADDENDA

7.1. All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by the office issuing documents as having received the Bidding Documents. Questions received less than 5 days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

7.2. Addenda may also be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner or Engineer.

8. CONTRACT TIMES

8.1. The number of days within which, or the dates by which, the Work is to be substantially completed and ready for final payment are set forth in Section 00 11 57 Request for Proposals and Statements of Qualifications..

9. SUBSTITUTE AND “OR-EQUAL” ITEMS

9.1. The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or “or-equal” items. Whenever it is specified or described in the Bidding Documents that a substitute or “or-equal” item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement.

10. FEDERAL AND STATE REQUIREMENTS.

10.1.1. This Contract is Federally assisted. The Bidder must comply with the Davis-Bacon Act, the Anti-Kickback Act and the Contract Work Hours and Safety Standards Act, Title VI of the Civil Rights Act of 1964 and Executive Orders 11246 and 11375.

10.1.2. The Work under these Bidding Documents is to be paid for by public funds; therefore, minimum prevailing wage rates published by the State of Wisconsin are included as a Supplement to this Section.

10.1.3. At time of Bid, Bidder shall disclose name of any other construction businesses which Bidder, shareholder, officer, or partner of Bidder owns or has owned within preceding 3 years if the following has occurred: Bidder, shareholder, officer, or partner of Bidder presently owns or has owned within the preceding 3 years at least 25 percent interest in other construction business and the Wisconsin Department of Workforce Development has determined that such other construction business have failed to pay prevailing wage rate or at least 1.5 times the hourly basic rate of pay for hours worked in excess of prevailing hours of labor within the preceding 3 years.

10.1.4. Owner is exempt from Wisconsin state sales and use taxes on materials and equipment to be incorporated in the Work; Said taxes shall not be included in the Bid.

10.1.5. Bidder shall submit list of their proposed Subcontractors with their Bid in accordance with Section 66.0901(7) of the Wisconsin Statutes.

11. REQUIREMENTS FOR SAFE DRINKING WATER FUND PROJECTS

11.1.1. Bidders on this work shall be required to comply with the State and Federal Requirements regarding Labor Standards, Equal Employment Opportunity, need for Affirmative Action, etc.

11.1.2. The following Supplements to this Section are provided to clarify Federal equivalency requirements concerning employment opportunity and various labor standards. It is necessary that each bidder be thoroughly familiar with the information and requirements covered in these attachments.

Appendix E, Employee Rights under the Davis-Bacon Act

Appendix F, Contract and Subcontract Provisions

Appendix H, Labor Standards Interview Form 1445

NOTE: All subcontracts must be in writing and must contain the Wage Rates and Labor Standards Regulation. Contractual relationships between contractors and alleged subcontractors which are formed for the purpose of evading the application of prevailing wage requirements are expressly prohibited and may provide a basis for debarment.

11.1.3. **Davis-Bacon Wage Rates** – Davis-Bacon wages shall be required for this project under the "Principal Forgiveness" loan by Wisconsin Department of Natural Resources.

11.1.4. Davis Bacon Wage Rate Requirements:

11.1.4.1. Notwithstanding any other provision of law and in a manner consistent with other provisions in this ACT, all laborers and mechanics employed by Bidder and its subcontractors on projects funded directly by or assisted in whole or in part by and through the Federal Government pursuant to this Act shall be paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by the Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40, United States Code. With respect to the labor standards specified in this section, the Secretary of Labor shall have the authority and functions set forth in Reorganization Plan Number 14 of 1950 (64 State. 1267; 5 U.S.C. App.) and section 3145 of title 40, United States Code.

11.1.5. The Bidder shall comply with 29 cfr 5.5(a).

11.1.6. On January 17, 2014, H.R. 3547, "Consolidated Appropriations Act, 2014," (Appropriations Act) was enacted. This law provides appropriations for the Drinking

Water State Revolving Fund (DWSRF), while adding a Buy American requirement to these already existing programs. Application of this new requirement is the focus of this memorandum.

H.R. 3547 includes the following language in Division G, Title IV, under the heading, "Use of American Iron and Steel:"

Sec. 436. (a)(1) None of the funds made available by a State water pollution control revolving fund as authorized by Title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.

(2) In this section, the term "iron and steel products" means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.

(b) Subsection (a) shall not apply in any case or category of cases in which the Administrator of the Environmental Protection Agency (in this section referred to as the "Administrator") finds that:

11.1.6.1. applying subsection (a) would be inconsistent with the public interest;

11.1.6.2. iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or

11.1.6.3. inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

(c) If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public on an informal basis a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet Web site of the Environmental Protection Agency.

(d) This section shall be applied in a manner consistent with United States obligations under international agreements.

(e) The Administrator may retain up to 0.25 percent of the funds appropriated in this Act for the Clean and Drinking Water State Revolving Funds for carrying out the provisions described in subsection (a)(1) for management and oversight of the requirements of this section.

(f) This section does not apply with respect to a project if a State agency approves the engineering plans and specifications for the project, in that agency's capacity to approve such plans and specifications prior to a project requesting bids, prior to the date of the enactment of this Act.

12. PREPARATION OF BID

12.1. Within each copy of the Bidding Documents, Bidder will be furnished one copy of the Bid Form, and the Bid Bond Form. No substitution of the Bid Form will be allowed.

12.2. All blanks on the Bid Form shall be completed by typing or printing with ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each Bid item listed therein or the words "No Bid," "No Change," or "Not Applicable" entered.

12.3. A Bid by a corporation shall be executed in the corporate name by the president or a vice president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown.

12.4. A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown.

12.5. A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.

12.6. A Bid by an individual shall show the Bidder's name and official address.

12.7. A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.

12.8. All names shall be typed or printed in ink below the signatures.

12.9. The Bid shall contain an acknowledgement of receipt of all Addenda; the numbers of which shall be filled in on the Bid Form.

12.10. Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

12.11. The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number and class, if applicable, shall also be shown on the Bid Form.

12.12. At time of Bid, Bidder shall disclose name of any other construction businesses which Bidder, shareholder, officer, or partner of Bidder owns or has owned within preceding 3 years if the following has occurred: Bidder, shareholder, officer, or partner of Bidder presently owns or has owned within the preceding 3 years at least 25 percent interest in other construction business and the Wisconsin Department of Workforce Development has determined that such other construction business have failed to pay prevailing wage rate or at least 1.5 times the hourly basic rate of pay for hours worked in excess of prevailing hours of labor within the preceding 3 years.

13. BID AMOUNT

13.1. Lump Sum:

13.1.1. Bidders shall submit a Bid on a lump sum basis as set forth in the Bid Form.

13.1.2. The lump sum Bid Price shall include such amounts as the Bidder deems proper for overhead and profit.

14. SUBMISSION OF BID

14.1. The Bid Form is to be completed and submitted with the Bid security and the following data:

14.1.1. Information requested in section 00 11 57 Request for Proposals and Statement of Qualifications.

14.1.2. Prevailing Wage Rate Violation Disclosure, if applicable, as required by WSA 66.0903(12). Refer also to Article Preparation Of Bids.

14.1.3. Disclosure of Ownership Form. (Section 00 21 13, Instructions to Bidders, Supplement 12).

14.2. A Bid shall be submitted no later than the date and time prescribed, and at the place indicated in the Advertisement for Bids. Enclose Bid in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is

submitted), name and address of Bidder, and accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation “BID ENCLOSED.”

15. MODIFICATION AND WITHDRAWAL OF BID

15.1. A Bid may be modified or withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.

15.2. If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

16. OPENING OF BIDS

16.1. Bids will be opened at the time and place indicated in the Advertisement for Bids and unless obviously nonresponsive, read aloud publicly.

17. BIDS TO REMAIN SUBJECT TO ACCEPTANCE

17.1. All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

18. EVALUATION OF BIDS AND BIDDER SELCTION

18.1. In accordance with Wisconsin State Statute (WSA 66.0903(12)), Contract will not be awarded to Bidder who has failed to pay prevailing wage rate or has found to have paid less than 1.5 times the hourly basic rate of pay for hours worked in excess of prevailing hours of labor within preceding 3 years.

18.2. In accordance with Wisconsin State Statute WSA 16.855(1), if Bidder is not a Wisconsin firm and the state, foreign nation, or subdivision in which Bidder is domiciled grants preference to Bidders domiciled in that state, nation, or subdivision, preference shall be given to Bidder domiciled in Wisconsin.

18.3. Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder. Owner also

reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

18.4. More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

18.5. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.

18.6. In evaluating Bidders, Owner may consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted either with the Bid, or otherwise prior to issuance of the Notice of Award.

18.7. Owner may conduct such investigations as Owner deems necessary to establish responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work in accordance with the Contract Documents.

19. CONTRACT SECURITY AND INSURANCE

19.1. Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to bonds and insurance. When Installing Contractor delivers executed construction agreement to Owner, it shall be accompanied by prestressed concrete tank Successful Bidder bonds.

20. SELECTION OF BIDDER

20.1. Within 60 days of bid opening, Owner shall notify Successful Bidder in writing of selection.

21. SALES AND USE TAXES

21.1. Owner is exempt from Wisconsin state sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Bid.

22. RETAINAGE

22.1. Provisions concerning retainage and Contractor's rights to deposit securities in lieu of retainage, if applicable, are set forth in the Agreement.

23. SUPPLEMENTS

23.1. Supplement 1 Employee Rights under the Davis-Bacon Act.

23.2. Supplement 2 Appendix F, Contract and Subcontract Provisions.

23.3. Supplement 3 Appendix H, Labor Standards Interview.

23.4. Supplement 4 State- of Wisconsin Prevailing Wage Determination.

23.5. Supplement 5 Davis-Bacon Wage Determination.

23.6. Supplement 6 Instructions for Completion of Payroll (Form WH-347).

23.7. Supplement 7 Instructions for Preparation of Statement of Compliance.

23.8. Supplement 8 2005 Wisconsin Act 181.

23.9. Supplement 9 Disclosure of Ownership Form.

23.10. Supplement 10, Prime Contract Affidavit of Compliance with Prevailing Wage Rate Determination.

23.11. Supplement 11 – Implementation of American Iron and Steel Provisions of P.L. 113-76 Consolidated Appropriations Act, 2014.

END OF SECTION

EMPLOYEE RIGHTS
UNDER THE DAVIS-BACON ACT

FOR LABORERS AND MECHANICS EMPLOYED ON FEDERAL OR FEDERALLY ASSISTED CONSTRUCTION PROJECTS

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

PREVAILING WAGES — You must be paid not less than the wage rate listed in the Davis-Bacon Wage Decision posted with this Notice for the work you perform.

OVERTIME — You must be paid not less than one and one-half times your basic rate of pay for all hours worked over 40 in a work week. There are few exceptions.

ENFORCEMENT — Contract payments can be withheld to ensure workers receive wages and overtime pay due, and liquidated damages may apply if overtime pay requirements are not met. Davis-Bacon contract clauses allow contract termination and debarment of contractors from future federal contracts for up to three years. A contractor who falsifies certified payroll records or induces wage kickbacks may be subject to civil or criminal prosecution, fines and/or imprisonment.

APPRENTICES — Apprentice rates apply only to apprentices properly registered under approved Federal or State apprenticeship programs.

PROPER PAY — If you do not receive proper pay, or require further information on the applicable wages, contact the Contracting Officer listed below:

or contact the U.S. Department of Labor's Wage and Hour Division.

For additional information:

1-866-4-USWAGE

(1-866-487-9243) TTY: 1-877-889-5627

U.S. Wage and Hour Division

WWW.WAGEHOUR.DOL.GOV

U.S. Department of Labor | Employment Standards Administration | Wage and Hour Division

WH 1321(Revised April 2009)

DERECHOS DEL EMPLEADO
BAJO LA LEY DAVIS-BACON

PARA OBREROS Y MECÁNICOS EMPLEADOS EN PROYECTOS DE CONSTRUCCIÓN FEDERAL O CON ASISTENCIA FEDERAL

LA SECCIÓN DE HORAS Y SUELDOS DEL DEPARTAMENTO DE TRABAJO DE EEUU

SALARIOS PREVALECIENTES
No se le puede pagar menos de la tasa de pago indicada en la Decisión de Salarios Davis-Bacon fijada con este Aviso para el trabajo que Ud. desempeña.

SOBRETIEMPO
Se le ha de pagar no menos de tiempo y medio de su tasa básica de pago por todas las horas trabajadas en exceso de 40 en una semana laboral. Existen pocas excepciones.

CUMPLIMIENTO
Se pueden retener pagos por contratos para asegurarse que los obreros reciban los salarios y el pago de sobretiempo debidos, y se podría aplicar daños y perjuicios si no se cumple con las exigencias del pago de sobretiempo. Las cláusulas contractuales de Davis-Bacon permiten la terminación y exclusión de contratistas para efectuar futuros contratos federales hasta tres años. El contratista que falsifique los registros certificados de las nóminas de pago o induzca devoluciones de salarios puede ser sujeto a procesamiento civil o criminal, multas y/o encarcelamiento.

APRENDICES
Las tasas de aprendices sólo se aplican a aprendices correctamente inscritos bajo programas federales o estatales aprobados.

PAGO APROPIADO
Si Ud. no recibe el pago apropiado, o precisa de información adicional sobre los salarios aplicables, póngase en contacto con el Contratista Oficial que aparece abajo:

o póngase en contacto con la Sección de Horas y Sueldos del Departamento de Trabajo de EEUU.

Para obtener información adicional:

1-866-4-USWAGE
(1-866-487-9243) TTY: 1-877-889-5627

WWW.WAGEHOUR.DOL.GOV

U.S. Department of Labor | Employment Standards Administration | Wage and Hour Division

WH 1321 SPA (Revised April 2009)

Appendix F

3. Contract and Subcontract provisions.

(a) The Recipient shall insure that the **subrecipient** (s) shall insert in full in any contract in excess of $2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a public building or public work, or building or work financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1, the following clauses:

(1) Minimum wages.

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

Subrecipient s may obtain wage determinations from the U.S. Department of Labor's web site, www.wdol.gov.

(ii)(A) The **subrecipient** (s), on behalf of EPA, shall require that any class of laborers or mechanics,

including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The EPA award official shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the **subrecipient** (s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the **subrecipient** (s) to the State award official. The State award official will transmit the report, to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the and the **subrecipient** (s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the questions, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may

consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding. The **subrecipient** (s), shall upon written request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the **subrecipient** , that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State

recipient or EPA. As to each payroll copy received, the **subrecipient** shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the **subrecipient** (s) for transmission to the State or EPA if requested by EPA , the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the **subrecipient** (s).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United

States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees--

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the

work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may by appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the

Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and **Subrecipient** (s), State, EPA, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

4. **Contract Provision for Contracts in Excess of $100,000.**

(a) Contract Work Hours and Safety Standards Act. The **subrecipient** shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above or 29 CFF 4.6 . As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (a)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation

of the clause set forth in paragraph (a)(1) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (a)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The **subrecipient,** upon written request of the EPA Award Official or an authorized representative of the Department of Labor, shall withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a)(1) through (4) of this section.

(b) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the **Subrecipient** shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the **Subrecipient** shall insert in any such contract a clause providing hat the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

Appendix H

LABOR STANDARDS INTERVIEW

CONTRACT NUMBER	EMPLOYEE INFORMATION		
	LAST NAME	FIRST NAME	MI
NAME OF PRIME CONTRACTOR			
	STREET ADDRESS		
NAME OF EMPLOYER			
	CITY	STATE	ZIP CODE
SUPERVISOR'S NAME			
LAST NAME / FIRST NAME / MI	WORK CLASSIFICATION	WAGE RATE	

ACTION	CHECK BELOW YES	NO
Do you work over 8 hours per day?		
Do you work over 40 hours per week?		
Are you paid at least time and a half for overtime hours?		
Are you receiving any cash payments for fringe benefits required by the posted wage determination decision?		

WHAT DEDUCTIONS OTHER THAN TAXES AND SOCIAL SECURITY ARE MADE FROM YOUR PAY?

	TOOLS YOU USE	
HOW MANY HOURS DID YOU WORK ON YOUR LAST WORK DAY BEFORE THIS INTERVIEW?		
DATE OF LAST WORK DAY BEFORE INTERVIEW *(YYMMDD)*		
DATE YOU BEGAN WORK ON THIS PROJECT *(YYMMDD)*		

THE ABOVE IS CORRECT TO THE BEST OF MY KNOWLEDGE

EMPLOYEE'S SIGNATURE	DATE *(YYMMDD)*

INTERVIEWER	SIGNATURE	TYPED OR PRINTED NAME	DATE *(YYMMDD)*

INTERVIEWER'S COMMENTS

WORK EMPLOYEE WAS DOING WHEN INTERVIEWED	ACTION *(If explanation is needed, use comments section)*	YES	NO
	IS EMPLOYEE PROPERLY CLASSIFIED AND PAID?		
	ARE WAGE RATES AND POSTERS DISPLAYED?		

FOR USE BY PAYROLL CHECKER

IS ABOVE INFORMATION IN AGREEMENT WITH PAYROLL DATA?

☐ YES ☐ NO

COMMENTS

CHECKER			
LAST NAME	FIRST NAME	MI	JOB TITLE
SIGNATURE			DATE *(YYMMDD)*

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STANDARD FORM 1445 (REV. 12-96)
Prescribed by GSA - FAR (48 CFR) 53.222(g)

State of Wisconsin Department of Workforce Development Equal Rights Division	**DEPARTMENTAL ORDER**

ISSUE DATE: 4/6/2015

PROJECT:

PRESELECTION OF PRESTRESSED CONCRETE STORAGE TANK
OAK CREEK CITY, MILWAUKEE COUNTY, WI
Determination No. 201501234

PROJECT OWNER:	REQUESTER:
MIKE SULLIVAN, UTILITY ENGINEER OAK CREEK SEWER & WATER UTILITY 170 W DREXEL AVE OAK CREEK, WI 53154	MIKE SULLIVAN, UTILITY ENGINEER OAK CREEK SEWER & WATER UTILITY 170 W DREXEL AVE OAK CREEK, WI 53154
ADDITIONAL CONTACT:	
	NOTE: The Requester must provide a copy of this Project Determination and enclosures to the Project Owner and Additional Contact.

The department received an application for prevailing wage rate determination for the above-captioned project. The department conducted a survey to determine the prevailing wage rate for the trade(s) or occupation(s) needed to complete the project. The survey's findings appear in the attached project determination.

If you believe that the wage rate for any trade or occupation does not accurately reflect the prevailing wage rate in the city, village or town where the project is located, you may ask the department to conduct an administrative review of such wage rate. You must submit this request in writing within 30 days from the date indicated above. Additionally, your request must include wage rate information from at least three similar projects in the city, village or town where the proposed project is located and on which some work has been performed by the contested trade(s) during the current survey period and was previously considered by the department in issuing the attached determination. See DWD 290.10 of the Wisconsin Administrative Code and either s. 66.0903(3)(br), Stats., or s. 103.49(3)(c), Stats., for a complete explanation of the administrative review process.

Enclosures

It is hereby ordered that the prevailing wage rates set forth in the attached project determination shall only be applicable to the above referenced project. This order is a **FINAL ORDER** of the department unless a timely request for an administrative review is filed with the department.

ISSUED BY:

Equal Rights Division
Labor Standards Bureau
Construction Wage Standards Section
P.O. Box 8928, Madison, WI 53708-8928
(608)266-6861

Web Site: http://dwd.wisconsin.gov/er/

PREVAILING WAGE RATE DETERMINATION
Issued by the State of Wisconsin
Department of Workforce Development
Pursuant to s. 66.0903, Wis. Stats.
Issued On: 4/6/2015

DETERMINATION NUMBER: 201501234

EXPIRATION DATE: Prime Contracts MUST Be Awarded or Negotiated On Or Before 12/31/2015. If NOT, You MUST Reapply.

PROJECT NAME: PRESELECTION OF PRESTRESSED CONCRETE STORAGE TANK

PROJECT LOCATION: OAK CREEK CITY, MILWAUKEE COUNTY, WI

CONTRACTING AGENCY: OAK CREEK SEWER & WATER UTILITY

CLASSIFICATION:	Contractors are responsible for correctly classifying their workers. Either call the Department of Workforce Development (DWD) with trade or classification questions or consult DWD's Dictionary of Occupational Classifications & Work Descriptions on the DWD website at: dwd.wisconsin.gov/er/prevailing_wage_rate/Dictionary/dictionary_main.htm.
OVERTIME:	Time and one-half must be paid for all hours worked: - over 10 hours per day on prevailing wage projects - over 40 hours per calendar week - Saturday and Sunday - on all of the following holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25; - The day before if January 1, July 4 or December 25 falls on a Saturday; - The day following if January 1, July 4 or December 25 falls on a Sunday. Apply the time and one-half overtime calculation to whichever is higher between the Hourly Basic Rate listed on this project determination or the employee's regular hourly rate of pay. Add any applicable Premium or DOT Premium to the Hourly Basic Rate before calculating overtime. A DOT Premium (discussed below) may supersede this time and one-half requirement.
FUTURE INCREASE:	When a specific trade or occupation requires a future increase, you MUST add the full hourly increase to the "TOTAL" on the effective date(s) indicated for the specific trade or occupation.
PREMIUM PAY:	If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whevenever such pay is applicable.
DOT PREMIUM:	This premium only applies to highway and bridge projects owned by the Wisconsin Department of Transportation and to the project type heading "Airport Pavement or State Highway Construction." DO NOT apply the premium calculation under any other project type on this determination.
APPRENTICES:	Pay apprentices a percentage of the applicable journeyperson's hourly basic rate of pay and hourly fringe benefit contributions specified in this determination. Obtain the appropriate percentage from each apprentice's contract or indenture.
SUBJOURNEY:	Subjourney wage rates may be available for some of the trades or occupations indicated below with the exception of laborers, truck drivers and heavy equipment operators. Any employer interested in using a subjourney classification on this project MUST complete Form ERD-10880 and request the applicable wage rate from the Department of Workforce Development PRIOR to using the subjourney worker on this project.

This document **MUST BE POSTED** by the **CONTRACTING AGENCY** in at least one conspicuous and easily accessible place **on the site of the project** . A local governmental unit may post this document at the place normally used to post public notices if there is no common site on the project. This document **MUST** remain posted during the entire time any worker is employed on the project and **MUST** be physically incorporated into the specifications and all contracts and subcontracts. If you have any questions, please write to the Equal Rights Division, Labor Standards Bureau, P.O. Box 8928, Madison, Wisconsin 53708 or call (608) 266-6861.

The following statutory provisions apply to local governmental unit projects of public works and are set forth below pursuant to the requirements of s. 66.0903(8), Stats.

s. 66.0903 (1) (f) & s. 103.49 (1) (c) "PREVAILING HOURS OF LABOR" for any trade or occupation in any area means 10 hours per day and 40 hours per week and may not include any hours worked on a Saturday or Sunday or on any of the following holidays:

1. January 1.
2. The last Monday in May.
3. July 4.
4. The first Monday in September.
5. The 4th Thursday in November.
6. December 25.
7. The day before if January 1, July 4 or December 25 falls on a Saturday.
8. The day following if January 1, July 4 or December 25 falls on a Sunday.

s. 66.0903 (10) RECORDS; INSPECTION; ENFORCEMENT.
(a) Each contractor, subcontractor, or contractor's or subcontractor's agent performing work on a project of public works that is subject to this section shall keep full and accurate records clearly indicating the name and trade or occupation of every person performing the work described in sub. (4) and an accurate record of the number of hours worked by each of those persons and the actual wages paid for the hours worked.

s. 66.0903 (11) LIABILITY AND PENALTIES.
(a) 1. Any contractor, subcontractor, or contractor's or subcontractor's agent who fails to pay the prevailing wage rate determined by the department under sub. (3) or who pays less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor is liable to any affected employee in the amount of his or her unpaid wages or his or her unpaid overtime compensation and in an additional amount as liquidated damages as provided under subd. 2., 3., whichever is applicable.
2. If the department determines upon inspection under sub. (10) (b) or (c) that a contractor, subcontractor, or contractor's or subcontractor's agent has failed to pay the prevailing wage rate determined by the department under sub. (3) or has paid less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor, the department shall order the contractor to pay to any affected employee the amount of his or her unpaid wages or his or her unpaid overtime compensation and an additional amount equal to 100 percent of the amount of those unpaid wages or that unpaid overtime compensation as liquidated damages within a period specified by the department in the order.
3. In addition to or in lieu of recovering the liability specified in subd. 1. as provided in subd. 2., any employee for and in behalf of that employee and other employees similarly situated may commence an action to recover that liability in any court of competent jurisdiction. If the court finds that a contractor, subcontractor, or contractor's or subcontractor's agent has failed to pay the prevailing wage rate determined by the department under sub. (3) or has paid less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor, the court shall order the contractor, subcontractor, or agent to pay to any affected employee the amount of his or her unpaid wages or his or her unpaid overtime compensation and an additional amount equal to 100 percent of the amount of those unpaid wages or that unpaid overtime compensation as liquidated damages.
5. No employee may be a party plaintiff to an action under subd. 3. unless the employee consents in writing to become a party and the consent is filed in the court in which the action is brought. Notwithstanding s. 814.04 (1), the court shall, in addition to any judgment awarded to the plaintiff, allow reasonable attorney fees and costs to be paid by the defendant.

BUILDING OR HEAVY CONSTRUCTION

Includes sheltered enclosures with walk-in access for the purpose of housing persons, employees, machinery, equipment or supplies and non-sheltered work such as canals, dams, dikes, reservoirs, storage tanks, etc. A sheltered enclosure need not be "habitable" in order to be considered a building. The installation of machinery and/or equipment, both above and below grade level, does not change a project's character as a building. On-site grading, utility work and landscaping are included within this definition. Residential buildings of four (4) stories or less, agricultural buildings, parking lots and driveways are NOT included within this definition.

SKILLED TRADES

Fringe Benefits Must Be Paid On All Hours Worked

CODE	TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
101	Acoustic Ceiling Tile Installer Future Increase(s): Add $1.50/hr on 6/1/2015; Add $1.65/hr on 6/1/2016. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	34.13	20.61	54.74
102	Boilermaker Future Increase(s): Add $1.50/hr. on 01/01/2016	33.35	28.24	61.59
103	Bricklayer, Blocklayer or Stonemason Future Increase(s): Add $1.35on 06/01/2015; Add $1.45 on 06/06/2016 Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	35.89	18.64	54.53
104	Cabinet Installer Future Increase(s): Add $1.42/hr on 6/1/2015; Add $1.42/hr on 6/1/2016.	32.72	16.00	48.72
105	Carpenter Future Increase(s): Add $1.50/hr on 6/1/2015; Add $1.65/hr on 6/1/2016. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	34.13	20.61	54.74
106	Carpet Layer or Soft Floor Coverer	33.68	19.98	53.66
107	Cement Finisher Future Increase(s): Add $1.30 on 06/01/2015; Add $1.40 on 06/06/2016	32.09	19.21	51.30
108	Drywall Taper or Finisher Future Increase(s): Add $.90/hr eff. 06/01/2015; Add $1.00/hr eff. 06/01/2016; Add $1.05/hr eff. 06/01/2017	29.97	20.74	50.71

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
109	Electrician Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	33.93	22.77	56.70
110	Elevator Constructor	43.84	27.09	70.93
111	Fence Erector	23.73	19.09	42.82
112	Fire Sprinkler Fitter	39.10	19.94	59.04
113	Glazier Future Increase(s): Add $.75/hr eff. 06/01/2015; Add $.90/hr eff. 06/01/2016	34.19	18.50	52.69
114	Heat or Frost Insulator	33.43	25.81	59.24
115	Insulator (Batt or Blown) Future Increase(s): Add $1.42/hr on 6/1/2015; Add $1.42/hr on 6/1/2016.	32.72	16.00	48.72
116	Ironworker Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	30.77	23.97	54.74
117	Lather	33.68	19.81	53.49
118	Line Constructor (Electrical)	37.43	18.19	55.62
119	Marble Finisher	20.00	0.52	20.52
120	Marble Mason	35.37	17.99	53.36
121	Metal Building Erector	22.05	8.08	30.13
122	Millwright	28.53	25.19	53.72
123	Overhead Door Installer	20.00	6.10	26.10
124	Painter Future Increase(s): Add $.90/hr on 06/01/2015; Add $1.00/hr on 06/01/2016; Add $1.05/hr on 06/01/2017 Premium Increase(s): Add $.20/hr for paperhanging; Add $.35/hr for bridge, iron and drywall; Add $.75/hr for spraying and sandblasting; Add $.60/hr for EIFS work; Add $1.00/hr for lead based paint removal.	29.62	20.74	50.36
125	Pavement Marking Operator	30.10	18.08	48.18

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
126	Piledriver Future Increase(s): Add $1.50/hr on 6/1/2015; Add $1.60/hr on 6/1/2016. Premium Increase(s): Add $.65/hr for Piledriver Loftsman; Add $.75/hr for Sheet Piling Loftsman. DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	30.11	26.51	56.62
127	Pipeline Fuser or Welder (Gas or Utility)	31.88	20.89	52.77
129	Plasterer Premium Increase(s): Add $.40/hr for swing stage work.	31.21	19.93	51.14
130	Plumber	38.37	19.55	57.92
132	Refrigeration Mechanic Future Increase(s): Add $1.70 on 6/1/15	41.01	21.54	62.55
133	Roofer or Waterproofer Future Increase(s): Add $1.25/hr eff. 06/01/2015; Add $1.25/hr eff. 06/01/2016	29.65	18.15	47.80
134	Sheet Metal Worker	36.94	20.22	57.16
135	Steamfitter	41.01	21.54	62.55
137	Teledata Technician or Installer Future Increase(s): Add $.86/hr on 6/1/2015. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	25.63	17.25	42.88
138	Temperature Control Installer	39.76	21.09	60.85
139	Terrazzo Finisher	20.00	0.52	20.52
140	Terrazzo Mechanic	31.18	17.35	48.53
141	Tile Finisher Future Increase(s): Add $.20/hr on 1/ 5/2015	24.24	17.54	41.78
142	Tile Setter	30.38	17.33	47.71
143	Tuckpointer, Caulker or Cleaner Future Increase(s): Add $1.35on 06/01/2015; Add $1.45 on 06/01/2016 Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	34.28	18.48	52.76

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
144	Underwater Diver (Except on Great Lakes)	35.40	15.90	51.30
146	Well Driller or Pump Installer	25.32	15.65	40.97
147	Siding Installer	36.17	19.44	55.61
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	30.16	15.11	45.27
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	31.60	15.71	47.31
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	27.65	14.49	42.14
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	27.83	15.01	42.84
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	24.00	11.57	35.57

TRUCK DRIVERS

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
201	Single Axle or Two Axle	34.07	18.10	52.17
203	Three or More Axle	23.49	12.02	35.51
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add $1.60/hr on 5/30/2016.	33.02	18.70	51.72
205	Pavement Marking Vehicle	20.85	11.02	31.87
207	Truck Mechanic	23.49	12.02	35.51

LABORERS

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
301	General Laborer Future Increase(s): Add $1.35/hr eff. 06/01/2015; Add $1.25/hr eff. 06/06/2016 Premium Increase(s): Add $.11 for mortar mixer, fork lift operator, air and electric equipment and power buggy operators; Add $.22 for jackhammer operator, certified welder, gunite machineman.	29.01	17.22	46.23
302	Asbestos Abatement Worker	22.05	19.16	41.21
303	Landscaper	15.44	11.20	26.64

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
310	Gas or Utility Pipeline Laborer (Other Than Sewer and Water)	20.13	17.79	37.92
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased) Premium Increase(s): DOT PREMIUMS: Pay two times the hourly basic rate on New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	18.06	16.76	34.82
314	Railroad Track Laborer	14.50	4.39	18.89
315	Final Construction Clean-Up Worker	28.31	12.30	40.61

HEAVY EQUIPMENT OPERATORS
SITE PREPARATION, UTILITY OR LANDSCAPING WORK ONLY

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
501	Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Milling Machine; Boring Machine (Directional, Horizontal or Vertical); Backhoe (Track Type) Having a Mfgr's Rated Capacity of 130,000 Lbs. or Over; Backhoe (Track Type) Having a Mfgr's Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bulldozer or Endloader (Over 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Crane, Shovel, Dragline, Clamshells; Forklift (Machinery Moving or Steel Erection, 25 Ft & Over); Gradall (Cruz-Aire Type); Grader or Motor Patrol; Master Mechanic; Mechanic or Welder; Robotic Tool Carrier (With or Without Attachments); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Tractor (Scraper, Dozer, Pusher, Loader); Trencher (Wheel Type or Chain Type Having Over 8 Inch Bucket). Future Increase(s): Add $1.50/hr on 6/1/2015; Add $1.60/hr on 5/30/2016.	34.47	18.70	53.17
502	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Environmental Burner; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Jeep Digger; Screed (Milling Machine); Skid Rig; Straddle Carrier or Travel Lift; Stump Chipper; Trencher (Wheel Type or Chain Type Having 8 Inch Bucket & Under). Future Increase(s): Add $1.50/hr on 6/1/2015; Add $1.60/hr on 5/30/2016.	34.17	18.70	52.87

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
503	Air Compressor (&/or 400 CFM or Over); Augers (Vertical & Horizontal); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Crusher, Screening or Wash Plant; Farm or Industrial Type Tractor; Forklift; Generator (&/or 150 KW or Over); Greaser; High Pressure Utility Locating Machine (Daylighting Machine); Mulcher; Oiler; Post Hole Digger or Driver; Pump (3 Inch or Over) or Well Points; Refrigeration Plant or Freeze Machine; Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add $1.50/hr on 6/1/2015; Add $1.60/hr on 5/30/2016.	34.17	18.70	52.87
504	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	41.65	21.71	63.36
505	Work Performed on the Great Lakes Including Crane or Backhoe Operator; Assistant Hydraulic Dredge Engineer; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder; 70 Ton & Over Tug Operator. Premium Increase(s): Add $.50/hr for Friction Crane, Lattice Boom or Crane Certification (CCO).	41.65	21.71	63.36
506	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	35.72	17.85	53.57
507	Work Performed on the Great Lakes Including Deck Equipment Operator, Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	35.46	20.40	55.86

HEAVY EQUIPMENT OPERATORS
EXCLUDING SITE PREPARATION, UTILITY, PAVING LANDSCAPING WORK

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
508	Boring Machine (Directional); Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity of Over 4,000 Lbs., Crane With Boom Dollies; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic. Future Increase(s): Add $1.55/hr on 6/1/2015. Premium Increase(s): Crane Operators with CCO certification add $.50/hr. Cranes with boom length over 200 ft. not exceeding 300 ft. OR lifting capacity over 200 ton not exceeding 300 ton add $.50/hr. Over 300 ton OR 300 ft. add $.01/hr. per foot OR ton whichever is greater.	40.61	20.15	60.76

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
509	Backhoe (Track Type) Having a Mfgr's Rated Capacity of 130,000 Lbs. or Over; Boring Machine (Horizontal or Vertical); Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs. & Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Pile Driver; Versi Lifts, Tri-Lifts & Gantrys (20,000 Lbs. & Over). Future Increase(s): Add $1.55/hr on 6/1/2015. Premium Increase(s): Crane Operators with CCO certification add $.50/hr.	40.11	20.15	60.26
510	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump (Over 46 Meter), Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Dredge (NOT Performing Work on the Great Lakes); Forklift (Machinery Moving or Steel Erection, 25 Ft & Over); Gradall (Cruz-Aire Type); Hydro-Blaster (10,000 PSI or Over); Milling Machine; Skid Rig; Traveling Crane (Bridge Type). Future Increase(s): Add $1.55/hr on 6/1/2015. Premium Increase(s): Crane Operators with CCO certification add $.50/hr.	39.61	20.15	59.76
511	Air, Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Bulldozer or Endloader (Over 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Pump (46 Meter & Under), Concrete Conveyor (Rotec or Bidwell Type); Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Environmental Burner; Gantrys (Under 20,000 Lbs.); Grader or Motor Patrol; High Pressure Utility Locating Machine (Daylighting Machine); Manhoist; Material or Stack Hoist; Mechanic or Welder; Railroad Track Rail Leveling Machine, Tie Placer, Extractor, Tamper, Stone Leveler or Rehabilitation Equipment; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yd or More Capacity; Screed (Milling Machine); Sideboom; Straddle Carrier or Travel Lift; Tining or Curing Machine; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Trencher (Wheel Type or Chain Type Having Over 8-Inch Bucket). Future Increase(s): Add $1.55/hr on 6/1/2015.	38.92	20.15	59.07

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
512	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Finishing Machine (Road Type); Fireman (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Grout Pump; Hoist (Tugger, Automatic); Industrial Locomotives; Jeep Digger; Lift Slab Machine; Mulcher; Roller (Rubber Tire, 5 Ton or Under); Screw or Gypsum Pumps; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Stump Chipper; Trencher (Wheel Type or Chain Type Having 8-Inch Bucket & Under); Winches & A-Frames. Future Increase(s): Add $1.55/hr on 6/1/2015.	37.04	20.15	57.19
513	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Boatmen (NOT Performing Work on the Great Lakes); Boiler (Temporary Heat); Crusher, Screening or Wash Plant; Elevator; Farm or Industrial Type Tractor; Fireman (Asphalt Plant NOT Performing Work on the Great Lakes); Forklift; Generator (&/or 150 KW or Over); Greaser; Heaters (Mechanical); Loading Machine (Conveyor); Oiler; Post Hole Digger or Driver; Prestress Machine; Pump (3 Inch or Over) or Well Points; Refrigeration Plant or Freeze Machine; Robotic Tool Carrier (With or Without Attachments); Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add $1.55/hr on 6/1/2015.	31.89	20.15	52.04
514	Gas or Utility Pipeline, Except Sewer & Water (Primary Equipment). Future Increase(s): Add $1/hr on 6/1/2015; Add $1/hr on 5/30/2016.	36.34	22.14	58.48
515	Gas or Utility Pipeline, Except Sewer & Water (Secondary Equipment). Future Increase(s): Add $1.65/hr on 6/1/2015.	34.06	19.35	53.41
516	Fiber Optic Cable Equipment	28.89	17.95	46.84

SEWER, WATER OR TUNNEL CONSTRUCTION

Includes those projects that primarily involve public sewer or water distribution, transmission or collection systems and related tunnel work (excluding buildings).

SKILLED TRADES

Fringe Benefits Must Be Paid On All Hours Worked

CODE	TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
103	Bricklayer, Blocklayer or Stonemason	35.37	17.99	53.36
105	Carpenter Future Increase(s): Add $1.50/hr on 6/1/2015; Add $1.65/hr on 6/1/2016. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	34.13	20.61	54.74
107	Cement Finisher Future Increase(s): Add $1.87 on 6/1/15; Add $1.75 on 6/1/16. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.	35.18	16.78	51.96
109	Electrician	47.76	0.00	47.76
111	Fence Erector	23.73	19.09	42.82
116	Ironworker	31.50	20.01	51.51
118	Line Constructor (Electrical)	37.43	18.19	55.62
125	Pavement Marking Operator	30.10	18.08	48.18
126	Piledriver	29.56	25.71	55.27
130	Plumber	21.50	0.00	21.50
135	Steamfitter	39.76	21.09	60.85
137	Teledata Technician or Installer	24.89	17.15	42.04
143	Tuckpointer, Caulker or Cleaner	33.76	17.82	51.58
144	Underwater Diver (Except on Great Lakes)	35.40	15.90	51.30
146	Well Driller or Pump Installer	25.32	15.65	40.97
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	35.55	15.57	51.12

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	31.60	15.19	46.79
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	27.65	13.44	41.09
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.68	13.28	38.96
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	12.97	34.72

TRUCK DRIVERS

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
201	Single Axle or Two Axle Future Increase(s): Add $1.15/hr on 6/1/2015. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	25.18	18.31	43.49
203	Three or More Axle	18.00	0.00	18.00
204	Articulated, Euclid, Dumptor, Off Road Material Hauler	32.89	18.96	51.85
205	Pavement Marking Vehicle	20.85	11.02	31.87
207	Truck Mechanic	18.00	0.00	18.00

LABORERS

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
301	General Laborer Future Increase(s): Add $1.35/hr eff. 06/01/2015; Add $1.25/hr eff. 06/06/2016 Premium Increase(s): Add $2.29 for bottomman; Add $2.15 for concrete manhole builder, bracer, jointman, or pipelayer; Add $5.44 for blaster. Add $2.00 for all tunnel work under 15 lbs. compressed air; Add $2.00 for 0-30 lbs. compressed air; Add $3.00 for over 30 lbs. compressed air.	29.16	17.72	46.88
303	Landscaper	39.43	0.00	39.43
304	Flagperson or Traffic Control Person	31.95	0.00	31.95
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	17.71	16.01	33.72

314	Railroad Track Laborer	14.50	4.39	18.89

HEAVY EQUIPMENT OPERATORS
SEWER, WATER OR TUNNEL WORK

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
521	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Master Mechanic; Pile Driver. Future Increase(s): Add $1.55/hr on 6/1/2015. Premium Increase(s): Add $.25/hr for operating tower crane.	37.24	20.10	57.34
522	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Boring Machine (Directional); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump (Over 46 Meter), Concrete Conveyor (Rotec or Bidwell Type); Concrete Spreader & Distributor; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With a Lifting Capacity of 4,000 Lbs. & Under; Dredge (NOT Performing Work on the Great Lakes); Milling Machine; Skid Rig; Telehandler; Traveling Crane (Bridge Type). Future Increase(s): Add $1.55/hr on 6/1/2015. Premium Increase(s): Add $.25/hr for operating tower crane.	36.46	20.10	56.56
523	Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Boring Machine (Horizontal or Vertical); Bulldozer or Endloader (Over 40 hp); Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Concrete Pump (46 Meter & Under), Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Hydro-Blaster (10,000 PSI or Over); Manhoist; Material or Stack Hoist; Mechanic or Welder; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yd or More Capacity; Screed (Milling Machine); Sideboom; Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Trencher (Wheel Type or Chain Type Having Over 8-Inch Bucket). Future Increase(s): Add $1.55/hr on 6/1/2015. Premium Increase(s): Add $.25/hr for operating tower crane.	35.51	20.10	55.61

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
524	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Finishing Machine (Road Type); Environmental Burner; Fireman (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Hoist (Tugger, Automatic); Grout Pump; Jeep Digger; Lift Slab Machine; Mulcher; Power Subgrader; Pump (3 Inch or Over) or Well Points; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Screw or Gypsum Pumps; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Stump Chipper; Tining or Curing Machine; Trencher (Wheel Type or Chain Type Having 8-Inch Bucket & Under); Winches & A-Frames.	36.79	19.15	55.94
525	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Crusher, Screening or Wash Plant; Farm or Industrial Type Tractor; Fireman (Asphalt Plant NOT Performing Work on the Great Lakes); Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Loading Machine (Conveyor); Post Hole Digger or Driver; Refrigeration Plant or Freeze Machine; Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack.	50.50	0.42	50.92
526	Boiler (Temporary Heat); Forklift; Greaser; Oiler.	31.64	19.15	50.79
527	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	41.65	21.71	63.36
528	Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder.	41.65	21.71	63.36
529	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	35.72	17.85	53.57
530	Work Performed on the Great Lakes Including Deck Equipment Operator; Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under), Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	35.46	20.40	55.86

LOCAL STREET OR MISCELLANEOUS PAVING CONSTRUCTION

Includes roads, streets, alleys, trails, bridges, paths, racetracks, parking lots and driveways (except residential or agricultural), public sidewalks or other similar projects (excluding projects awarded by the Wisconsin Department of Transportation).

SKILLED TRADES

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
103	Bricklayer, Blocklayer or Stonemason	35.37	17.99	53.36
105	Carpenter Future Increase(s): Add $1.42/hr on 6/1/2015; Add $1.42/hr on 6/1/2016. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	32.72	16.00	48.72
107	Cement Finisher	30.96	18.53	49.49
109	Electrician Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	33.93	22.77	56.70
111	Fence Erector	23.73	19.09	42.82
116	Ironworker	30.52	23.47	53.99
118	Line Constructor (Electrical)	37.43	18.19	55.62
124	Painter	29.52	19.99	49.51
125	Pavement Marking Operator	30.10	18.08	48.18
126	Piledriver	29.56	25.71	55.27
133	Roofer or Waterproofer	29.40	17.05	46.45
137	Teledata Technician or Installer	24.89	17.15	42.04
143	Tuckpointer, Caulker or Cleaner	33.76	17.82	51.58
144	Underwater Diver (Except on Great Lakes)	35.40	15.90	51.30
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	35.55	15.57	51.12
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	31.60	15.19	46.79
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	27.65	13.44	41.09
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.68	13.28	38.96
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	12.97	34.72

TRUCK DRIVERS

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
201	Single Axle or Two Axle Future Increase(s): Add $1.15/hr on 6/1/2015. Premium Increase(s): DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.	25.18	18.31	43.49
203	Three or More Axle	18.00	0.00	18.00
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add $1.60/hr on 6/2/2015; Add $1.60/hr on 6/3/2016.	33.69	19.78	53.47
205	Pavement Marking Vehicle	20.85	11.02	31.87
206	Shadow or Pilot Vehicle	24.37	17.77	42.14
207	Truck Mechanic	18.00	0.00	18.00

LABORERS

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
301	General Laborer	24.75	19.69	44.44
303	Landscaper Future Increase(s): Add $1.05/hr eff. 06/01/2015; Add $1.00/hr eff. 06/01/2016; Add $1.00/hr eff. 06/01/2017 Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	27.06	20.03	47.09
304	Flagperson or Traffic Control Person	25.67	12.66	38.33
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	17.71	16.01	33.72
314	Railroad Track Laborer	14.50	4.39	18.89

HEAVY EQUIPMENT OPERATORS
CONCRETE PAVEMENT OR BRIDGE WORK

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
541	Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic. Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm.	37.72	21.15	58.87
542	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With a Lifting Capacity of 4,000 Lbs. & Under; Crane, Tower Crane Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm.	37.22	21.15	58.37

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
543	Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Manhoist; Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A-Frames.	35.72	17.85	53.57
544	Backfiller; Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Jeep Digger; Joint Sawer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (WIth or Without Attachments); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler; Tining or Curing Machine. Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm.	36.46	21.15	57.61
545	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack.	35.17	20.40	55.57
546	Fiber Optic Cable Equipment.	28.89	17.95	46.84

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
547	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	41.65	21.71	63.36
548	Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder.	41.65	21.71	63.36
549	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or more); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	35.72	17.85	53.57
550	Work Performed on the Great Lakes Including Deck Equipment Operator; Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	35.46	20.40	55.86

HEAVY EQUIPMENT OPERATORS
ASPHALT PAVEMENT OR OTHER WORK

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
551	Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self Erecting Tower Crane With a Lifting Capacity of Over 4,000 Lbs., Crane With Boom Dollies; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads and/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic.	36.72	20.40	57.12
552	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With a Lifting Capacity Of 4,000 Lbs. & Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm.	37.22	21.15	58.37

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
553	Air, Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boring Machine (Directional, Horizontal or Vertical); Bulldozer or Endloader; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Laser/Screed; Concrete Slipform Placer Curb & Gutter Machine; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Manhoist; Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Railroad Track Rail Leveling Machine, Tie Placer, Extractor, Tamper, Stone Leveler or Rehabilitation Equipment; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A-Frames. Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017.	36.17	20.80	56.97
554	Backfiller; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self-Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler. Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017.	36.17	20.80	56.97

CODE	Fringe Benefits Must Be Paid On All Hours Worked TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
555	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm.	36.17	21.15	57.32
556	Fiber Optic Cable Equipment.	27.89	17.20	45.09

********** END OF RATES **********

Department of Workforce Development
Equal Rights Division
P.O. Box 8928
Madison, WI 53708-8928
Telephone: (608) 266-6860
Fax: (608) 267-4592
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STATE OF WISCONSIN
DWD
Department of Workforce Development

Scott Walker, Governor
Reginald J. Newson, Secretary

The documents following the Prevailing Wage Rate Determination consist of eighteen pages (including this one) of various forms/documents that will be used throughout the completion of the project. The chart below lists the form number, form/document name, the party who uses the document, and the document's number of pages. If you have any questions regarding these forms please call the Prevailing Wage Office at (608)266-6861.

ERD Form Number	Form Name	Party Who Uses the Form	Pages
	Prevailing Wage - Public Entity Project Owners	Explanation of project owner responsibilities	2
16056	Post the White Sheet	Contracting agency	1
10908	Consolidated List of Debarred Contractors	Any party contracting someone to complete work on a prevailing wage project	3
	Prevailing Wage – Contractors	Explanation of contractor responsibilities	2
7777	Disclosure of Ownership	Contractors that meet the criteria set out in (3)(A)&(B) of the form	1
5724	Prime Contractor Affidavit of Compliance	Prime contractor files with contracting agency upon completion of the work before receiving final payment	2
10584	Agent or Subcontractor Affidavit of Compliance	Subcontractors file with their awarding contractor upon completion of their work on the project before receiving final payment	2
10880	Request to Employ Subjourneyperson	Contractors wishing to employ a subjourneyperson(s)	1
	Additional General Prevailing Wage Law Information	General information for public entity or any other interested party	3

10/01/2014

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PREVAILING WAGE – Public Entity Project Owners

Any public works project that has a total estimated project cost that equals or exceeds single-trade or multiple-trade project thresholds requires a prevailing wage rate determination issued by the Department of Workforce Development (DWD). Public works include erecting, constructing, remodeling, repairing, demolishing, alterations, painting and decorating projects for a local governmental unit or state agency. State law excludes minor service or maintenance work, warranty work, or work under a supply-and-installation contract. There is a statutory definition for most of these exclusions. The prevailing wage law that applies to local governmental units is §66.0903, Wis. Stats. The prevailing wage law that applies to state agencies is §103.49, Wis. Stats. The applicable administrative rules for all public entities are DWD 290 and DWD 294, Wis. Adm. Code.

Thresholds

A "single-trade project of public works" means a project in which a single trade accounts for 85% or more of the total labor cost of the project. The single trade threshold is $48,000.

A "multiple-trade project of public works" means a project in which no single trade accounts for 85% or more of the total labor cost of the project.

(a) The multiple-trade threshold is $100,000, unless a municipality falls under the description in (b).

(b) The multiple-trade threshold of $234,000 applies to public works projects erected, constructed, repaired, remodeled, or demolished by a private contractor for •a city or village with a population less than 2500 or •a town.

A local governmental unit or state agency that has a public works project that equals or exceeds the prevailing wage thresholds must do all of the following:

- Request a prevailing wage rate determination for the project from DWD at least 30 days before soliciting bids or negotiating contracts. An Application for Prevailing Wage Rate Determination is available on the DWD website: http://dwd.wisconsin.gov/er/prevailing_wage_rate/default.htm
  To avoid waiting for a project determination use the on-line application system that permits the user to generate a determination immediately and save all documents in PDF form to the user's computer. Use this project determination on line application at the following address:

http://dwd.wisconson.gov/er/prevailing_wage_rate/pw_online_determinations.htm

- Tell potential contractors the project is subject to state prevailing wage law when soliciting bids.

- Include the prevailing wage rate determination in the construction contract, or if there is no written contract, provide a copy of the project determination to each prime contractor.

- Award contracts to contractors who do *not* appear on the "Consolidated List of Debarred Contractors."

- Notify contractors that they are required to have a written substance abuse testing program in place that fulfills the requirements of §103.503, Wis. Stats., before commencing work on the prevailing wage project.

- Post the prevailing wage rate determination on the project site. (This document is often referred to as "the white sheet.")

- Notify project contractors that if DWD finds that a contractor violated the prevailing wage law, DWD will assess liquidated damages of 100% of the wages owed to employees.

- Obtain an Affidavit of Compliance from each prime contractor before making final payment for the project.

If the total estimated cost of the project exceeds the prevailing wage thresholds, a local governmental unit or state agency also must obtain a prevailing wage rate determination under the following circumstances:

- when a completed facility is leased, purchased, lease-purchased or otherwise acquired by or dedicated to a public entity in lieu of the public entity contracting for the project,

- when one public entity does work for another public entity,

- when a *private* entity will construct a road, street, bridge, sanitary sewer or water main project and dedicate it to a local governmental unit or the state for its ownership or maintenance (except for some residential subdivisions).

For more information, visit the prevailing wage website: http://dwd.wisconsin.gov/er/prevailing_wage_rate/default.htm. For further assistance, call the Equal Rights Division at 608-266-6861 and ask for prevailing wage.

State of Wisconsin
Department of Workforce Development
Equal Rights Division
Labor Standards Bureau

POST THE WHITE SHEET

As the public entity receiving this prevailing wage rate determination, YOU ARE REQUIRED by law to post the prevailing wage rate determination (i.e., white sheet) in at least one conspicuous and easily accessible place on the project site that is available to all construction workers. The white sheet must remain posted from the onset of the project until all construction labor on the project has been completed.
[*See,* Wis. Admin. Code §DWD 290.12(1)]

Posting the white sheet inside the general contractor's trailer does not meet this requirement. That placement is not available/accessible to all workers and is not a location over which you have control.

If you have questions about posting, please call (608)266-6861 and ask for prevailing wage intake.

Consolidated List of Debarred Contractors
Prepared and Issued By
State of Wisconsin - Department of Workforce Development

This list has been prepared in accordance with the provisions of §§66.0903(12) and 103.49(7), Wis. Stats., and Chapter DWD 294 of the Wisconsin Administrative Code. All contractors on this list were found to have committed a "debarable offense" related to certain labor standard provisions determined or established for a state or local public works project. No state agency, local governmental unit or owner or developer may knowingly solicit bids from, negotiate with or award any contracts to or approve or allow any subcontracts with a debarred contractor, including all divisions, affiliates or other organizational elements of such contractor that are engaged in construction business activities, until the debarment is terminated. The name of each debarred contractor must remain on this list for a period of three (3) years from the termination date indicated below. The contractor is, however, only "debarred" from the "effective date" through the "termination date" indicated for that contractor. Questions regarding this list should be addressed to Julie Eckenwalder, Equal Rights Division, P. O. Box 8928, Madison, WI 53708 or call (608) 266-3148. Deaf, hearing or speech-impaired callers may contact the department by calling its TDD number (608) 264-8752.

Name of Contractor	Address	Effective Date	Termination Date	Cause Code	Date of Violation(s)	Limitations/ Deviations
A-1 Duran Roofing & Insulation Services, Inc.	3700 N Fratney St Milwaukee, WI 53212 or 8095 NW 64th St Miami, FL 33166	11/1/14	10/31/17	1, 2 and 4	2011-2012	None
Abel, Mike	*See,* Abel Electric, Inc					
Abel Electric, Inc	3385 Belmar Rd Green Bay, WI 54313	9/1/12	8/31/15	1	2011	None
Arnie Christiansen Mason Contractors, LLC	2304 65th Dr Franksville, WI 53126	9/1/14	8/31/16	1, 2 and 4	2011	None
Atkins, Scott	*See,* Freedom Insulation, Inc					
Boecker, Roger	*See,* R-Way Pumping, Inc					
Brechtl, Mark G	*See,* Ecodec, Inc					
Cargill Heating and Air Conditioning Company, Inc	3049 Edgewater La La Crosse, WI 54603	3/1/14	2/28/17	1 and 2	2011	None
Castlerock Commercial Construction, Inc	PO Box 11699 Milwaukee, WI 53211-0699	2/1/12	1/31/15	1, 2 and 4	2009 & 2010	None

Name of Contractor	Address	Effective Date	Termination Date	Cause Code	Date of Violation(s)	Limitations/ Deviations
Christiansen, Andy	*See,* Arnie Christiansen Mason Contractors, LLC					
Christiansen, Arnold	*See,* Arnie Christiansen Mason Contractors, LLC					
Darnick, Gregory L	*See,* Darnick Trucking, LLC					
Darnick Trucking, LLC	W914 County Rd V Berlin, WI 54923	11/1/14	10/31/15	1, 2 and 4	2012 & 2013	None
Dem/Ex Group, Inc	805 S Adams St Manito, IL 61546	12/1/11	11/30/14	1 and 2	2010	None
Duran, Bernardo	*See,* A-1 Duran Roofing & Insulation Services and RRS2 Inc					
Ecodec, Inc	5106 Wintergreen Dr Madison, WI 53704	10/1/14	9/30/17	1	2011 & 2012	None
Fisher, Ed &/or Fisher, Rhonda	*See*, Dem/Ex Group, Inc					
Freedom Insulation, Inc	117925 219th Ave Chippewa Falls, WI 54729	9/1/11	8/31/14	1	2008-2010	None
Galstad, Michael E (aka Michael Earl Galstad)	*See,* Cargill Heating and Air Conditioning Company, Inc					
Gjolaj, Ded	*See,* Horizon Bros Painting Corp					
Horizon Bros Painting Corp	1053 Kendra La Howell, MI 48843	10/1/14	9/30/16	4	2012	None
JT Roofing, Inc	350 Tower Dr Saukville, WI 53080	6/1/12	5/31/15	1, 2 and 4	2007 & 2008	None

Name of Contractor	Address	Effective Date	Termination Date	Cause Code	Date of Violation(s)	Limitations/ Deviations
Jinkins, Richard	*See,* Castlerock Commercial Construction, Inc					
Oden, Cassie	*See,* A-1 Duran Roofing & Insulation Services and RRS2 Inc					
Ofstie, Darin	*See,* Precision Excavating and Grading, LLC					
Peret, Robert	*See,* A-1 Duran Roofing & Insulation Services and RRS2 Inc					
Precision Excavating and Grading, LLC or Precision Excavating Enterprises, LLC	2104 Pierce Saint Croix Rd Baldwin, WI 54002	5/1/11	4/30/14	1, 2 and 4	2006-2008	None
R-Way Pumping, Inc	3023 Lake Maria Rd Freeport, MN 56331	3/1/12	2/28/15	1, 2 and 4	2008	None
RRS2 Inc	133 N Jackson St, #427 Milwaukee, WI 53202 or 1313 N Franklin Pl, #805 Milwaukee, WI 53202	11/1/14	10/31/17	1, 2 and 4	2011-2012	None
Thull, Gerald T	*See,* JT Roofing, Inc					

Cause Code: 1 = Failure to Pay Straight Time 2 = Failure to Pay Overtime 3 = Kickback 4 = Payroll Records.

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STATE OF WISCONSIN
DWD
Department of Workforce Development

Scott Walker, Governor
Reginald J. Newson, Secretary

PREVAILING WAGE – Contractors

Any public works project that has a total estimated project cost that equals or exceeds prevailing wage project thresholds requires a prevailing wage rate determination issued by the Department of Workforce Development (DWD). Public works include erecting, constructing, remodeling, repairing, demolishing, alterations, painting and decorating projects for a local governmental unit or state agency. State law excludes minor service or maintenance work, warranty work, or work under a supply-and-installation contract. There is a statutory definition for most of these exclusions. The prevailing wage laws that apply to local governmental units and their contractors are §§66.0903 and 103.503, Wis. Stats. The prevailing wage laws that apply to state agencies and their contractors are §§103.49 and 103.503, Wis. Stats. The applicable administrative rules for all prevailing wage projects are DWD 290 and DWD 294, Wis. Adm. Code. These laws include provisions that apply to all contractors and subcontractors working on prevailing wage projects.

Any contractor or subcontractor working on a local governmental unit or state agency's public works project that equals or exceeds current prevailing wage project thresholds must do all of the following:

- Receive and review the project's prevailing wage rate determination (i.e., white sheet).
- Tell subcontractors the project is subject to state prevailing wage law and include the prevailing wage rate determination in the construction contract, or if there is no written contract, provide a copy of the project determination to each subcontractor.
- Hire subcontractors who do *not* appear on the "Consolidated List of Debarred Contractors."
- Have a written substance abuse testing program in place that fulfills the requirements of §103.503, Wis. Stats., before commencing work on the project.

- Notify subcontractors that if DWD finds that a contractor or subcontractor violated the prevailing wage law, DWD will assess liquidated damages of 100% of the wages owed to employees.

- Apply to DWD for subjourney wage rates prior to employing these individuals on the project.

- Receive and retain a completed Affidavit of Compliance from each subcontractor brought on to the project before providing final payment to those subcontractors.

- Submit a completed Affidavit of Compliance to the contractor who brought the subcontractor on to the project before receiving final payment for the project.

- Maintain payroll records for 3 years that comply with §§66.0903(10)(a) or 103.49(5)(a), Stats. and DWD 274.06.

- Respond to requests from DWD or the project owner to provide payroll records and/or respond to prevailing wage complaints filed by employees or third parties.

For more information, visit the prevailing wage website: http://dwd.wisconsin.gov/er/prevailing_wage_rate/default.htm. For further assistance, call the Equal Rights Division at 608-266-6861 and ask for prevailing wage.

State of Wisconsin
Department of Workforce Development
Equal Rights Division

Disclosure of Ownership

The statutory authority for the use of this form is prescribed in Sections 66.0903(12)(d), 66.0904(10)(d) and 103.49(7)(d), Wisconsin Statutes.
The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes.
Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04(1) (m), Wisconsin Statutes].

(1) On the date a contractor submits a bid to or completes negotiations with a state agency, local governmental unit, or developer, investor or owner on a project subject to Section 66.0903, 66.0904 or 103.49, Wisconsin Statutes, the contractor shall disclose to such state agency, local governmental unit, or developer, investor or owner, the name of any "other construction business," which the contractor, or a shareholder, officer or partner of the contractor, owns or has owned within the preceding three (3) years.

(2) The term "other construction business" means any business engaged in the erection, construction, remodeling, repairing, demolition, altering or painting and decorating of buildings, structures or facilities. It also means any business engaged in supplying mineral aggregate, or hauling excavated material or spoil as provided by Sections 66.0903(3), 66.0904(2), 103.49(2) and 103.50(2), Wisconsin Statutes.

(3) This form must ONLY be filed, with the state agency project owner, local governmental unit project owner, or developer, investor or owner of a publicly funded private construction project that will be awarding the contract, if **both (A) and (B) are met**.

(A) The contractor, or a shareholder, officer or partner of the contractor:
(1) Owns at least a 25% interest in the "other construction business," indicated below, on the date the contractor submits a bid or completes negotiations; or
(2) Has owned at least a 25% interest in the "other construction business" at any time within the preceding three (3) years.

(B) The Wisconsin Department of Workforce Development (DWD) has determined that the "other construction business" has failed to pay the prevailing wage rate or time and one-half the required hourly basic rate of pay, for hours worked in excess of the prevailing hours of labor, to any employee at any time within the preceding three (3) years.

Other Construction Business

Business Name			
Street Address or P O Box	City	State	Zip Code
Business Name			
Street Address or P O Box	City	State	Zip Code
Business Name			
Street Address or P O Box	City	State	Zip Code
Business Name			
Street Address or P O Box	City	State	Zip Code

I hereby state under penalty of perjury that the information, contained in this document, is true and accurate according to my knowledge and belief.

Print the Name of Authorized Officer			
Authorized Officer Signature	Date Signed		
Corporation, Partnership or Sole Proprietorship Name			
Street Address or P O Box	City	State	Zip Code

If you have any questions call (608) 266-6861

State of Wisconsin
Department of Workforce Development
Equal Rights Division

Prime Contractor Affidavit of Compliance With Prevailing Wage Rate Determination

Authorization for this form is provided under Sections 66.0903(9)(c), 66.0904(7)(c) and 103.49(4r)(c) Wisconsin Statutes.
The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes.
Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04(1)(m), Wisconsin Statutes].

This form must **ONLY** be filed with the **Awarding Agency** indicated below.

State Of))SS County Of)	Project Name	
	DWD Determination Number	Project Number (if applicable)
	Date Determination Issued	Date of Contract
	Awarding Agency	
	Date Work Completed	

After being duly sworn, the person whose name and signature appears below hereby states under penalty of perjury that

- **I am** the duly authorized officer of the corporation, partnership, sole proprietorship or business indicated below and have recently completed all of the work required under the terms and conditions of a contract with the above-named awarding agency and make this affidavit in accordance with the requirements set forth in Section 66.0903(9)(c), 66.0904(7)(c) or 103.49(4r)(c), Wisconsin Statutes and Chapter DWD 290 of the Wisconsin Administrative Code in order to obtain FINAL PAYMENT from such awarding agency.
- **I have** fully complied with all the wage and hour requirements applicable to this project, including all of the requirements set forth in the prevailing wage rate determination indicated above which was issued for such project by the Department of Workforce Development on the date indicated above.
- **I have** received the required affidavit of compliance from each of my agents and subcontractors that performed work on this project and have listed each of their names and addresses on page 2 of this affidavit.
- **I have** full and accurate records that clearly indicate the name and trade or occupation of every worker(s) that I employed on this project, including an accurate record of the hours worked and actual wages paid to such worker(s).
- **I will** retain the records and affidavit(s) described above and make them available for inspection for a period of at least three (3) years from the completion date indicated above at the address indicated below and shall not remove such records or affidavit(s) without prior notification to the awarding agency indicated above.

Name of Corporation, Partnership, Sole Proprietorship, Business, State Agency or Local Governmental Unit				
Street Address	City	State	Zip Code	Telephone Number
Print Name of Authorized Officer			Date Signed	
Signature of Authorized Officer				

List of Agents and Subcontractors

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		

If you have any questions call (608) 266-6861

State of Wisconsin
Department of Workforce Development
Equal Rights Division

Agent or Subcontractor Affidavit of Compliance With Prevailing Wage Rate Determination

Authorization for this form is provided under Sections 66.0903(9)(b), 66.0904(7)(b) and 103.49(4r)(9b), Wisconsin Statutes. The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes.
Personal information you provide may be used for secondary purposes [Privacy Law, Section 15.04(1)(m), Wisconsin Statutes].

This form must **ONLY** be filed with the **Awarding Contractor** indicated below.

State Of _____))SS County Of _____)	Project Name	
	DWD Determination Number	Project Number (if applicable)
	Date Determination Issued	Date of Subcontract
	Awarding Contractor	
	Date Work Completed	

After being duly sworn, the person whose name and signature appears below hereby states under penalty of perjury that

- **I am** the duly authorized officer of the corporation, partnership, sole proprietorship or business indicated below. We have recently completed all of the work required under the terms and conditions of a subcontract with the above-named awarding contractor. We make this affidavit in accordance with the requirements set forth in Section 66.0903(9)(b), 66.0904(7)(b) or 103.49(4r)(b), Wisconsin Statutes and Chapter DWD 290 of the Wisconsin Administrative Code in order to obtain FINAL PAYMENT from such awarding contractor.
- **I have** fully complied with the entire wage and hour requirements applicable to this project, including all of the requirements set forth in the prevailing wage rate determination indicated above which was issued for such project by the Department of Workforce Development on the date indicated above.
- **I have** received the required affidavit of compliance from each of my agents and subcontractors that performed work on this project and have listed each of their names and addresses on page 2 of this affidavit.
- **I have** full and accurate records that clearly indicate the name and trade or occupation of every worker(s) that I employed on this project, including an accurate record of the hours worked and actual wages paid to such worker(s).
- **I will** retain the records and affidavit(s) described above and make them available for inspection for a period of at least three (3) years from the completion date indicated above at the address indicated below and shall not remove such records or affidavit(s) without prior notification to the awarding contractor.

Name of Corporation, Partnership, Sole Proprietorship, Business, State Agency or Local Governmental Unit				
Street Address or PO Box	City	State	Zip Code	Telephone Number ( )
Print Name of Authorized Officer			Date Signed	
Authorized Officer Signature				

List of Agents and Subcontractors

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( )			Telephone Number ( )		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( )			Telephone Number ( )		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( )			Telephone Number ( )		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( )			Telephone Number ( )		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( )			Telephone Number ( )		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number ( )			Telephone Number ( )		

If you have any questions call (608) 266-6861

State of Wisconsin
Department of Workforce Development
Equal Rights Division
Labor Standards Bureau

Request to Employ Subjourneyperson

The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes.
Personal information you provide may be used for secondary purposes (Privacy Law, s. 15.04(1)(m), Wisconsin Statutes].
The employer indicated below requests that the Department of Workforce Development (DWD) determine the prevailing wage rate(s) and related qualifications to enable such employer to use a subjourneyperson(s) on the following prevailing wage project, in accordance with the provisions of Section DWD 290.025, Wisconsin Administrative Code.

1. Name of Project Appearing on the Project Determination			
County	City, Village or Town		
DWD Project Determination Number	Project Number (if applicable)		
2. Job Classification(s) for which you request a subjourney rate (i.e., carpenter, electrician, plumber, etc.)			
a.	b.		
c.	d.		
3. Employer Name (Print)	Requester Name (Print)		
Address	City	State	Zip Code
Telephone Number ( )	Requester Title		
Email address (if you prefer to receive your response via email)	Fax Number (if you prefer to receive your response via fax) ( )		

READ CAREFULLY: I understand that this request is ONLY applicable to the project and job classification(s) listed above and that subjourney employees primarily work under the direction of and assist a skilled trade employee by frequently using the tools of a skilled trade and will NOT regularly perform the duties of a general laborer, heavy equipment operator or truck driver. If the subjourney employee regularly performs the work of a different trade or occupation, he/she will be compensated for such work at the applicable journeyperson prevailing wage rate. I agree to compensate subjourney employees in strict accordance with the directions received from the DWD.

Requester Signature	Date Signed

MAIL the completed request to:
EQUAL RIGHTS DIVISION, LABOR STANDARDS BUREAU
PO BOX 8928, MADISON WI 53708
OR
FAX the completed request to: (608) 267-4592 / **DO NOT e-mail your request**.
Call (608) 266-6861 for assistance in completing this form.

ADDITIONAL GENERAL PREVAILING WAGE LAW INFORMATION

(This document updated February 2014)

For prevailing wage laws and frequently asked questions, refer to the prevailing wage website at: http://dwd.wisconsin.gov/er/prevailing_wage_rate/default.htm

Topic	Who's affected?	Brief description of requirement under §66.0903 or §103.49
Non-applicability	All public entities	Prevailing wage rates do not apply to minor service or maintenance work, warranty work, or work under a supply and installation contract.
Non-applicability: Minor service or maintenance work	Local governmental units & Contractors	Minor service or maintenance work means a project of public works that is limited to • minor crack filling, chip or slurry sealing, or other minor pavement patching, not including overlays, that has a projected life span of no longer than 5 years or that is performed for a TOWN and is not funded under §86.31, regardless of projected life span; • the depositing of gravel on an existing gravel road applied solely to maintain the road; • road shoulder maintenance; • cleaning of drainage or sewer ditches or structures; or • any other limited, minor work on public facilities or equipment that is routinely performed to prevent breakdown or deterioration.
Non-applicability: Minor service or maintenance work	State agencies	Minor service or maintenance work means a project of public works that is limited to • minor crack filling, chip or slurry sealing, or other minor pavement patching, not including overlays, that has a projected life span of no longer than 5 years; • cleaning of drainage or sewer ditches or structures; or • any other limited, minor work on public facilities or equipment that is routinely performed to prevent breakdown or deterioration.
Non-applicability: Supply & installation contract	All public entities	Supply and installation contract means a contract under which the material is installed by means of simple fasteners or connectors such as screws or nuts and bolts and no other work is performed on the site of the project of public works, and the total labor cost to install the material does not exceed 20 percent of the total cost of the contract.
Non-applicability: Work which a contractor or individual donates to a public entity	All public entities	Prevailing wage laws §§66.0903 & 103.49, Stats., do not apply to work performed on a project of public works for which the local governmental unit or the state or the state agency contracting for the project is not required to compensate any contractor, subcontractor, contractor's or subcontractor's agent, or individual for performing the work.

Topic	Who's affected?	Brief description of requirement under §66.0903 or §103.49
Non-applicability: Residential	All public entities	A prevailing wage rate determination is not required for the erection, construction, repair, remodeling, or demolition of a residential property containing 2 dwelling units or less.
Non-applicability: Residential subdivision infrastructure	All public entities	A prevailing wage rate determination is not required for a road, street, bridge, sanitary sewer, or water main project that is a part of a development in which at least 90 percent of the lots contain or will contain 2 dwelling units or less, as determined by the local governmental unit at the time of approval of the development, and that, on completion, is acquired by, or dedicated to, a local governmental unit (including under §236.13(2), Stats.), or the state, for ownership or maintenance by the local governmental unit or the state.
Electronic certified payroll record	Contractors	The requirement that every contractor on a prevailing wage project submit to DWD monthly a certified record of employees who worked on the project and that DWD post these certified records on its Internet website was discontinued effective July 1, 2011. Contractors are still required to maintain payroll records and provide them upon request from DWD &/or the project owner.
Payroll record inspection request by any person	Contractors & Complainants	Any person may request DWD to inspect the payroll records of any contractor working on a prevailing wage project. On receipt of such a request, the contractor must submit to DWD a certified record of its payroll records, other than personally identifiable information relating to an employee of the contractor, for no longer than a 4-week period. DWD may request records from a contractor under this provision no more than once per calendar quarter for each project of public works on which the contractor is performing work. The department may not charge a requester a fee for obtaining that information. DWD must make these certified records available for public inspection.
Statewide uniformity	Local govern-mental units	A local governmental unit may not enact & administer a prevailing wage ordinance/provision for public works or publicly funded private construction projects. Any extant laws to that effect are void.
Substance Abuse Testing	Contractors & Workers	Before commencing work on a prevailing wage project, a contractor must have a written substance abuse testing program in place that complies with §103.503, Wis. Stats. No employee may use, possess, attempt to possess, distribute, deliver, or be under the influence of a drug or under the influence of alcohol while performing work on a prevailing wage project.

Topic	Who's affected	Brief description of requirement under §66.0903 or §103.49
Covered employees	Truck drivers & Other workers & Contractors	A laborer, worker, mechanic, or truck driver who is employed to process, manufacture, pick up, or deliver materials or products from a commercial establishment that has a fixed place of business from which the establishment supplies processed or manufactured materials or products or from a facility that is not dedicated exclusively, or nearly so, to a project of public works is NOT entitled to receive the prevailing wage rate UNLESS any of the following applies: 1) the laborer, worker, mechanic, or truck driver is employed to go to the source of mineral aggregate such as sand, gravel, or stone and deliver that mineral aggregate to the site of a project of public works by depositing the material directly in final place, from the transporting vehicle or through spreaders from the transporting vehicle. 2) the laborer, worker, mechanic, or truck driver is employed to go to the site of a project of public works, pick up excavated material or spoil from the site of the project, and transport that excavated material or spoil away from the site of the project.

General Decision Number: WI150008 03/20/2015 WI8

Superseded General Decision Number: WI20140008

State: Wisconsin

Construction Types: Heavy (Sewer and Water Line and Tunnel)

Counties: Wisconsin Statewide.

TUNNEL, SEWER & WATER LINE CONSTRUCTION PROJECTS

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of $10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is 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 $10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/02/2015
1	01/16/2015
2	02/27/2015
3	03/20/2015

BRWI0001-002 06/01/2013

CRAWFORD, JACKSON, JUNEAU, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.94	17.05

BRWI0002-002 06/01/2013

ASHLAND, BAYFIELD, DOUGLAS, AND IRON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.94	17.05

BRWI0002-005 06/01/2013

ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA,

CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 32.65	17.44

BRWI0003-002 06/01/2013

BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, AND OCONTO COUNTIES

	Rates	Fringes
BRICKLAYER	$ 30.85	17.85

BRWI0004-002 06/01/2013

KENOSHA, RACINE, AND WALWORTH COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.10	18.58

BRWI0006-002 06/01/2013

ADAMS, CLARK, FOREST, LANGLADE, LINCOLN, MARATHON, MENOMINEE, ONEIDA, PORTAGE, PRICE, TAYLOR, VILAS AND WOOD COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.14	16.56

BRWI0007-002 06/01/2013

GREEN, LAFAYETTE, AND ROCK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.14	18.25

BRWI0008-002 06/01/2013

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.37	18.47

BRWI0009-001 06/01/2012

GREEN LAKE, MARQUETTE, OUTAGAMIE, SHAWANO, WAUPACA, WASHARA, AND WINNEBAGO COUNTIES

	Rates	Fringes
BRICKLAYER	$ 30.77	16.62

BRWI0011-002 06/01/2012

CALUMET, FOND DU LAC, MANITOWOC, AND SHEBOYGAN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 30.77	16.62

BRWI0013-002 06/01/2012

DANE, GRANT, IOWA, AND RICHLAND COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.01	17.05

BRWI0019-002 06/01/2012

BARRON, BUFFALO, BURNETT, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, ST. CROIX, SAWYER AND WASHBURN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 30.42	16.97

BRWI0021-002 06/01/2012

DODGE AND JEFFERSON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.56	16.52

BRWI0034-002 06/01/2013

COLUMBIA AND SAUK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 32.28	18.10

CARP0087-001 07/01/2012

BURNETT (W. of Hwy 48), PIERCE (W. of Hwy 29), POLK (W. of Hwys 35, 48 & 65), AND ST. CROIX (W. of Hwy 65) COUNTIES

	Rates	Fringes
Carpenter & Piledrivermen	$ 33.34	16.73

CARP0252-002 07/02/2012

ADAMS, BARRON, BAYFIELD (Eastern 2/3), BROWN, BUFFALO, BURNETT (E. of Hwy 48), CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DANE, DODGE, DOOR, DUNN, EAU CLAIRE, FLORENCE (except area bordering Michigan State Line), FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IOWA, IRON, JACKSON, JEFFERSON, JUNEAU, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE (except N.E. corner), MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE (E. of Hwys 29 & 65), POLK (E. of Hwys 35, 48 & 65), PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST CROIX (E. of Hwy 65), TAYLOR, TREMPEALEAU, VERNON, VILAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CARPENTER		
CARPENTER	$ 30.48	15.80
MILLWRIGHT	$ 32.11	15.80
PILEDRIVER	$ 30.98	15.80

CARP0252-010 07/02/2012

ASHLAND COUNTY

	Rates	Fringes
Carpenters		
Carpenter	$ 30.48	15.80
Millwright	$ 32.11	15.80
Pile Driver	$ 30.98	15.80

CARP0264-003 06/01/2008

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WAUKESHA, AND WASHINGTON COUNTIES

	Rates	Fringes
CARPENTER	$ 30.52	14.41

CARP0361-004 07/11/2011

BAYFIELD (West of Hwy 63) AND DOUGLAS COUNTIES

	Rates	Fringes
CARPENTER	$ 31.07	15.80

CARP2337-001 06/01/2008

ZONE A: MILWAUKEE, OZAUKEE, WAUKESHA AND WASHINGTON

ZONE B: KENOSHA & RACINE

	Rates	Fringes
PILEDRIVERMAN		
Zone A	$ 27.25	19.46
Zone B	$ 24.47	19.46

CARP2337-003 06/02/2008

	Rates	Fringes
MILLWRIGHT		
Zone A	$ 27.92	19.08
Zone B	$ 26.82	19.08

ZONE DEFINITIONS

ZONE A: MILWAUKEE, OZAUKEE, WAUKESHA AND WASHINGTON COUNTIES

ZONE B: KENOSHA & RACINE COUNTIES

ELEC0014-002 06/01/2014

ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Maryville, Colby, Unity, Sherman, Fremont, Lynn & Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON, AND WASHBURN COUNTIES

	Rates	Fringes
Electricians:	$ 30.59	18.43

ELEC0127-002 06/01/2012

KENOSHA COUNTY

	Rates	Fringes

Electricians:.....$ 35.25 19.30

ELEC0158-002 06/02/2014

BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE(Wausuakee and area South thereof), OCONTO, MENOMINEE (East of a ine 6 miles West of the West boundary of Oconto County), SHAWANO (Except Area North of Townships of Aniwa and Hutchins) COUNTIES

	Rates	Fringes
Electricians:.....	$ 29.32	28.50% + 9.27

ELEC0159-003 06/02/2014

COLUMBIA, DANE, DODGE (Area West of Hwy 26, except Chester and Emmet Townships), GREEN, LAKE (except Townships of Berlin, Seneca, and St. Marie), IOWA, MARQUETTE (except Townships of Neshkoka, Crystal Lake, Newton, and Springfield), and SAUK COUNTIES

	Rates	Fringes
Electricians:.....	$ 34.82	19.575

ELEC0219-004 05/30/2011

FLORENCE COUNTY (Townships of Aurora, Commonwealth, Fern, Florence and Homestead) AND MARINETTE COUNTY (Township of Niagara)

	Rates	Fringes
Electricians:		
Electrical contracts over $130,000.....	$ 29.41	16.97
Electrical contracts under $130,000.....	$ 26.24	16.85

ELEC0242-005 06/01/2014

DOUGLAS COUNTY

	Rates	Fringes
Electricians:.....	$ 32.54	24.07

ELEC0388-002 06/01/2013

ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Beecher, Dunbar, Goodman & Pembine), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Aniwa and Hutchins), VILAS AND WOOD COUNTIES

	Rates	Fringes
Electricians:	$ 28.96	24.85% + 9.70

ELEC0430-002 06/01/2012

RACINE COUNTY (Except Burlington Township)

	Rates	Fringes
Electricians:	$ 32.87	19.23

ELEC0494-005 06/01/2014

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Electricians:	$ 33.93	22.67

ELEC0494-006 06/01/2014

CALUMET (Township of New Holstein), DODGE (East of Hwy 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

	Rates	Fringes
Electricians:	$ 29.64	20.54

ELEC0577-003 06/02/2014

CALUMET (except Township of New Holstein), GREEN LAKE (N. part including Townships of Berlin, St Marie, and Seneca), MARQUETTE (N. part including Townships of Crystal Lake, Neshkoro, Newton, and Springfield), OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO COUNTIES

	Rates	Fringes
Electricians:	$ 29.00	26.5%+9.15

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* ELEC0890-003 12/01/2014

DODGE (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE,
RACINE (Burlington Township), ROCK AND WALWORTH COUNTIES

	Rates	Fringes
Electricians:	$ 31.30	24.93% + $10.40

ENGI0139-003 06/01/2014

REMAINING COUNTIES

	Rates	Fringes
Power Equipment Operator		
Group 1	$ 36.67	19.50
Group 2	$ 35.42	19.50
Group 3	$ 34.22	19.50
Group 4	$ 33.69	19.50
Group 5	$ 31.62	19.50
Group 6	$ 30.99	19.50

HAZARDOUS WASTE PREMIUMS:
EPA Level "A" Protection: $3.00 per hour
EPA Level "B" Protection: $2.00 per hour
EPA Level "C" Protection: $1.00 per hour

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, Tower Cranes and Derricks with or without attachments with a lifting capacity of over 100 tons; Cranes, Tower Cranes, and Derricks with boom, leads and/or jib lengths 176 ft or longer.

GROUP 2: Backhoes (Excavators) weighing 130,00 lbs and over; Cranes, Tower Cranes and Derricks with or without attachments with a lifting capacity of 100 tons or less; Cranes, Tower Cranes, and Derricks with boom, leads, and/or jib lengths 175 ft or less; Caisson Rigs; Pile Driver

GROUP 3: Backhoes (Excavators) weighing under 130,000 lbs; Travelling Crane (bridge type); Milling Machine; Concrete Paver over 27 E; Concrete Spreader and Distributor; Concrete Laser Screed; Concrete Grinder and Planing Machine; Slipform Curb and Gutter Machine; Boring Machine (Directional); Dredge Operator; Skid Rigs; over 46 meter Concrete Pump.

GROUP 4: Hydraulic Backhoe (tractor or truck mounted); Hydraulic Crane, 10 tons or less; Tractor, Bulldozer, or End Loader (over 40 hp); Motor Patrol; Scraper Operator; Bituminous Plant and Paver Operator; Screed-Milling Machine; Roller over 5 tons; Concrete pumps 46 meter and under; Grout Pumps; Rotec type machine; Hydro Blaster,

10,000 psi and over; Rotary Drill Operator; Percussion Drilling Machine; Air Track Drill with or without integral hammer; Blaster; Boring Machine (vertical or horizontal); Side Boom; Trencher, wheel type or chain type having 8 inch or larger bucket; Rail Leveling Machine (Railroad); Tie Placer; Tie Extractor; Tie Tamper; Stone Leveler; Straddle Carrier; Material Hoists; Stack Hoist; Man Hoists; Mechanic and Welder; Off Road Material Haulers.

GROUP 5: Tractor, Bulldozer, or Endloader (under 40 hp); Tampers -Compactors, riding type; Stump Chipper, large; Roller, Rubber Tire; Backfiller; Trencher, chain type (bucket under 8 inch); Concrete Auto Breaker, large; Concrete Finishing Machine (road type); Concrete Batch Hopper; Concrete Conveyor Systems; Concrete Mixers, 14S or over; Pumps, Screw Type and Gypsum); Hydrohammers, small; Brooms and Sweeeprs; Lift Slab Machine; Roller under 5 tons; Industrial Locomotives; Fireman (Pile Drivers and Derricks); Pumps (well points); Hoists, automatic; A-Frames and Winch Trucks; Hoists (tuggers); Boats (Tug, Safety, Work Barges and Launches); Assistant Engineer

GROUP 6: Shouldering Machine Operator; Farm or Industrial Tractor mounted equipment; Post Hole Digger; Auger (vertical and horizontal); Skid Steer Loader with or without attachments; Robotic Tool Carrier with or without attachments; Power Pack Vibratory/Ultra Sound Driver and Extractor; Fireman (Asphalt Plants); Screed Operator; Stone Crushers and Screening Plants; Air, Electric, Hydraulic Jacks (Slip Form); Prestress Machines; Air Compressor, 400 CFM or over; Refrigeration Plant/Freese Machine; Boiler Operators (temporary heat); Forklifts; Welding Machines; Generators; Pumps over 3"; Heaters, Mechanical; Combination small equipment operator; Winches, small electric; Oiler; Greaser; Rotary Drill Tender; Conveyor; Elevator Operator

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ENGI0139-007 06/01/2014

DODGE, FOND DU LAC, JEFFERSON, KENOSHA, MILWAUKEE, OZAUKEE, RACINE, SHEBOYGAN, WALWORTH, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Power Equipment Operator		
Group 1	$ 37.24	19.85
Group 2	$ 36.46	19.85
Group 3	$ 35.51	19.85
Group 4	$ 34.46	19.85
Group 5	$ 33.06	19.85

HAZARDOUS WASTE PREMIUMS:
EPA Level "A" Protection: $3.00 per hour

EPA Level "B" Protection: $2.00 per hour
EPA Level "C" Protection: $1.00 per hour

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, Tower Cranes, and Derricks with or without attachments, with a lifting capacity of over 100 tons; or Cranes, Tower Cranes, and Derricks with boom, leads, and/or jib lengths measuring 176 feet or longer; Backhoes (Excavators) 130,000 lbs and over; Caisson Rigs and Pile Drivers

GROUP 2: Cranes, Tower Cranes and Derricks with or without attachments with a lifting capacity of 100 tons or under; or Cranes, Tower Cranes, and Derricks with boom, lead, and\or jib lengths measuring 175 feet or under; Backhoes (Excavators) under 130,000 lbs; Skid Rigs; Dredge Operator: Traveling Crane (Bridge type); Concrete Paver over 27 E; Concrete Spreader and Distributor; Concrete Pumps and Boring Machines (directional)

GROUP 3: Material Hoists; Stack Hoists; Tractor or Truck mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane, 5 tons or under; Manhoist; Tractor over 40 hp; Bulldozer over 40 hp; Endloader over 40 hp; Forklift, 25 ft and over; Motor Patrol; Scraper Operator; Sideboom; Straddle Carrier; Mechanic and Welder; Bituminous Plant and Paver Operator; Roller over 5 tons; Percussion Drill Operator; Rotary Drill Operator; Blaster; Air Track Drill; Trencher (wheel type or chain type having over 8 inch bucket); Elevator; Milling Machine and Boring Machine (horizontal or vertical); Backhoe Mounted Compactor

GROUP 4: Backfiller; Concrete Auto Breaker (large); Concrete Finishing Machine (road type); Roller, Rubber Tire; Concrete Batch Hopper; Concrete Conveyor System; Concrete Mixers (14S or over); Screw type Pumps and Gypsum Pumps; Grout Pumps; Tractor, Bulldozer, End Loader, under 40 hp; Pumps (well points); Trencher (chain type 8 inch or smaller bucket; Industrial Locomotives; Roller under 5 tons; Fireman (Piledrivers and Derricks); Robotic Tool Carrier with or without attachments.

GROUP 5: Hoists (Automatic); Forklift, 12 ft to 25 ft; Tamper-Compactors, riding type; A-Frame andWinch Trucks; Concrete Auto Breaker; Hydrohammer, small; Brooms and Sweepers; Hoist (Tuggers); Stump Chipper, large; Boats (Tug, Safety, Work Barges and Launch); Shouldering Machine Operator; Screed Operator; Farm or Industrial Tractor; Post Hole Digger; Stone Crushers and Screening Plants; Firemen (Asphalt Plants); Air Compressor (400 CFM or over); Augers (vertical and horizontal); Generators, 150 KW and over; Air, Electric Hydraulic Jacks (Slipform); Prestress Machines; Skid Steer Loader with or without attachments;

Boiler operators (temporary heat); Forklift, 12 ft and under; Screed Operator Milling Machine; Refrigeration Plant/Freeze Machine; Power Pack Vibratory/Ultra Sound Driver and Extractor; Generators under 150 KW; Combination small equipment operator; Compressors under 400 CFM; Welding Machines; Heaters, Mechanical; Pumps; Winches, Small Electric; Oiler and Greaser; Conveyor; High pressure utility locating machine (daylighting machine).

IRON0008-002 06/01/2013

BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC, MARINETTE, OCONTO, OUTAGAMI, SHAWANO, SHEBOYGAN, AND WINNEBAGO COUNTIES:

	Rates	Fringes
IRONWORKER	$ 28.72	23.47

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0008-003 06/01/2013

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WALWORTH (N.E. 2/3), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
IRONWORKER	$ 30.52	23.47

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0383-001 06/01/2013

ADAMS, COLUMBIA, CRAWFORD, DANE, DODGE, FLORENCE, FOREST, GRANT, GREENE, (Excluding S.E. tip), GREEN LAKE, IOWA, JEFFERSON, JUNEAU, LA CROSSE, LAFAYETTE, LANGLADE, MARATHON, MARQUETTE, MENOMINEE, MONROE, PORTAGE, RICHLAND, ROCK (Northern area, vicinity of Edgerton and Milton), SAUK, VERNON, WAUPACA, WAUSHARA, AND WOOD COUNTIES

	Rates	Fringes
IRONWORKER	$ 31.50	20.03

IRON0498-005 06/01/2008

GREEN (S.E. 1/3), ROCK (South of Edgerton and Milton), and
WALWORTH (S.W. 1/3) COUNTIES:

	Rates	Fringes
IRONWORKER	$ 34.34	25.72

IRON0512-008 06/09/2013

BARRON, BUFFALO, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, JACKSON, PEPIN, PIERCE, POLK, RUSK, ST CROIX, TAYLOR, AND TREMPEALEAU COUNTIES

	Rates	Fringes
IRONWORKER	$ 34.15	22.05

IRON0512-021 06/09/2013

ASHLAND, BAYFIELD, BURNETT, DOUGLAS, IRON, LINCOLN, ONEIDA, PRICE, SAWYER, VILAS AND WASHBURN COUNTIES

	Rates	Fringes
IRONWORKER	$ 29.34	22.05

LABO0113-004 06/02/2014

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Laborers: (Open Cut)		
Group 1	$ 14.62	17.64
Group 2	$ 16.78	17.64
Group 3	$ 20.13	17.64
Group 4	$ 29.03	17.64
Group 5	$ 29.16	17.64
Group 6	$ 29.22	17.64
Group 7	$ 31.31	17.64
Group 8	$ 34.00	17.64
Group 9	$ 34.60	17.64

LABORERS CLASSIFICATIONS [OPEN CUT]

GROUP 1: Yard Laborer

GROUP 2: Landscaper

GROUP 3: Flag Person

GROUP 4: Paving Laborer

GROUP 5: General Laborer on Surface; Top Man

GROUP 6: Mud Mixer

GROUP 7: Mucker; Form Stripper; Bottom Digger and Misc; Bottom Man and Welder on Surface

GROUP 8: Concrete Manhole Builder; Caisson Worker; Miner; Pipe Layer; Rock Driller and Joint Man; Timber Man and Concrete Brusher; Bracer in Trench Behind Machine & Tight Sheeting; Concrete Formsetter and Shoveler; Jackhammer Operator

GROUP 9: Blaster

LABO0113-005 06/02/2014

SEWER, TUNNEL & UNDERGROUND

KENOSHA AND RACINE COUNTIES

	Rates	Fringes
Laborers:		
Group 1	$ 20.95	17.64
Group 2	$ 26.58	17.64
Group 3	$ 29.01	17.64
Group 4	$ 30.69	17.64

TUNNEL WORK UNDER COMPRESSED AIR: 0-15 lbs add $1.00, 15-30 lbs add $2.00, over 30 lbs add $3.00

LABORERS CLASSIFICATIONS

GROUP 1: Flagperson

GROUP 2: Top Man, General Laborer, Wellpoint Installation, Wire Mesh and Reinforcement, Concrete Worker, Form Stripper, Strike-off Work

GROUP 3: Machine and Equipment Operator, Sheeting, Form Setting, Patch Finisher, Bottom Man, Joint Sawer, Gunnite Man, Manhole Builder, Welder-Torchman, Blaster, Caulker, Bracer, Bull Float, Conduit Worker, Mucker and Car Pusher, Raker and Luteman, Hydraulic Jacking of Shields, Shield Drivers, Mining Machine, Lock Tenders, Mucking Machine Operator, Motor Men & Gauge Tenders and operation of incidental Mechanical Equipment and all Power Driven Tools

GROUP 4: Pipelayer, Miner and Laser Operator

LABO0113-008 06/02/2014

MILWAUKEE, OZAUKEE, WASHINGTON & WAUKESHA COUNTIES

	Rates	Fringes
Laborers: (Tunnel-Free Air)		
Group 1	$ 20.13	17.64
Group 2	$ 29.16	17.64
Group 3	$ 29.22	17.64
Group 4	$ 31.31	17.64
Group 5	$ 31.45	17.64
Group 6	$ 34.00	17.64
Group 7	$ 34.60	17.64

LABORERS CLASSIFICATIONS [TUNNEL - FREE AIR]:

GROUP 1: Flagperson

GROUP 2: General Laborer on surface; Tower Man

GROUP 3: Saw Man; Top Man

GROUP 4: Form Stripper; Car Pusher

GROUP 5: Mucker; Dinkey; Welder (rate on surface)

GROUP 6: Concrete Manhole Builder; Mucking Machine; Miner; Mining Machine; Welder; Rock Driller; Concrete Buster; Jack Hammer Operator; Caisson Worker; Pipelayer and Joint Man; Bracerman

GROUP 7: Blaster

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* LABO0113-009 06/02/2014

MILWAUKEE, OZAUKEE, WASHINGTON & WAUKESHA COUNTIES

	Rates	Fringes
Laborers: (Tunnel - *COMPRESSED AIR 0 - 15 lbs.)		
Group 1	$ 20.13	17.64
Group 2	$ 29.16	17.64
Group 3	$ 31.83	17.64
Group 4	$ 32.59	17.64
Group 5	$ 32.70	17.64
Group 6	$ 35.27	17.64
Group 7	$ 35.85	17.64

LABORERS CLASSIFICATIONS [TUNNEL - COMPRESSED AIR]:

*Compressed Air 15 - 30 lbs add $2.00 to all classifications
*Compressed Air over 30 lbs add $3.00 to all classifcations

GROUP 1: Flagperson

GROUP 2: General Laborer on surface

GROUP 3: Lock Tender on surface

GROUP 4: Form Stripper; Car Pusher

GROUP 5: Mucker; Dinkey

GROUP 6: Mucking Machine; Miner; Mining Machine; Welder & Rock Driller; Lock Tender in tunnel; Concrete Buster; Jack Hammer Operator; Caisson Worker; Pielayer and Joint Man; Bracerman; Nozzle Man on Gunite; Timber Man; Concrete Brusher

GROUP 7: Blaster

NOTE: Hazardous & Toxic Waste Removal: add $0.15 per hour.

LABO0140-005 12/05/2011

ADAMS, ASHLAND, BARRON, BROWN, BUFFALO, CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DODGE, DOOR, DUNN, EAU CLAIRE, FLORENCE,FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IOWA, JACKSON, JEFFERSON, JUNEAU, LACROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE, POLK, PORTAGE, PRICE, RICHLAND, ROCK, RUSK, ST CROIX, SAUK, SAWYER, SHAWANO, SHEBOYGAN, TAYLOR, TREMMPEALEAU, VERNON, VILAS, WALWWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
LABORER (SEWER & WATER)		
Group 1	$ 23.18	13.44
Group 2	$ 25.03	13.44
Group 3	$ 25.23	13.44
Group 4	$ 25.58	13.44

FOR ALL TUNNEL WORK UNDER COMPRESSED AIR: 0-15 lbs add $1.00, 15-30 lbs add $2.00, over 30 lbs add $3.00

LABORER CLASSIFICATIONS:

GROUP 1: Flagperson

GROUP 2: General Laborer, Wellpoint Installation; Form Stripper; Strike Off worker

GROUP 3: Sheeting Formsetting; Patch Finisher; Bottom Man; Joint Sawer; Gunnite Man; Manhole Builder; Welder; Torchman; Blaster; Caulker Bracer; Bull Float; Mucker and Car Pusher; Raker and Luteman; Hydraulic jacking of shields, Shield Drivers; Mining Machine; Lock Tenders; Mucking Machine Operators; Motor Men and Gauge Tenders; Power Tool Operators

GROUP 4: Pipelayer, Miner, and Laser Operator

LABO0464-002 06/01/2014

DANE AND DOUGLAS COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 26.76	15.04
Group 2	$ 30.41	15.04
Group 3	$ 30.56	15.04
Group 4	$ 30.86	15.04

FOR ALL TUNNEL WORK UNDER COMPRESSED AIR: 0 - 15 lbs add $1.00, 15- 30 lbs add $2.00, over 30 lbs add $3.00

LABORERS CLASSIFICATIONS:

GROUP 1: Flagperson

GROUP 2: General Laborer; Wellpoint Installation; Concrete Worker; Form Stripper; Strike Off worker

GROUP 3: Sheeting Formsetting; Patch Finisher; Bottom Man; Joint Sawer; Gunnite Man; Manhole Builder; Welder; Torchman; Blaster; Caulker Bracer; Bull Float; Mucker and Car Pusher; Raker and Luteman; Hydraulic jacking of shields, Shield Dirvers; Mining Machine; Lock Tenders; Mucking Machine Operators; Motor Men and Gauge Tenders; Power Tool Operators

GROUP 4: Pipelayer, Miner, and Laser Operator

LABO1091-010 12/05/2011

BAYFIELD, BURNETT, IRON, SAWYER, AND WASHBURN COUNTIES

	Rates	Fringes
Laborers: (SEWER & WATER)		
Group 1	$ 22.87	13.44
Group 2	$ 24.93	13.44
Group 3	$ 25.13	13.44
Group 4	$ 25.48	13.44

FOR ALL TUNNEL WORK UNDER COMPRESSED AIR:
0 - 15 lbs add $1.00, 15-30 lbs add $2.00, over 30 lbs add $3.00

LABORERS CLASSIFICATIONS:

GROUP 1: Flagperson

GROUP 2: Laborers, Wellpoint Installation; Form Stripper; Strike Off worker

GROUP 3: Sheeting Formsetting; Patch Finisher; Bottom Man; Joint Sawer; Gunnite Man; Manhole Builder; Welder; Torchman; Blaster; Caulker Bracer; Bull Float; Mucker and Car Pusher; Raker and Luteman; Hydraulic jacking of shields, Shield Dirvers; Mining Machine; Lock Tenders; Mucking Machine Operators; Motor Men and Gauge Tenders; Power Tool Operators

GROUP 4: Pipelayer, Miner, and Laser Operator

PLAS0599-010 06/01/2012

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
Area 1	$ 32.78	16.80
Area 2 (BAC)	$ 31.52	16.30
Area 3	$ 31.37	16.85
Area 4	$ 30.69	17.53
Area 5	$ 32.09	16.13
Area 6	$ 28.50	19.72

AREA DESCRIPTIONS

AREA 1: BAYFIELD, DOUGLAS, PRICE, SAWYER, AND WASHBURN COUNTIES

AREA 2: ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK,

PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

AREA 3: BUFFALO, CRAWFORD, EAU CLAIRE, JACKSON, JUNEAU, LA CROSSE MONROE, PEPIN, PIERCE, RICHLAND, TREMPEALEAU, AND VERNON COUNTIES

AREA 4: MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

AREA 5: DANE, GRANT, GREEN, IOWA, LAFAYETTE, AND ROCK COUNTIES

AREA 6: KENOSHA AND RACINE COUNTIES

TEAM0039-001 06/01/2014

	Rates	Fringes
TRUCK DRIVER		
1 & 2 Axles	$ 25.18	18.31
3 or more Axles; Euclids Dumptor & Articulated, Truck Mechanic	$ 25.38	18.31
WELL DRILLER	$ 16.52	3.70

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

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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

INSTRUCTIONS FOR COMPLETION OF PAYROLL
(FORM WH-347)
U.S. DEPARTMENT OF LABOR WAGE AND HOUR DECISION

General: Form WH-347 has been made available for the convenience of contractors and subcontractors required by their Federal or Federally-aided construction-type contracts and subcontracts to submit weekly payrolls. Properly filled out, this form will satisfy the requirements of Regulations, Parts 3 and 5 (29 C.F. R., Subtitle A), as to payrolls submitted in connection with contracts subject to the Davis-Bacon and related Acts.

While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally-financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. 3.3,5.5(a). The Copeland Act (40 U.S.C. 3145) requires contractors and subcontractors performing work on Federally-financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) Regulations at 29 C.F.R. 55(a)(3)(ii) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon federal wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

Under the Davis-Bacon and related Acts, the contractor is required to pay not less than prevailing wage, including fringe benefits, as predetermined by the Department of Labor. The contractor's obligation to pay fringe benefits may be met either by payment of the fringe benefits to bona fide benefit plans, funds, or programs, or by making payments to the covered workers (laborers and mechanics) as cash in lieu of fringe benefits.

This payroll provides for the contractor to show on the face of the payroll all monies to each worker, whether as basic rates or as cash in lieu of fringe benefits, and provides for the contractor's representation in the statement of compliance on the payroll (as shown on the next page) that he/she is paying for the fringe benefits required by the contract and not paid as cash in lieu of fringe benefits. Detailed instructions concerning the preparation of the payroll follow:

Contractor or Subcontractor: Fill in your firm's name and check appropriate box.

Address: Fill in your firm's address.

Payroll No.: Beginning with the number "1," list the payroll number for the submission.

For Week Ending: List the workweek ending date.

Project and Location: Self-explanatory.

Project or Contract No.: Self-explanatory.

Column 1 - Name and Individual Identifying Number of Worker: Each worker's full name and individual identifying number (e.g., last four digits of worker's social security number) must be shown on each weekly payroll submitted.

Column 2 – No. of Withholding Exemptions: This column is merely inserted for the employer's convenience and is not a requirement of Regulations, Part 3 and 5.

Column 3 - Work Classifications: List classification descriptive of work actually performed by each laborer or mechanic. Consult classification and minimum wage schedule set forth in contract

specifications. If additional classifications are deemed necessary, see Contracting Officer oar Agency representative. An individual may be shown as having worked in more than one classification provided an accurate breakdown of hours worked in each classification is maintained and shown on the submitted payroll by use of separate entries.

Column 4 - Hours Worked: List the day and date and straight time and overtime hours worked in the applicable boxes. On all contracts subject to the Contract Work Hours Standards Act, enter hours worked in excess of 40 hours a week as "overtime.".

Column 5 Total: Self-explanatory.

Column 6 - Rate of Pay (Including Fringe Benefits): In the "straight time" box for each worker, list the actual hourly rate paid for straight time worked, plus any cash in lieu of fringes paid. When recording the straight time hourly rate, any cash paid in lieu of fringes may be shown separately from the basic rate. For example, $12.25/40" would reflect a $12.25 base hourly rate plus $0.40 for fringe benefits. This is of assistance in correctly computing overtime. See "Fringe Benefits" below. When overtime is worked, show the overtime hourly rate paid plus any cash in lieu of fringe benefits paid in the "overtime" box for each worker; otherwise, you may skip this box. See "Fringe Benefits" below. Payment of not less than time and one-half the basic or regular rate paid is required for overtime under the Contract Work Hours Standards Act of 1962 if the prime contract exceeds $100,000. In addition to paying no less than the predetermined rate for the classification in which the individual works, the contractor must pay amounts predetermined as fringe benefits in the wage decision made part of the contract to approved fringe benefit plans, funds, or programs or shall pay as cash in lieu of fringes. See "FRINGE BENEFITS" below.

Column 7 - Gross Amount Earned: Enter gross amount earned on this project. If part of a worker's weekly wage was earned on projects other than the project described on this payroll, enter in column 7 first the amount earned on the Federal or Federally-assisted project and then the gross amount earned during the week on all projects, thus "$163.00/$420.00" would reflect the earnings of a worker who earned $163.00 on a Federally-assisted construction project during a week in which $420.00 was earned on all work.

Column 8 - Deductions: Five columns are provided for showing deductions made. If more than five deductions are be involved, use first four columns and show the balance of deductions under "Other" column; show actual total under "Total Deductions" column; and in the attachment to the payroll describe the deduction(s) contained in the "Other" column. All deductions must be in accordance with the provisions of the Copeland Act Regulations, 29 CFR, Part 3. If an individual worked on other jobs in addition to this project, show actual deductions from his/her weekly gross wage, and indicate that deductions are based on his/her gross wages.

Column 9 - Net Wages Paid for Week: Self-explanatory.

Totals – Space has been left at the bottom of the columns so that totals may be shown if the contractor so desires.

Statement Required by Regulations, Parts 3 and 5: While the "statement of compliance" need not be notarized, the statement (on page 2 of the payroll form) is subject to the penalties provided by 18 U.S. C. 1001, namely, a fine, possible imprisonment of not more than five years, or both. Accordingly, the party signing this statement should have knowledge of the facts represented as true.

Items 1 and 2: Space has been provided between items (1) and (2) of the statement for describing any deductions made. If all deductions made are adequately described in the "Deductions" column above, state "See Deductions column in this payroll. "See "FRINGE BENEFITS" below for instructions concerning filling out paragraph 4 of this statement.

Item 4 FRINGE BENEFITS – Contractors who pay all required fringe benefits: If paying all fringe benefits to approved plans, funds, or programs in amounts not less than were determined in the applicable wage rate of the Secretary of Labor show the basic cash hourly rate and overtime rate paid to each worker on the face of the payroll and check paragraph 4(a) of the statement on page 2 of the WH-347 payroll form to indicate the payment.

Contractors who pay no fringe benefits: If not paying all pay fringe benefits to approved plans, funds, or programs in amounts of at least those that were determined in the applicable wage decision of the Secretary of Labor, pay any remaining fringe benefit amount to each laborer and mechanic and insert in the "straight time" of the "Rate of Pay" column of the payroll an amount not less than the predetermined rate for each classification plus the amount of fringe benefits determined for each classification in the application wage decision. Inasmuch as it is not necessary to pay time and one-half on cash paid in lieu of fringes, the overtime rate shall not be less than the sum of the basic predetermined rate, plus the half-time premium on basic or regular rate, plus the required cash in lieu of fringe benefits at the straight time rate. In addition, check paragraph 4(b) of the statement on page 2 of the payroll form to indicate the payment of fringe benefits in cash directly to the workers. Note any exceptions in Section 4(c).

Use of Section 4(c), Exceptions: Any contractor who is making payment to approved plans, funds, or programs in amounts less than the wage determination required is obliged to pay the deficiency directly to the covered worker as cash in lieu of fringe benefits. Enter any exceptions to Section 4(a) or 4(b) in section 4(c). Enter in the Exception column the craft, and enter in the Explanation column the hourly amount paid each worker as cash in lieu of fringe benefits and the hourly amount paid to plans, funds, or programs as fringe benefits. The contractor must pay an amount not less than the predetermined rate plus cash in lieu of fringe benefits as shown in section 4(c) to each such individual for all hours worked (unless otherwise provided by applicable wage determination) on the Federal or Federally-assisted projects. Enter the rate paid and amount of cash paid in lieu of fringe benefits per hour in column 6 on the payroll. See paragraph on "Contractors who pay no fringe benefits" for computation of overtime rate.

Public Burden Statement: We estimate that it will take an average of 55 minutes to complete this collection of information, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection of information, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Decision, ESA, U.S. Department of Labor, room S3502, 200 Constitution Avenue, N.W., Washington, D.C. 20210.

Note: In order to view, fill out, and print PDF forms, you need Adobe Acrobat Reader version 5 or later, which you may download for free at www.adobecom/products/acrobat/readstep2.html. To save the completed forms on your workstation, you need to use the "Save As" method to save the file.
For example, move your mouse curser over the PDF link and click on your "RIGHT" mouse button. This will cause a menu to be displayed, from which you will select the proper save option – depending upon which browser you are using:

- For Microsoft IE users, select "Save Target As"
- For Netscape Navigator users, select "Save Link As"

Once you've selected the proper save option for your browser, and have saved the file to a location you specified, go to your program menu and start the Adobe Acrobat Reader. Once open, locate the PDS file you saved and open it directly in Acrobat.

U.S. Department of Labor
Wage and Hour Division

PAYROLL

(For Contractor's Optional Use; See Instructions at www.dol.gov/whd/forms/wh347instr.htm)

Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number.

U.S. Wage and Hour Division

Rev. Dec. 2008

OMB No.: 1215-0149
Expires: 12/31/2011

NAME OF CONTRACTOR ☐ OR SUBCONTRACTOR ☐	ADDRESS	
PAYROLL NO.	FOR WEEK ENDING	PROJECT AND LOCATION

PROJECT OR CONTRACT NO.: #4942-03 (Contract No. 1269-13-01)

(1) NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER	(2) NO. OF WITHHOLDING EXEMPTIONS	(3) WORK CLASSIFICATION	OT. OR ST.	(4) DAY AND DATE — HOURS WORKED EACH DAY	(5) TOTAL HOURS	(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS: FICA	WITH-HOLDING TAX			OTHER	TOTAL DEDUCTIONS	(9) NET WAGES PAID FOR WEEK
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While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) contractors and subcontractors performing work on Federally financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) regulations at 29 C.F.R. § 5.5(a)(3)(ii) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

Public Burden Statement

We estimate that is will take an average of 55 minutes to complete this collection, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, U.S. Department of Labor, Room S3502, 200 Constitution Avenue, N.W. Washington, D.C. 20210

(over)

Date _____

I, _____ _____
(Name of Signatory Party) (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by

_____ on the
(Contractor or Subcontractor)

_____; that during the payroll period commencing on the
(Building or Work)

_____ day of _____, _____, and ending the _____ day of _____, _____,

all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said

_____ from the full
(Contractor or Subcontractor)

weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part 3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Start. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

_____

_____

_____

_____

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract; that the classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

☐ – in addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the benefit of such employees, except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

☐ – Each laborer or mechanic listed in the above referenced payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as listed in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:

NAME AND TITLE	SIGNATURE

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE 31 OF THE UNITED STATES CODE.

INSTRUCTIONS FOR PREPARATION OF STATEMENT OF COMPLIANCE

Under the Davis-Bacon law, the contractor is required to pay fringe benefits as predetermined by the USDOL, in addition to payment of the minimum rates. The contractor's obligation to pay fringe benefits may be met by payment of the various plans, funds, or programs or by making these payments to the employees as cash in lieu of fringes. Each contractor should complete a Statement of Compliance with the fringe benefits provisions.

The contractor should show on the face of his/her payroll all monies paid to the employees whether as basic rates or as cash in lieu of fringes. The contractor shall represent in the statement of compliance that he/she is paying fringe benefits required by the contract and is not paying as cash in lieu of fringes. Detailed instructions follow:

Contractors who pay all required fringe benefits:

A contractor who pays fringe benefits to approved plans, funds, or programs in amounts not less than were determined in the applicable wage rate of the Secretary of Labor shall continue to show on the face of the payroll the basic cash hourly rate and overtime rate paid to his/her employees, just as he/she has always done. Such a contractor shall check paragraph 4(a) of the statement to indicate payment to approved plans, funds, or programs not less than the amount predetermined as fringe benefits for each craft. Any exception shall be noted in Section 4(c).

Contractors that do not pay fringe benefits:

A contractor that doesn't pay fringe benefits shall pay to the employee and insert in the straight time hourly rate column of the payroll, an amount not less than the predetermined rate for each classification plus the amount of fringe benefits determined for each classification in the applicable wage rate. Inasmuch as it is not necessary to pay time and one-half on cash paid in lieu of fringes, the overtime rate shall be not less than the sum of the basic predetermined rate, plus the half-time premium on the basic or regular rate, plus the required cash in lieu of fringes at the straight time rate. To simplify computation of overtime, it is suggested that the straight time basic rate and cash in lieu of fringes be separately stated in the hourly rate column, thus #3.25/40. In addition, the contractor shall check paragraph 4(b) of the statement to indicate that he/she is paying fringe benefits in cash directly to his/her employees. Any exceptions shall be noted in Section 4(c).

Use of Section 4(c), Exceptions

Any contractor who is making payment to approved plans, funds, or programs in amounts less than the wage rate required is obligated to pay the deficiency directly to the employees as cash in lieu of fringes. Any exceptions to Section 4(a) or 4(b), whichever the contractor may check, shall be entered in Section 4(c). Enter in the Exception column the craft, and enter in the Explanation column the hourly amount paid the employee as cash in lieu of fringes and the hourly amount paid to plans, funds or programs as fringes. The contractor shall pay and shall show the payment to each such employee for all hours (unless otherwise provided by applicable wage rate) worked on Federal or Federally assisted project an amount not less than the predetermined rate plus cash in lieu of fringes as shown in Section 4(c). The rate paid and amount of cash paid in lieu of fringe benefits per hour should be entered in column 6 on the payroll. See paragraph on "Contractors who pay no fringe benefits" for computation of overtime rate.

STATEMENT OF COMPLIANCE

Date: _____

I, _____, _____, do hereby state:
(Name) *(Title)*

(1) That I pay or supervise the payment of the persons employed by _____ on
(Contractor of subcontractor)

the _____; that during the payroll period commencing on the _____ day of _____,
(Building or Work)

20_____ and ending the _____ day of _____, 20_____, all persons employed on said project have been paid in full weekly wages earned that no rebates have been or will be made either directly or indirectly to or on behalf of said _____ from the full wages earned by any person and that no deductions have
(Contractor or subcontractor)

been made either directly or indirectly from the full wages earned by person, other than permissible deductions as defined in Regulations, Part 3 (29 CFR Subtitle A), issued by the Secretary of Labor under the Copeland Act, as Amended (48 Stat. 948, 63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. 276c), and described below:

_____

_____

_____

_____

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete, that the wage rates for laborers and mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract; that the classifications set forth therein for each laborer or mechanic conform with the work he/she performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in the State, then the apprentice must be registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

❒ - In addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the benefit of such employees, except as noted in Section 4(c) below.

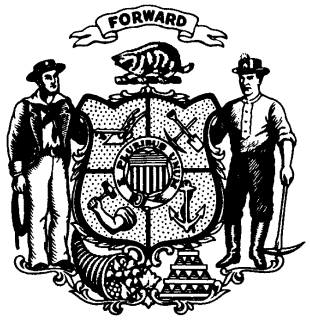
(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

❒ - Each laborer or mechanic listed in the above-referenced payroll has been paid as indicated on the payroll, an amount not less than the sum of the applicable basic hourly rate plus the amount of the required fringe benefits as listed in the contract, except as noted in Section 4(c) below

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION
REMARKS	
NAME AND TITLE	SIGNATURE
THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION, SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE 31 OF THE UNITED STATES CODE	

State of Wisconsin



Date of enactment: **March 22, 2006**
2005 Assembly Bill 736 Date of publication*: **April 5, 2006**

2005 WISCONSIN ACT 181

AN ACT ***to create*** 103.503 of the statutes; **relating to:** substance abuse by employees who are required to be paid the prevailing wage rate for work performed on projects of public works, other than state highway projects.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

SECTION 1. 103.503 of the statutes is created to read:

103.503 Substance abuse prevention on public works projects. (1) DEFINITIONS. In this section:

(a) "Accident" means an incident caused, contributed to, or otherwise involving an employee that resulted or could have resulted in death, personal injury, or property damage and that occurred while the employee was performing the work described in s. 66.0903 (4) or 103.49 (2m) on a project.

(b) "Alcohol" has the meaning given in s. 340.01 (1q).

(c) "Contracting agency" means a local governmental unit, as defined in s. 66.0903 (1) (d), or a state agency, as defined in s. 103.49 (1) (f), that has contracted for the performance of work on a project.

(d) "Drug" means any controlled substance, as defined in s. 961.01 (4), or controlled substance analog, as defined in s. 961.01 (4m), for which testing is required by an employer under its substance abuse prevention program under this section.

(e) "Employee" means a laborer, worker, mechanic, or truck driver who performs the work described in s. 66.0903 (4) or 103.49 (2m) on a project.

(f) "Employer" means a contractor, subcontractor, or agent of a contractor or subcontractor that performs work on a project.

(g) "Project" mean a project of public works that is subject to s. 66.0903 or 103.49.

(2) SUBSTANCE ABUSE PROHIBITED. No employee may use, possess, attempt to possess, distribute, deliver, or be under the influence of a drug, or use or be under the influence of alcohol, while performing the work described in s. 66.0903 (4) or 103.49 (2m) on a project. An employee is considered to be under the influence of alcohol for purposes of this subsection if he or she has an alcohol concentration that is equal to or greater than the amount specified in s. 885.235 (1g) (d).

(3) SUBSTANCE ABUSE PREVENTION PROGRAMS REQUIRED. (a) Before an employer may commence work on a project, the employer shall have in place a written program for the prevention of substance abuse among its employees. At a minimum, the program shall include all of the following:

1. A prohibition against the actions or conditions specified in sub. (2).

2. A requirement that employees performing the work described in s. 66.0903 (4) or 103.49 (2m) on a project submit to random, reasonable suspicion, and post−accident drug and alcohol testing and to drug and alcohol

* Section 991.11, WISCONSIN STATUTES 2003−04 : Effective date of acts. "Every act and every portion of an act enacted by the legislature over the governor's partial veto which does not expressly prescribe the time when it takes effect shall take effect on the day after its date of publication as designated" by the secretary of state [the date of publication may not be more than 10 working days after the date of enactment].

testing before commencing work on a project, except that testing of an employee before commencing work on a project is not required if the employee has been participating in a random testing program during the 90 days preceding the date on which the employee commenced work on the project.

3. A procedure for notifying an employee who violates sub. (2), who tests positive for the presence of a drug in his or her system, or who refuses to submit to drug or alcohol testing as required under the program that the employee may not perform work on a project until he or she meets the conditions specified in sub. (4) (b) 1. and 2.

(b) Each employer shall be responsible for the cost of developing, implementing, and enforcing its substance abuse prevention program, including the cost of drug and alcohol testing of its employees under the program. The contracting agency is not responsible for that cost, for the cost of any medical review of a test result, or for any rehabilitation provided to an employee.

(4) EMPLOYEE ACCESS TO PROJECT. (a) No employer may permit an employee who violates sub. (2), who tests positive for the presence of a drug in his or her system, or who refuses to submit to drug or alcohol testing as required under the employer's substance abuse prevention program under sub. (3) to perform work on a project until he or she meets the conditions specified in par. (b) 1. and 2. An employer shall immediately remove an employee from work on a project if any of the following occurs:

1. The employee violates sub. (2), tests positive for the presence of a drug in his or her system, or refuses to submit to drug or alcohol testing as required under the employer's substance abuse prevention program.

2. An officer or employee of the contracting agency has a reasonable suspicion that the employee is in violation of sub. (2) and requests the employer to immediately remove the employee from work on the project.

(b) An employee who is barred or removed from work on a project under par. (a) may commence or return to work on the project upon his or her employer providing to the contracting agency documentation showing all of the following:

1. That the employee has tested negative for the presence of drugs in his or her system and is not under the influence of alcohol as described in sub. (2).

2. That the employee has been approved to commence or return to work on the project in accordance with the employer's substance abuse prevention program.

(c) Testing for the presence of drugs or alcohol in an employee's system and the handling of test specimens shall be conducted in accordance with guidelines for laboratory testing procedures and chain−of−custody procedures established by the substance abuse and mental health services administration of the federal department of health and human services.

(5) LOCAL ORDINANCES; STRICT CONFORMITY REQUIRED. A local governmental unit, as defined in s. 66.0903 (1) (d), may enact an ordinance regulating the conduct regulated under this section only if the ordinance strictly conforms to this section.

SECTION 2. Initial applicability.

(1) This act first applies to a contract to perform work on a project, as defined in section 103.503 (1) (g) of the statutes, as created by this act, for which bids are opened on the effective date of this subsection or, if bids are not solicited for the contract, to a contract to perform such work entered into on the effective date of this subsection, except that this This act first applies to an employee who is affected by a collective bargaining agreement that contains provisions inconsistent with this act on the day on which the collective bargaining agreement expires or is extended, modified, or renewed, whichever occurs first.

SECTION 3. Effective date.

(1) This act takes effect on the first day of the 13th month beginning after publication.

State of Wisconsin
Department of Workforce Development
Equal Rights Division

Disclosure of Ownership

The statutory authority for the use of this form is prescribed in Sections 66.0903(12)(d), 66.0904(10)(d) and 103.49(7)(d), Wisconsin Statutes.
The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes.
Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04(1) (m), Wisconsin Statutes].

(1) On the date a contractor submits a bid to or completes negotiations with a state agency, local governmental unit, or developer, investor or owner on a project subject to Section 66.0903, 66.0904 or 103.49, Wisconsin Statutes, the contractor shall disclose to such state agency, local governmental unit, or developer, investor or owner, the name of any "other construction business," which the contractor, or a shareholder, officer or partner of the contractor, owns or has owned within the preceding three (3) years.

(2) The term "other construction business" means any business engaged in the erection, construction, remodeling, repairing, demolition, altering or painting and decorating of buildings, structures or facilities. It also means any business engaged in supplying mineral aggregate, or hauling excavated material or spoil as provided by Sections 66.0903(3), 66.0904(2), 103.49(2) and 103.50(2), Wisconsin Statutes.

(3) This form must ONLY be filed, with the state agency project owner, local governmental unit project owner, or developer, investor or owner of a publicly funded private construction project that will be awarding the contract, if **both (A) and (B) are met**.

(A) The contractor, or a shareholder, officer or partner of the contractor:
(1) Owns at least a 25% interest in the "other construction business," indicated below, on the date the contractor submits a bid or completes negotiations; or
(2) Has owned at least a 25% interest in the "other construction business" at any time within the preceding three (3) years.

(B) The Wisconsin Department of Workforce Development (DWD) has determined that the "other construction business" has failed to pay the prevailing wage rate or time and one-half the required hourly basic rate of pay, for hours worked in excess of the prevailing hours of labor, to any employee at any time within the preceding three (3) years.

Other Construction Business

Business Name			
Street Address or P O Box	City	State	Zip Code
Business Name			
Street Address or P O Box	City	State	Zip Code
Business Name			
Street Address or P O Box	City	State	Zip Code
Business Name			
Street Address or P O Box	City	State	Zip Code

I hereby state under penalty of perjury that the information, contained in this document, is true and accurate according to my knowledge and belief.

Print the Name of Authorized Officer			
Authorized Officer Signature	Date Signed		
Corporation, Partnership or Sole Proprietorship Name			
Street Address or P O Box	City	State	Zip Code

If you have any questions call (608) 266-6861

State of Wisconsin
Department of Workforce Development
Equal Rights Division

Prime Contractor Affidavit of Compliance With Prevailing Wage Rate Determination

Authorization for this form is provided under Sections 66.0903(9)(c), 66.0904(7)(c) and 103.49(4r)(c) Wisconsin Statutes.
The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes.
Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04(1)(m), Wisconsin Statutes].

This form must **ONLY** be filed with the **Awarding Agency** indicated below.

State Of))SS County Of)	Project Name	
	DWD Determination Number	Project Number (if applicable)
	Date Determination Issued	Date of Contract
	Awarding Agency	
	Date Work Completed	

After being duly sworn, the person whose name and signature appears below hereby states under penalty of perjury that

- **I am** the duly authorized officer of the corporation, partnership, sole proprietorship or business indicated below and have recently completed all of the work required under the terms and conditions of a contract with the above-named awarding agency and make this affidavit in accordance with the requirements set forth in Section 66.0903(9)(c), 66.0904(7)(c) or 103.49(4r)(c, Wisconsin Statutes and Chapter DWD 290 of the Wisconsin Administrative Code in order to obtain FINAL PAYMENT from such awarding agency.
- **I have** fully complied with all the wage and hour requirements applicable to this project, including all of the requirements set forth in the prevailing wage rate determination indicated above which was issued for such project by the Department of Workforce Development on the date indicated above.
- **I have** received the required affidavit of compliance from each of my agents and subcontractors that performed work on this project and have listed each of their names and addresses on page 2 of this affidavit.
- **I have** full and accurate records that clearly indicate the name and trade or occupation of every worker(s) that I employed on this project, including an accurate record of the hours worked and actual wages paid to such worker(s).
- **I will** retain the records and affidavit(s) described above and make them available for inspection for a period of at least three (3) years from the completion date indicated above at the address indicated below and shall not remove such records or affidavit(s) without prior notification to the awarding agency indicated above.

Name of Corporation, Partnership, Sole Proprietorship, Business, State Agency or Local Governmental Unit				
Street Address	City	State	Zip Code	Telephone Number
Print Name of Authorized Officer			Date Signed	
Signature of Authorized Officer				

List of Agents and Subcontractors

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
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Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		
Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		

If you have any questions call (608) 266-0028

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 20 2014

OFFICE OF WATER

MEMORANDUM

SUBJECT: Implementation of American Iron and Steel provisions of P.L. 113-76, Consolidated Appropriations Act, 2014

FROM: For Andrew D. Sawyers, Director
Office of Wastewater Management (4201M)

Peter C. Grevatt, Director
Office of Ground Water and Drinking Water (4601M)

TO: Water Management Division Directors
Regions I - X

P.L. 113-76, Consolidated Appropriations Act, 2014 (Act), includes an "American Iron and Steel (AIS)" requirement in section 436 that requires Clean Water State Revolving Loan Fund (CWSRF) and Drinking Water State Revolving Loan Fund (DWSRF) assistance recipients to use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, or repair of a public water system or treatment works if the project is funded through an assistance agreement executed beginning January 17, 2014 (enactment of the Act), through the end of Federal Fiscal Year 2014.

Section 436 also sets forth certain circumstances under which EPA may waive the AIS requirement. Furthermore, the Act specifically exempts projects where engineering plans and specifications were approved by a State agency prior to January 17, 2014.

The approach described below explains how EPA will implement the AIS requirement. The first section is in the form of questions and answers that address the types of projects that must comply with the AIS requirement, the types of products covered by the AIS requirement, and compliance. The second section is a step-by-step process for requesting waivers and the circumstances under which waivers may be granted.

Implementation

The Act states:

Sec. 436. (a)(1) None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j–12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.

(2) In this section, the term ‘‘iron and steel products’’ means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.

(b) Subsection (a) shall not apply in any case or category of cases in which the Administrator of the Environmental Protection Agency (in this section referred to as the ‘‘Administrator’’) finds that—

(1) applying subsection (a) would be inconsistent with the public interest;

(2) iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or

(3) inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

(c) If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public on an informal basis a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet Web site of the Environmental Protection Agency.

(d) This section shall be applied in a manner consistent with United States obligations under international agreements.

(e) The Administrator may retain up to 0.25 percent of the funds appropriated in this Act for the Clean and Drinking Water State Revolving Funds for carrying out

the provisions described in subsection (a)(1) for management and oversight of the requirements of this section.

(f) This section does not apply with respect to a project if a State agency approves the engineering plans and specifications for the project, in that agency's capacity to approve such plans and specifications prior to a project requesting bids, prior to the date of the enactment of this Act.

The following questions and answers provide guidance for implementing and complying with the AIS requirements:

Project Coverage

1) What classes of projects are covered by the AIS requirement?

All treatment works projects funded by a CWSRF assistance agreement, and all public water system projects funded by a DWSRF assistance agreement, from the date of enactment through the end of Federal Fiscal Year 2014, are covered. The AIS requirements apply to the entirety of the project, no matter when construction begins or ends. Additionally, the AIS requirements apply to all parts of the project, no matter the source of funding.

2) Does the AIS requirement apply to nonpoint source projects or national estuary projects?

No. Congress did not include an AIS requirement for nonpoint source and national estuary projects unless the project can also be classified as a 'treatment works' as defined by section 212 of the Clean Water Act.

3) Are any projects for the construction, alteration, maintenance, or repair of a public water system or treatment works excluded from the AIS requirement?

Any project, whether a treatment works project or a public water system project, for which engineering plans and specifications were approved by the responsible state agency prior to January 17, 2014, is excluded from the AIS requirements.

4) What if the project does not have approved engineering plans and specifications but has signed an assistance agreement with a CWSRF or DWSRF program prior to January 17, 2014?

The AIS requirements do not apply to any project for which an assistance agreement was signed prior to January 17, 2014.

5) What if the project does not have approved engineering plans and specifications, but bids were advertised prior to January 17, 2014 and an assistance agreement was signed after January 17, 2014?

If the project does not require approved engineering plans and specifications, the bid advertisement date will count in lieu of the approval date for purposes of the exemption in section 436(f).

6) What if the assistance agreement that was signed prior to January 17, 2014, only funded a part of the overall project, where the remainder of the project will be funded later with another SRF loan?

If the original assistance agreement funded any construction of the project, the date of the original assistance agreement counts for purposes of the exemption. If the original assistance agreement was only for planning and design, the date of that assistance agreement will count for purposes of the exemption only if there is a written commitment or expectation on the part of the assistance recipient to fund the remainder of the project with SRF funds.

7) What if the assistance agreement that was signed prior to January 17, 2014, funded the first phase of a multi-phase project, where the remaining phases will be funded by SRF assistance in the future?

In such a case, the phases of the project will be considered a single project if all construction necessary to complete the building or work, regardless of the number of contracts or assistance agreements involved, are closely related in purpose, time and place. However, there are many situations in which major construction activities are clearly undertaken in phases that are distinct in purpose, time, or place. In the case of distinct phases, projects with engineering plans and specifications approval or assistance agreements signed prior to January 17, 2014 would be excluded from AIS requirements while those approved/signed on January 17, 2014, or later would be covered by the AIS requirements.

8) What if a project has split funding from a non-SRF source?

Many States intend to fund projects with "split" funding, from the SRF program and from State or other programs. Based on the Act language in section 436, which requires that American iron and steel products be used in any project for the construction, alteration, maintenance, or repair of a public water system or treatment works receiving SRF funding between and including January 17, 2014 and September 30, 2014, any project that is funded in whole or in part with such funds must comply with the AIS requirement. A "project" consists of all construction necessary to complete the building or work regardless of the number of contracts or assistance agreements involved so long as all contracts and assistance agreements awarded are closely related in purpose, time and place. This precludes the intentional splitting of SRF projects into separate and smaller contracts or assistance agreements to avoid AIS coverage on some portion of a larger

project, particularly where the activities are integrally and proximately related to the whole. However, there are many situations in which major construction activities are clearly undertaken in separate phases that are distinct in purpose, time, or place, in which case, separate contracts or assistance agreement for SRF and State or other funding would carry separate requirements.

9) What about refinancing?

If a project began construction, financed from a non-SRF source, prior to January 17, 2014, but is refinanced through an SRF assistance agreement executed on or after January 17, 2014 and prior to October 1, 2014, AIS requirements will apply to all construction that occurs on or after January 17, 2014, through completion of construction, unless, as is likely, engineering plans and specifications were approved by a responsible state agency prior to January 17, 2014. There is no retroactive application of the AIS requirements where a refinancing occurs for a project that has completed construction prior to January 17, 2014.

10) Do the AIS requirements apply to any other EPA programs, besides the SRF program, such as the Tribal Set-aside grants or grants to the Territories and DC?

No, the AIS requirement only applies to funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j–12)

Covered Iron and Steel Products

11) What is an iron or steel product?

For purposes of the CWSRF and DWSRF projects that must comply with the AIS requirement, an iron or steel product is one of the following made primarily of iron or steel that is permanently incorporated into the public water system or treatment works:

Lined or unlined pipes or fittings;
Manhole Covers;
Municipal Castings (defined in more detail below);
Hydrants;
Tanks;
Flanges;
Pipe clamps and restraints;
Valves;
Structural steel (defined in more detail below);
Reinforced precast concrete; and
Construction materials (defined in more detail below).

12) What does the term 'primarily iron or steel' mean?

'Primarily iron or steel' places constraints on the list of products above. For one of the listed products to be considered subject to the AIS requirements, it must be made of greater than 50% iron or steel, measured by cost. The cost should be based on the material costs.

13) Can you provide an example of how to perform a cost determination?

For example, the iron portion of a fire hydrant would likely be the bonnet, body and shoe, and the cost then would include the pouring and casting to create those components. The other material costs would include non-iron and steel internal workings of the fire hydrant (i.e., stem, coupling, valve, seals, etc). However, the assembly of the internal workings into the hydrant body would not be included in this cost calculation. If one of the listed products is not made primarily of iron or steel, United States (US) provenance is not required. An exception to this definition is reinforced precast concrete, which is addressed in a later question.

14) If a product is composed of more than 50% iron or steel, but is not listed in the above list of items, must the item be produced in the US? Alternatively, must the iron or steel in such a product be produced in the US?

The answer to both question is no. Only items on the above list must be produced in the US. Additionally, the iron or steel in a non-listed item can be sourced from outside the US.

15) What is the definition of steel?

Steel means an alloy that includes at least 50 percent iron, between .02 and 2 percent carbon, and may include other elements. Metallic elements such as chromium, nickel, molybdenum, manganese, and silicon may be added during the melting of steel for the purpose of enhancing properties such as corrosion resistance, hardness, or strength. The definition of steel covers carbon steel, alloy steel, stainless steel, tool steel and other specialty steels.

16) What does 'produced in the United States' mean?

Production in the United States of the iron or steel products used in the project requires that all manufacturing processes, including application of coatings, must take place in the United States, with the exception of metallurgical processes involving refinement of steel additives. All manufacturing processes includes processes such as melting, refining, forming, rolling, drawing, finishing, fabricating and coating. Further, if a domestic iron and steel product is taken out of the US for any part of the manufacturing process, it becomes foreign source material. However, raw materials such as iron ore, limestone and iron and steel scrap are not covered by the AIS requirement, and the

material(s), if any, being applied as a coating are similarly not covered. Non-iron or steel components of an iron and steel product may come from non-US sources. For example, for products such as valves and hydrants, the individual non-iron and steel components do not have to be of domestic origin.

17) Are the raw materials used in the production of iron or steel required to come from US sources?

No. Raw materials, such as iron ore, limestone, scrap iron, and scrap steel, can come from non-US sources.

18) If an above listed item is primarily made of iron or steel, but is only at the construction site temporarily, must such an item be produced in the US?

No. Only the above listed products made primarily of iron or steel, permanently incorporated into the project must be produced in the US. For example trench boxes, scaffolding or equipment, which are removed from the project site upon completion of the project, are not required to be made of U.S. Iron or Steel.

19) What is the definition of 'municipal castings'?

Municipal castings are cast iron or steel infrastructure products that are melted and cast. They typically provide access, protection, or housing for components incorporated into utility owned drinking water, storm water, wastewater, and surface infrastructure. They are typically made of grey or ductile iron, or steel. Examples of municipal castings are:

Access Hatches;
Ballast Screen;
Benches (Iron or Steel);
Bollards;
Cast Bases;
Cast Iron Hinged Hatches, Square and Rectangular;
Cast Iron Riser Rings;
Catch Basin Inlet;
Cleanout/Monument Boxes;
Construction Covers and Frames;
Curb and Corner Guards;
Curb Openings;
Detectable Warning Plates;
Downspout Shoes (Boot, Inlet);
Drainage Grates, Frames and Curb Inlets;
Inlets;
Junction Boxes;
Lampposts;
Manhole Covers, Rings and Frames, Risers;

Meter Boxes;
Service Boxes;
Steel Hinged Hatches, Square and Rectangular;
Steel Riser Rings;
Trash receptacles;
Tree Grates;
Tree Guards;
Trench Grates; and
Valve Boxes, Covers and Risers.

20) What is 'structural steel'?

Structural steel is rolled flanged shapes, having at least one dimension of their cross-section three inches or greater, which are used in the construction of bridges, buildings, ships, railroad rolling stock, and for numerous other constructional purposes. Such shapes are designated as wide-flange shapes, standard I-beams, channels, angles, tees and zees. Other shapes include H-piles, sheet piling, tie plates, cross ties, and those for other special purposes.

21) What is a 'construction material' for purposes of the AIS requirement?

Construction materials are those articles, materials, or supplies made primarily of iron and steel, that are permanently incorporated into the project, not including mechanical and/or electrical components, equipment and systems. Some of these products may overlap with what is also considered "structural steel". This includes, but is not limited to, the following products: wire rod, bar, angles, concrete reinforcing bar, wire, wire cloth, wire rope and cables, tubing, framing, joists, trusses, fasteners (i.e., nuts and bolts), welding rods, decking, grating, railings, stairs, access ramps, fire escapes, ladders, wall panels, dome structures, roofing, ductwork, surface drains, cable hanging systems, manhole steps, fencing and fence tubing, guardrails, doors, and stationary screens.

22) What is not considered a 'construction material' for purposes of the AIS requirement?

Mechanical and electrical components, equipment and systems are not considered construction materials. Mechanical equipment is typically that which has motorized parts and/or is powered by a motor. Electrical equipment is typically any machine powered by electricity and includes components that are part of the electrical distribution system.

The following examples (including their appurtenances necessary for their intended use and operation) are NOT considered construction materials: pumps, motors, gear reducers, drives (including variable frequency drives (VFDs)), electric/pneumatic/manual accessories used to operate valves (such as electric valve actuators), mixers, gates, motorized screens (such as traveling screens), blowers/aeration equipment, compressors, meters, sensors, controls and switches, supervisory control and

data acquisition (SCADA), membrane bioreactor systems, membrane filtration systems, filters, clarifiers and clarifier mechanisms, rakes, grinders, disinfection systems, presses (including belt presses), conveyors, cranes, HVAC (excluding ductwork), water heaters, heat exchangers, generators, cabinetry and housings (such as electrical boxes/enclosures), lighting fixtures, electrical conduit, emergency life systems, metal office furniture, shelving, laboratory equipment, analytical instrumentation, and dewatering equipment.

23) If the iron or steel is produced in the US, may other steps in the manufacturing process take place outside of the US, such as assembly?

No. Production in the US of the iron or steel used in a listed product requires that all manufacturing processes must take place in the United States, except metallurgical processes involving refinement of steel additives.

24) What processes must occur in the US to be compliant with the AIS requirement for reinforced precast concrete?

While reinforced precast concrete may not be at least 50% iron or steel, in this particular case, the reinforcing bar and wire must be produced in the US and meet the same standards as for any other iron or steel product. Additionally, the casting of the concrete product must take place in the US. The cement and other raw materials used in concrete production are not required to be of domestic origin.

If the reinforced concrete is cast at the construction site, the reinforcing bar and wire are considered to be a construction material and must be produced in the US.

Compliance

25) How should an assistance recipient document compliance with the AIS requirement?

In order to ensure compliance with the AIS requirement, specific AIS contract language must be included in each contract, starting with the assistance agreement, all the way down to the purchase agreements. Sample language for assistance agreements and contracts can be found in Appendix 3 and 4.

EPA recommends the use of a step certification process, similar to one used by the Federal Highway Administration. The step certification process is a method to ensure that producers adhere to the AIS requirement and assistance recipients can verify that products comply with the AIS requirement. The process also establishes accountability and better enables States to take enforcement actions against violators.

Step certification creates a paper trail which documents the location of the manufacturing process involved with the production of steel and iron materials. A step certification is a process under which each handler (supplier, fabricator, manufacturer,

processor, etc) of the iron and steel products certifies that their step in the process was domestically performed. Each time a step in the manufacturing process takes place, the manufacturer delivers its work along with a certification of its origin. A certification can be quite simple. Typically, it includes the name of the manufacturer, the location of the manufacturing facility where the product or process took place (not its headquarters), a description of the product or item being delivered, and a signature by a manufacturer's responsible party. Attached, as Appendix 5, are sample certifications. These certifications should be collected and maintained by assistance recipients.

Alternatively, the final manufacturer that delivers the iron or steel product to the worksite, vendor, or contractor, may provide a certification asserting that all manufacturing processes occurred in the US. While this type of certification may be acceptable, it may not provide the same degree of assurance. Additional documentation may be needed if the certification is lacking important information. Step certification is the best practice.

26) How should a State ensure assistance recipients are complying with the AIS requirement?

In order to ensure compliance with the AIS requirement, States SRF programs must include specific AIS contract language in the assistance agreement. Sample language for assistance agreements can be found in Appendix 3.

States should also, as a best practice, conduct site visits of projects during construction and review documentation demonstrating proof of compliance which the assistance recipient has gathered.

27) What happens if a State or EPA finds a non-compliant iron and/or steel product permanently incorporated in the project?

If a potentially non-compliant product is identified, the State should notify the assistance recipient of the apparent unauthorized use of the non-domestic component, including a proposed corrective action, and should be given the opportunity to reply. If unauthorized use is confirmed, the State can take one or more of the following actions: request a waiver where appropriate; require the removal of the non-domestic item; or withhold payment for all or part of the project. Only EPA can issue waivers to authorize the use of a non-domestic item. EPA may use remedies available to it under the Clean Water Act, the Safe Drinking Water Act, and 40 CFR part 31 grant regulations, in the event of a violation of a grant term and condition.

It is recommended that the State work collaboratively with EPA to determine the appropriate corrective action, especially in cases where the State is the one who identifies the item in noncompliance or there is a disagreement with the assistance recipient.

If fraud, waste, abuse, or any violation of the law is suspected, the Office of Inspector General (OIG) should be contacted immediately. The OIG can be reached at 1-

888-546-8740 or OIG_Hotline@epa.gov. More information can be found at this website: http://www.epa.gov/oig/hotline.htm.

28) How do international trade agreements affect the implementation of the AIS requirements?

The AIS provision applies in a manner consistent with United States obligations under international agreements. Typically, these obligations only apply to direct procurement by the entities that are signatories to such agreements. In general, SRF assistance recipients are not signatories to such agreements, so these agreements have no impact on this AIS provision. In the few instances where such an agreement applies to a municipality, that municipality is under the obligation to determine its applicability and requirements and document the actions taken to comply for the State.

Waiver Process

The statute permits EPA to issue waivers for a case or category of cases where EPA finds (1) that applying these requirements would be inconsistent with the public interest; (2) iron and steel products are not produced in the US in sufficient and reasonably available quantities and of a satisfactory quality; or (3) inclusion of iron and steel products produced in the US will increase the cost of the overall project by more than 25 percent.

In order to implement the AIS requirements, EPA has developed an approach to allow for effective and efficient implementation of the waiver process to allow projects to proceed in a timely manner. The framework described below will allow States, on behalf of the assistance recipients, to apply for waivers of the AIS requirement directly to EPA Headquarters. Only waiver requests received from states will be considered. Pursuant to the Act, EPA has the responsibility to make findings as to the issuance of waivers to the AIS requirements.

Definitions

The following terms are critical to the interpretation and implementation of the AIS requirements and apply to the process described in this memorandum:

Reasonably Available Quantity: The quantity of iron or steel products is available or will be available at the time needed and place needed, and in the proper form or specification as specified in the project plans and design.

Satisfactory Quality: The quality of iron or steel products, as specified in the project plans and designs.

Assistance Recipient: A borrower or grantee that receives funding from a State CWSRF or DWSRF program.

Step-By-Step Waiver Process

Application by Assistance Recipient

Each local entity that receives SRF water infrastructure financial assistance is required by section 436 of the Act to use American made iron and steel products in the construction of its project. However, the recipient may request a waiver. Until a waiver is granted by EPA, the AIS requirement stands, except as noted above with respect to municipalities covered by international agreements.

The waiver process begins with the SRF assistance recipient. In order to fulfill the AIS requirement, the assistance recipient must in good faith design the project (where applicable) and solicit bids for construction with American made iron and steel products. It is essential that the assistance recipient include the AIS terms in any request for proposals or solicitations for bids, and in all contracts (see Appendix 3 for sample construction contract language). The assistance recipient may receive a waiver at any point before, during, or after the bid process, if one or more of three conditions is met:

1. Applying the American Iron and Steel requirements of the Act would be inconsistent with the public interest;
2. Iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or
3. Inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

Proper and sufficient documentation must be provided by the assistance recipient. A checklist detailing the types of information required for a waiver to be processed is attached as Appendix 1.

Additionally, it is strongly encouraged that assistance recipients hold pre-bid conferences with potential bidders. A pre-bid conference can help to identify iron and steel products needed to complete the project as described in the plans and specifications that may not be available from domestic sources. It may also identify the need to seek a waiver prior to bid, and can help inform the recipient on compliance options.

In order to apply for a project waiver, the assistance recipient should email the request in the form of a Word document (.doc) to the State SRF program. It is strongly recommended that the State designate a single person for all AIS communications. The State SRF designee will review the application for the waiver and determine whether the necessary information has been included. Once the waiver application is complete, the State designee will forward the application to either of two email addresses. For CWSRF waiver requests, please send the application to: cwsrfwaiver@epa.gov. For DWSRF waiver requests, please send the application to: dwsrfwaiver@epa.gov.

Evaluation by EPA

After receiving an application for waiver of the AIS requirements, EPA Headquarters will publish the request on its website for 15 days and receive informal comment. EPA Headquarters will then use the checklist in Appendix 2 to determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver – that it is quantitatively and qualitatively sufficient – and to determine whether or not to grant the waiver.

In the event that EPA finds that adequate documentation and justification has been submitted, the Administrator may grant a waiver to the assistance recipient. EPA will notify the State designee that a waiver request has been approved or denied as soon as such a decision has been made. Granting such a waiver is a three-step process:

1. Posting – After receiving an application for a waiver, EPA is required to publish the application and all material submitted with the application on EPA's website for 15 days. During that period, the public will have the opportunity to review the request and provide informal comment to EPA. The website can be found at: http://water.epa.gov/grants_funding/aisrequirement.cfm

2. Evaluation – After receiving an application for waiver of the AIS requirements, EPA Headquarters will use the checklist in Appendix 2 to determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver – that it is quantitatively and qualitatively sufficient – and to determine whether or not to grant the waiver.

3. Signature of waiver approval by the Administrator or another agency official with delegated authority – As soon as the waiver is signed and dated, EPA will notify the State SRF program, and post the signed waiver on our website. The assistance recipient should keep a copy of the signed waiver in its project files.

Public Interest Waivers

EPA has the authority to issue public interest waivers. Evaluation of a public interest waiver request may be more complicated than that of other waiver requests so they may take more time than other waiver requests for a decision to be made. An example of a public interest waiver that might be issued could be for a community that has standardized on a particular type or manufacturer of a valve because of its performance to meet their specifications. Switching to an alternative valve may require staff to be trained on the new equipment and additional spare parts would need to be purchased and stocked, existing valves may need to be unnecessarily replaced, and portions of the system may need to be redesigned. Therefore, requiring the community to install an alternative valve would be inconsistent with public interest.

EPA also has the authority to issue a public interest waiver that covers categories of products that might apply to all projects.

EPA reserves the right to issue national waivers that may apply to particular classes of assistance recipients, particular classes of projects, or particular categories of iron or steel products. EPA may develop national or (US geographic) regional categorical waivers through the identification of similar circumstances in the detailed justifications presented to EPA in a waiver request or requests. EPA may issue a national waiver based on policy decisions regarding the public's interest or a determination that a particular item is not produced domestically in reasonably available quantities or of a sufficient quality. In such cases, EPA may determine it is necessary to issue a national waiver.

If you have any questions concerning the contents of this memorandum, you may contact us, or have your staff contact Jordan Dorfman, Attorney-Advisor, State Revolving Fund Branch, Municipal Support Division, at dorfman.jordan@epa.gov or (202) 564-0614 or Kiri Anderer, Environmental Engineer, Infrastructure Branch, Drinking Water Protection Division, at anderer.kirsten@epa.gov or (202) 564-3134.

Attachments

Appendix 1: Information Checklist for Waiver Request

The purpose of this checklist is to help ensure that all appropriate and necessary information is submitted to EPA. EPA recommends that States review this checklist carefully and provide all appropriate information to EPA. This checklist is for informational purposes only and does not need to be included as part of a waiver application.

Items	✓	Notes
General • Waiver request includes the following information: — Description of the foreign and domestic construction materials — Unit of measure — Quantity — Price — Time of delivery or availability — Location of the construction project — Name and address of the proposed supplier — A detailed justification for the use of foreign construction materials • Waiver request was submitted according to the instructions in the memorandum • Assistance recipient made a good faith effort to solicit bids for domestic iron and steel products, as demonstrated by language in requests for proposals, contracts, and communications with the prime contractor		
Cost Waiver Requests • Waiver request includes the following information: — Comparison of overall cost of project with domestic iron and steel products to overall cost of project with foreign iron and steel products — Relevant excerpts from the bid documents used by the contractors to complete the comparison — Supporting documentation indicating that the contractor made a reasonable survey of the market, such as a description of the process for identifying suppliers and a list of contacted suppliers		
Availability Waiver Requests • Waiver request includes the following supporting documentation necessary to demonstrate the availability, quantity, and/or quality of the materials for which the waiver is requested: — Supplier information or pricing information from a reasonable number of domestic suppliers indicating availability/delivery date for construction materials — Documentation of the assistance recipient's efforts to find available domestic sources, such as a description of the process for identifying suppliers and a list of contacted suppliers. — Project schedule — Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of construction materials • Waiver request includes a statement from the prime contractor and/or supplier confirming the non-availability of the domestic construction materials for which the waiver is sought • Has the State received other waiver requests for the materials described in this waiver request, for comparable projects?		

Appendix 2: HQ Review Checklist for Waiver Request

Instructions: To be completed by EPA. Review all waiver requests using the questions in the checklist, and mark the appropriate box as Yes, No or N/A. Marks that fall inside the shaded boxes may be grounds for denying the waiver. If none of your review markings fall into a shaded box, the waiver is eligible for approval if it indicates that one or more of the following conditions applies to the domestic product for which the waiver is sought:

1. The iron and/or steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality.
2. The inclusion of iron and/or steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

Review Items	Yes	No	N/A	Comments
Cost Waiver Requests • Does the waiver request include the following information? — Comparison of overall cost of project with domestic iron and steel products to overall cost of project with foreign iron and steel products				
— Relevant excerpts from the bid documents used by the contractors to complete the comparison				
— A sufficient number of bid documents or pricing information from domestic sources to constitute a reasonable survey of the market				
• Does the Total Domestic Project exceed the Total Foreign Project Cost by more than 25%?				
Availability Waiver Requests • Does the waiver request include supporting documentation sufficient to show the availability, quantity, and/or quality of the iron and/or steel product for which the waiver is requested? — Supplier information or other documentation indicating availability/delivery date for materials — Project schedule — Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of materials				
• Does supporting documentation provide sufficient evidence that the contractors made a reasonable effort to locate domestic suppliers of materials, such as a description of the process for identifying suppliers and a list of contacted suppliers?				
• Based on the materials delivery/availability date indicated in the supporting documentation, will the materials be unavailable when they are needed according to the project schedule? (By item, list schedule date and domestic delivery quote date or other relevant information)				
• Is EPA aware of any other evidence indicating the non-availability of the materials for which the waiver is requested? Examples include: — Multiple waiver requests for the materials described in this waiver request, for comparable projects in the same State — Multiple waiver requests for the materials described in this waiver request, for comparable projects in other States — Correspondence with construction trade associations indicating the non-availability of the materials				
• Are the available domestic materials indicated in the bid documents of inadequate quality compared those required by the project plans, specifications, and/or permits?				

Appendix 3: Example Loan Agreement Language

ALL ASSISTANCE AGREEMENT MUST HAVE A CLAUSE REQUIRING COMPLIANCE WITH THE AIS REQUIREMENT. THIS IS AN EXAMPLE OF WHAT COULD BE INCLUDED IN SRF ASSISTANCE AGREEMENTS. EPA MAKES NO CLAIMS REGARDING THE LEGALITY OF THIS CLAUSE WITH RESPECT TO STATE LAW:

Comply with all federal requirements applicable to the Loan (including those imposed by the 2014 Appropriations Act and related SRF Policy Guidelines) which the Participant understands includes, among other, requirements that all of the iron and steel products used in the Project are to be produced in the United States ("American Iron and Steel Requirement") unless (i) the Participant has requested and obtained a waiver from the Agency pertaining to the Project or (ii) the Finance Authority has otherwise advised the Participant in writing that the American Iron and Steel Requirement is not applicable to the Project.

Comply with all record keeping and reporting requirements under the Clean Water Act/Safe Drinking Water Act, including any reports required by a Federal agency or the Finance Authority such as performance indicators of program deliverables, information on costs and project progress. The Participant understands that (i) each contract and subcontract related to the Project is subject to audit by appropriate federal and state entities and (ii) failure to comply with the Clean Water Act/Safe Drinking Water Act and this Agreement may be a default hereunder that results in a repayment of the Loan in advance of the maturity of the Bonds and/or other remedial actions.

Appendix 4: Sample Construction Contract Language

ALL CONTRACTS MUST HAVE A CLAUSE REQUIRING COMPLIANCE WITH THE AIS REQUIREMENT. THIS IS AN EXAMPLE OF WHAT COULD BE INCLUDED IN ALL CONTRACTS IN PROJECTS THAT USE SRF FUNDS. EPA MAKES NO CLAIMS REGARDING THE LEGALITY OF THIS CLAUSE WITH RESPECT TO STATE OR LOCAL LAW:

The Contractor acknowledges to and for the benefit of the City of _____ ("Purchaser") and the _____ (the "State") that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund that have statutory requirements commonly known as "American Iron and Steel;" that requires all of the iron and steel products used in the project to be produced in the United States ("American Iron and Steel Requirement") including iron and steel products provided by the Contactor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Purchaser and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the State. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the Purchaser or State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

Appendix 5: Sample Certifications

The following information is provided as a sample letter of **step** certification for AIS compliance. Documentation must be provided on company letterhead.

Date

Company Name

Company Address

City, State Zip

Subject: American Iron and Steel Step Certification for Project (XXXXXXXXXX)

I, (company representative), certify that the (melting, bending, coating, galvanizing, cutting, etc.) process for (manufacturing or fabricating) the following products and/or materials shipped or provided for the subject project is in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. Xxxx
2. Xxxx
3. Xxxx

Such process took place at the following location:

_____

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

The following information is provided as a sample letter of certification for AIS compliance. Documentation must be provided on company letterhead.

Date

Company Name

Company Address

City, State Zip

Subject: American Iron and Steel Certification for Project (XXXXXXXXXX)

I, (company representative), certify that the following products and/or materials shipped/provided to the subject project are in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. Xxxx
2. Xxxx
3. Xxxx

Such process took place at the following location:

_____

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Signed by company representative

NOTE TO BIDDER: Use typewriter or BLACK ink for completing this Bid Form.

BID FORM

To:	Oak Creek Water and Sewer Utility (Owner)
Mailing Address:	Attn: Ron J. Pritzlaff, P.E., Utility Engineer Oak Creek Water and Sewer Utility 170 West Drexel Avenue Oak Creek, WI 53154
Project Identification:	Prestressed Concrete Storage Tank for the Oak Creek Water and Sewer Utility 2016 Water Treatment Plant Improvements Project

1. BIDDER'S DECLARATION AND UNDERSTANDING

1.1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm, or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over the Utility.

1.2. In submitting this Bid, Bidder certifies Bidder is qualified to do business in the State of Wisconsin as required by laws, rules, and regulations at the time the Bid Form is submitted to the Utility.

1.3. The undersigned Bidder understands and agrees that this Proposal shall form the basis for a subcontract with the Installing Contractor that is selected by the Owner. Therefore, the undersigned agrees to enter into an agreement to perform and furnish all Work as specified or indicated in these Specifications for the amount indicated in this Bid Form and in accordance with the other terms and conditions of this Request for Proposal and Statement of Qualifications.

1.4. The undersigned accepts all of the terms and conditions of this Request for Proposals and Statement of Qualifications including, without limitation, those dealing with the disposition of Bid security, and the penalties that may be imposed based on results from the Performance Testing. This Proposal shall remain subject to acceptance for a period of 90 days after the day of Bid opening.

BIDDER’S NAME _____

1.5. The Bidder understands and agrees that the Owner may assign all of its rights and obligations under these Contract Documents to the Installing Contractor for the installation of the prestressed concrete storage tank.

1.6. The Bid Price of the selected Supplier will be assigned by the Owner to the Installing Contractor.

1.7. Notwithstanding this assignment, the guarantees and warranties specified in the Contract Documents are intended for the benefit of the Owner and the Installing Contractor, and may be enforced by either party.

2. CONTRACT EXECUTION

2.1. The undersigned Bidder agrees, if this Bid is accepted, to enter into an Agreement with the Installing Contractor to perform and furnish Work as specified or indicated in the Bidding Documents for the Contract Price derived from the Bid, and in accordance with the other terms and conditions of the Bidding Documents.

2.2. Bidder accepts the terms and conditions of the Bidding Documents.

3. INSURANCE

3.1. Bidder further agrees that the Bid amount(s) stated herein includes specific consideration for the specified insurance coverages.

4. ADDENDA

4.1. Bidder hereby acknowledges that it has received Addenda

Nos. _____, _____, _____, _____,

(Bidder shall insert number of each Addendum received) and agrees that Addenda issued are hereby made part of the Bidding Documents, and Bidder further agrees that this Bid includes impacts resulting from said Addenda.

5. STATE AND LOCAL SALES AND USE TAXES

5.1. Taxes shall not be included in this Bid Form.

6. BID SCHEDULE

6.1. Bidders shall use only the Bid Schedule provided. All blank spaces in the Bid Schedule must be filled in, preferably in BLACK ink, in both words and figures where required. No

BIDDER'S NAME _____

changes shall be made in the phraseology of the forms. Written amounts shall govern in case of discrepancy between the amounts stated in writing and the amounts stated in figures.

6.2. Prices quoted shall be f.o.b. with freight and full insurance paid by Bidder, to the Oak Creek Water and Sewer Utility Water Treatment Plant, 9325 S. 5th Avenue, Oak Creek, WI 53154.

6.3. Bidder shall provide required information by filling in all blanks following the Bid Schedule .

6.1. Bidder shall complete the Work in accordance with the Contract Documents for the following price(s):

6.1.1. **Lump Sum Bid Price:**

_____Dollars
(words)

and_____ Cents $_____
(numerals)

7. SURETY

7.1. If Bidder is awarded the Work from this Bid, the surety providing the Performance Bond is:

_____ whose address is

_____
Street City State Zip

8. BIDDER

SUBMITTED on _____, 2013.

State Contractor License No. _____. (If applicable)

If Bidder is:

An Individual

Name *(typed or printed)*: _____

By *(signature)*: _____

BIDDER'S NAME _____

Doing business as:_____

Business address: _____

_____

Phone No.:_____ FAX No.:_____

A Partnership

Partnership Name: _____(SEAL)

By: _____
(Signature of general partner – attach evidence of authority to sign)

Name *(typed or printed)*: _____

Business address: _____

_____

Phone No.:_____ FAX No.:_____

A Corporation

Corporation Name: _____(SEAL)

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability):_____

By: _____
(Signature – attach evidence of authority to sign)

Name *(typed or printed)*: _____

Title:_____ (CORPORATE SEAL)

Attest: _____
(Signature of Corporate Secretary)

Business address: _____

_____

Phone No.:_____ FAX No.:_____

BIDDER'S NAME _____

Date of Qualification to do business is: _____

A Joint Venture

Joint Venturer Name: _____(SEAL)

By: _____
(Signature of joint venture partner – attach evidence of authority to sign)

Name *(typed or printed)*: _____

Title:_____

Business address: _____

_____

Phone No.:_____ FAX No.:_____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Phone and FAX Number, and Address for receipt of official communications:

_____

_____

END OF SECTION

BIDDER'S NAME _____

SECTION 00 41 13
NON-COLLUSION AFFIDAVIT

OAK CREEK WATER AND SEWER UTILITY
OAK CREEK, WISCONSIN

_____(Bidder), first being duly sworn, on his oath says that the bid above submitted is a genuine and not a sham or collusive bid, or made in the interest or behalf of any person not herein named, and he further says that the said bidder has not directly or indirectly induced or solicited any bidder on the above work or supplies to put in a sham bid, or any other person or corporation to refrain from bidding; and that said bidder has not in any manner sought by collusion to secure to _____self an advantage over any other bidder or bidders.

_____
BIDDER

Subscribed and sworn to before me this _____day of _____, 2015

_____
NOTARY PUBLIC

My Commission Expires: _____

END OF SECTION

BID BOND

Any singular reference to Bidder, Surety, Owner, or other party shall be considered plural where applicable.

BIDDER (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

Oak Creek Water and Sewer Utility
170 West Drexel Avenue
Oak Creek, WI 53154

BID

Bid Due Date:

Project (Brief Description Including Location):

BOND

Bond Number:
Date (Not later than Bid due date):

Penal sum (Five percent of net present value of Prestressed Concrete Storage Tank shown on Bid Form) _____ (Words) _____ (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER	SURETY
_____(Seal)	_____(Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature and Title	Signature and Title (Attach Power of Attorney)
Attest: _____	Attest: _____
Signature and Title	Signature and Title

Note: Above addresses are to be used for giving required notice.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Surety's liability.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Request for Proposals and Statement of Qualifications (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Request for Proposals and Statement of Qualifications and any performance and payment bonds required by the Request for Proposals and Statement of Qualifications.

3. This obligation shall be null and void if:

3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Request for Proposals and Statement of Qualifications (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Request for Proposals and Statement of Qualifications and any performance and payment bonds required by the Request for Proposals and Statement of Qualifications, or

3.2. All Bids are rejected by Owner, or

3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Request for Proposals and Statement of Qualifications (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default by Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 180 days from Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

END OF SECTION

PERFORMANCE BOND
CONTRACT NO. _____

KNOW ALL MEN BY THESE PRESENTS, that we,

_____

_____

("Principal") and

_____

("Surety"), hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns, to pay the Oak Creek Water and Sewer Utility, State of Wisconsin (Owner), the sum of

_____DOLLARS
($_____), in United States currency.

WHEREAS, the Principal has, by means of a written agreement dated _____, 20__, entered into contract with the Owner for furnishing and delivering the Prestressed Concrete Storage Tank, which contract is by reference made a part hereof the same as though fully set forth herein (the "Contract");

NOW, THEREFORE, the conditions of this obligation are as follows:

FIRST. Principal shall (1) honor all claims for defective workmanship and materials on the Prestressed Concrete Storage Tank made within the warranty period after acceptance of the foregoing Contract, and (2) pay over, make good and reimburse to the Owner, all loss or damage which the Owner may sustain by reason of failure or default on the part of the Principal.

SECOND. Principal shall honor all Guarantees including costs for additional services and materials, and consumables for the Prestressed Concrete Storage Tank.

If all the above conditions are fully satisfied, this obligation shall be null and void; otherwise it shall remain in full force and effect.

For value received, Surety further agrees that, any Contract provision to the contrary notwithstanding, Surety's obligations hereunder shall not be affected in any way by any of the following and expressly waives notice of the same:

1. Any extension of time granted to Principal in which to perform the Contract.
2. Any change in the Plans, Drawings, Specifications, Contract or other Contract Documents.

An action on the warranty provisions of this bond may be brought by the Owner or any person entitled to the benefits of this bond at any time within 1 year from the date of final settlement of the Contract.

Principal and Surety are jointly and severally liable under the provisions hereof and actions against either or both may proceed without prior action against the other, and both may be joined in one action.

SIGNED AND SEALED THIS _____ day of _____, 20_____.

IN THE PRESENCE OF:

WITNESS: (as to Individual)

_____
Principal

_____
Attest: (as to Corporation)

By:

_____
Name

_____
Secretary

_____
Title

(CORPORATE SEAL)

_____
Surety

By:_____
Attorney-in-Fact

Give local address and phone number.

_____

(SEAL OF SURETY)

_____

_____

NOTE: The Surety named on this bond shall be one who is licensed to conduct business in the State of Wisconsin. All Bonds signed by an agent must be accompanied by a certified copy of the authority to act for the Surety at the time of signing of this Bond.

END OF SECTION

SECTION 00 72 10
GENERAL CONDITIONS

1. DEFINITIONS

1.1. Bidder: The person or persons, partnership, firm, or corporation submitting a Proposal for the Work specified in these Contract Documents.

1.2. Contract Documents: “Contract” or “Contract Documents” shall include the BIDDING REQUIREMENTS, CONTRACT FORMS, CONDITIONS OF THE CONTRACT, SPECIFICATIONS, and DRAWINGS, including all modifications and Addenda thereof incorporated into the Documents before execution of the Contract, and including subsequent Change Orders issued by the Owner, and all other requirements incorporated in these Documents by specific reference thereto. These form the Contract.

1.3. Days: Unless otherwise specifically stated, the term “days” shall be understood to mean calendar days.

1.4. Engineer: CH2M HILL Engineers, located at 135 South 84th Street, Suite 400, Milwaukee, WI, 53214, Attention: Tony Myers, P.E., Project Manager.

1.5. Execution of Contract: Shall mean the signing of the Contract by the authorized representatives of both Owner and Supplier (Owner’s signature date is the Notice to Proceed date).

1.6. Installing Contractor (Contractor): The party under separate contract with Owner who constructs the 2016 Water Treatment Plant Improvements for the Oak Creek Water and Sewer Utility, except for the scope of work identified in these preselection documents.

1.7. Manufacturer: Shall be synonymous with Prestressed Concrete Storage Tank Supplier or Prestressed Concrete Storage Tank Manufacturer. Manufacturer shall be the Bidder as defined in these General Conditions.

1.8. NSF: National Sanitation Foundation.

1.9. Or Equal: The term “or equal” shall be understood to indicate that the “equal” product is the same or better than the products named in function, performance, reliability, quality, and general configuration. Determination of equality in reference to the project design requirements will be made by Engineer.

1.10. Owner: Oak Creek Water and Sewer Utility, Oak Creek, WI, its agents, officers, and employees. Shall be synonymous with Utility.

1.11. Person-day: Person-day shall be 8 working hours (8 a.m. to 5 p.m.) in a 24-hour period.

1.12. Proposal: Supplier's Response to this solicitation for Request for Proposals and Statement of Qualifications. Proposal shall be synonymous with Bid or Statement of Qualifications for the purposes of these Contract Documents.

1.13. Request for Proposals and Statement of Qualifications: The contents of these Contract Documents intended to solicit Suppliers to furnish and deliver the following equipment: Prestressed Concrete Storage Tank suitable for potable water storage and chlorine contact for installation at the existing Oak Creek Water and Sewer Utility Water Treatment Plant.

1.14. Supplier: Shall be synonymous with Prestressed Concrete Storage Tank Supplier and Manufacturer. Supplier shall be the Bidder as defined in these General Conditions.

1.15. Work: Shall include all equipment, materials and appurtenances, manufacturing of equipment, delivery of equipment, and specified services necessary for the Supplier to perform and complete the Contract, including items not specifically indicated or described which are reasonably considered in good practice as belonging to the equipment specified.

2. CONTRACT DOCUMENTS

2.1. Contract Documents include the BIDDING REQUIREMENTS, CONTRACT FORMS, CONDITIONS OF THE CONTRACT, SPECIFICATIONS, and DRAWINGS, including all modifications and Addenda thereof incorporated into the Documents before execution of the Contract, and including subsequent Change Orders issued by the Owner, and all other requirements incorporated in these Documents by specific reference thereto.

2.2. The Drawings are supplemental and represent the preliminary drawings of the design as developed by the Engineer. The final design drawings may be revised to reflect the selected Prestressed Concrete Storage Tank System. The requirements in the Specifications shall be considered complete and accurate and shall take precedent over the supplemental drawings, which depict the project scope and design intent. The supplemental drawings shall be considered as reference only.

2.3. Discrepancies and Omissions:

2.3.1. Should anything which is necessary for a clear understanding of the Work be omitted from the Specifications and Drawings, or should it appear that various instructions are in conflict, the Supplier or Contractor shall secure written instructions from Engineer before proceeding with the Work affected

by such omissions or discrepancies. It is understood and agreed that the Work shall be performed according to the true intent of the Contract Documents.

2.3.2. It is understood and agreed that the written terms and provisions of the Contract Documents shall supersede all verbal statements of representatives of Owner, and verbal statements shall not be effective or be construed as being a part of this Contract.

3. INSPECTION/ACCEPTANCE

3.1. All material and equipment shall be subject to inspection and testing by Owner, Installing Contractor, or its designee at Supplier's plant and at the project site. Notwithstanding any inspection at Supplier's plant, final inspection and acceptance of the material and equipment shall be at Owner's project site.

3.2. If inspection and tests, whether preliminary or final, are made on Supplier's premises, Supplier shall furnish all reasonable facilities and assistance for safe and convenient inspection and tests required by Owner. Inspection by Owner or failure to inspect by Owner shall not relieve Supplier of any responsibility or liability with respect to such material and equipment and shall not be interpreted in any way to imply acceptance by Owner.

3.3. Owner and Installing Contractor reserves the right to reject nonconforming material and equipment. Owner and Installing Contractor shall have the option either to require Supplier to promptly remove and replace rejected material and equipment at Supplier's expense; or to cancel this order pursuant to Article Termination/Cancellation and require Supplier to promptly remove rejected material and equipment at Supplier's expense.

3.4. Owner reserves the right to revoke acceptance of material and equipment if Owner accepted same on the reasonable assumption that the nonconformity would be cured by Supplier and has not been reasonably cured, or without discovery of such nonconformity if acceptance was reasonably induced either by the difficulty of discovery before acceptance or by Supplier's assurances.

4. CHANGES

4.1. Owner shall have the right (by written supplement hereto, including revised drawings, specifications, and other transmittals), to make changes in the specifications of material and equipment ordered.

4.2. If any change affects the price or delivery date of such material and equipment, Supplier shall forthwith so notify Owner in writing; and shall, within 30 days of the date such supplement is mailed or otherwise delivered to Supplier, submit a written

claim for adjustment of price and/or delivery date. If Supplier fails to do so, Supplier waives any claim for such adjustment.

4.3. Supplier shall not suspend performance while Owner and Supplier are in the process of making such changes and any related adjustments.

4.4. Payment or credit for any changes shall be determined by lump sum agreement, in writing, between Supplier and Owner before starting extra work.

5. SUPPLIER

5.1. The relationship of Supplier to Owner shall be that of an independent subcontractor to Installing Contractor. Supplier shall have no contractual relationship with the Engineer or Owner as a result of its contract with Installing Contractor. Nothing contained in this Contract shall create any contractual relation between any subcontractor of Supplier and Owner or Engineer.

5.2. The work hereunder will be assigned by the Owner to an Installing Contractor at the time the construction contract (under which the equipment and materials specified herein will be installed) is executed.

5.3. In the application of the terms and conditions of the Contract Documents after the Work has been assigned to the Installing Contractor, Supplier shall function as a subcontractor or a Supplier to the Installing Contractor and all obligation of Supplier to the Owner shall, after assignment, become obligation of Supplier to Installing Contractor.

5.4. Risk of loss as it relates to the equipment and materials provided hereunder shall be borne by Supplier until delivery to the project site and acceptance by the Installing Contractor, and thereafter shall be borne by the Installing Contractor until final acceptance by the Owner after all on-site testing has been completed and accepted by the Owner and Engineer.

6. MATERIALS AND EQUIPMENT

6.1. General: All materials and equipment furnished shall conform to applicable Specifications and shall be new, unused, and undamaged when installed or otherwise incorporated in Owner’s project. No such material or equipment shall be used by Supplier for any purpose other than that intended or specified, unless such use is specifically authorized by Owner in each case.

6.2. Codes, Laws, and Regulations: All material, equipment, and services provided hereunder shall comply with all applicable codes, laws, regulations, standards, and ordinances, including potable water NSF requirements, and UL listing mark or label requirements.

7. FIELD PERFORMANCE TESTING

7.1. Operating equipment and systems will be performance tested by the Supplier in the presence of Engineer to demonstrate compliance with the specified requirements. Performance testing will be conducted under the specified design operating conditions or under such simulated operating conditions as recommended or approved by Engineer.

7.2. In the event of malfunction or failure to perform as specified, and it is determined by Engineer that the equipment or system furnished under this Contract is in nonconformance with the Contract Documents, Supplier shall bear all cost for repair, replacement, retesting, and other damages resulting from noncompliance with these Contract Documents. If the failure of the Supplier's equipment results in any fines, penalties by the Federal Government or State of Wisconsin, or corrective actions by the Owner, Supplier shall reimburse the Owner for the amount of those fines, penalties, or corrective actions.

8. WARRANTY

8.1. Except as stated in the BID FORM, all material and equipment supplied shall be warranted by Supplier to Owner as follows:

8.1.1. All Work, including mechanical components of material and equipment which are furnished as components of the materials and equipment specified hereinafter, shall be warranted against defects in materials and workmanship for a period of ten (10) years following acceptance of performance testing by Owner and Engineer.

8.1.2. Warranty period shall commence after successful completion of Performance Testing and approval by the Owner and Engineer.

8.1.3. All material and equipment shall be guaranteed as merchantable and suitable for the purpose intended and shall provide the results required by the Drawings and Specifications.

8.1.4. Supplier shall make all repairs or replacements necessitated by defects in materials or workmanship that become evident within the warranty period.

8.1.5. Supplier also agrees to hold Owner harmless from liability of any kind arising from damage due to said defects. Supplier shall make all repairs and replacements promptly upon receipt of written orders for same from Owner. If within 10 days after Owner has notified Supplier of a defect, Supplier has not started to make the necessary corrections, Owner is hereby authorized to make the corrections or to order the Work to be done by a third party, and the cost of the corrections shall be paid by Supplier.

9. RELATED SERVICES

9.1. Whenever Supplier furnishes personnel for installation supervision, startup, testing, inspection, related services, or maintenance (the Work), the following provisions shall apply, in addition to other applicable provisions of this order including compensation:

9.1.1. Representation by Supplier: Supplier represents that Supplier, its agents, and employees, are qualified and competent to perform the Work and that all tools and equipment furnished by Supplier in its performance of the Work are, and shall be, kept in good working order.

9.1.2. Supplier's Responsibility: Supplier asserts that the Work shall be performed in accordance with accepted standards and shall conform to the requirements of this Contract. Any Work not so performed or not in conformity herewith shall be corrected by Supplier. If such deficiencies are not immediately corrected, Owner may cause the same to be corrected for the account of Supplier. The above-described remedy is in addition to any other remedies, in law or equity, available to Owner.

9.1.3. Completion and Acceptance: When Supplier deems the Work completed, Supplier shall give Owner notice thereof in writing. Within a reasonable time after receipt of such notice, Owner will determine if the Work has been completed to its satisfaction; if so, Owner will advise Supplier, in writing, of its final acceptance thereof; if not, Owner will notify Supplier of its lack or failure of performance and Supplier will take remedial action as described in this Article and will repeat the procedure stated herein until the Work has been satisfactorily completed and accepted.

10. DELIVERY/DELAYS

10.1. Delivery milestones will be established and incorporated into the agreement between the Installing Contractor and Supplier.

10.2. Since material and equipment covered hereby will be incorporated into a construction project, the submittal and delivery dates must be met by Supplier, and be subject to liquidated damages, as defined in the AGREEMENT between the Installing Contractor and Owner, if dates are not met.

10.3. Supplier shall not be responsible for delays resulting from occurrences beyond its control which it could not have reasonably anticipated and provided for. In such event, Supplier shall give Installing Contractor written notice within 5 days of such occurrence. Installing Contractor shall notify Owner of delay within 5 days subsequent to notification from Supplier. Owner shall determine an equitable extension of time for delivery. Supplier's failure to notify Installing Contractor of

such delay shall constitute a waiver of Supplier's right to a time extension. There shall be no price adjustment by virtue of any such time extension.

11. TERMINATION/CANCELLATION

11.1. Owner shall have the right to terminate all or any part of this Contract for its convenience. Upon termination, Supplier shall be reimbursed for its reasonable and necessary costs resulting therefrom which are substantiated by evidence satisfactory to Owner. Supplier shall receive no profit on unperformed Work. Owner shall be entitled to immediate possession of plans and Work for which it has paid.

11.2. Any failure by Supplier to perform its obligations under this order which is deemed substantial by Owner, shall be a grounds for Owner to cancel this order or the affected portion hereof. Supplier shall not be entitled to any compensation pursuant to such cancellation, except for the reasonable value of material and equipment delivered by Supplier and accepted by Owner prior to cancellation, which amount shall not exceed the Contract Price. Owner reserves all rights it may have against Supplier as a result of Supplier's failure to so perform.

11.3. Owner's obligations under Article Warranty shall survive termination or cancellation.

12. SUSPENSION OF WORK

12.1. Owner reserves the right to suspend and reinstate execution of the whole or any part of the Work without invalidating the provisions of the Contract. Orders for suspension or reinstatement of the Work will be issued by Owner to Supplier in writing. The time for completion of the Work will be extended for a period equal to the time lost by reason of the suspension. Supplier may request a cost escalation to be reviewed by Owner for suspensions of work extending beyond 6 months.

13. PAYMENT

13.1. Supplier shall invoice Installing Contractor on a complete and accurate payment request form in the percent complete amounts as described below. Installing Contractor will make payment within 30 days of Engineer's approval of the Supplier's payment request:

13.1.1. Ten (10) percent of the contracted price will be paid by Installing Contractor after the complete set of submittals, including shop drawings, acceptable to Engineer and Owner have been returned to Supplier.

13.1.2. Twenty five (25) percent of the contracted price will be paid by Installing Contractor after Supplier has fully mobilized on site at the Oak Creek Water and Sewer Utility Water Treatment Plant indicated by two or more Supplier personnel working on site full time.

13.1.3. Sixty (60) percent of the Contract amount shall be paid by Installing Contractor upon successful completion of testing, startup and training, and fulfillment of all contractual obligations concerning installation, startup services and training of Owner's personnel. During this time, Installing Contractor may make payments based upon satisfactory progress of this Work.

13.1.4. The remaining five (5) percent will be paid upon final acceptance of the Work.

13.1.5. Acceptance by Supplier of the final payment shall be a release to Owner from all claims and liability hereunder for anything done or furnished in connection with the Work, or for any act or neglect of Owner or of any person relating to or affecting the Work.

14. INSURANCE REQUIREMENTS

14.1. For PRODUCTS or SERVICES requiring Supplier's presence on any Owner property, the Supplier shall, during the term of this project and until completion thereof, provide and maintain the coverages required by the Installing Contractor.

15. HOLD HARMLESS AGREEMENT

15.1. The Supplier agrees to protect, defend, indemnify and hold harmless the Oak Creek Water and Sewer Utility and CH2M HILL, and their officers and employees (subject to any customary exclusion regarding professional liability) from any and all claims and damages of every kind and nature made, rendered or incurred by or in behalf of every person or corporation whatsoever, including the parties hereto and their employees that may arise, occur, or grow out of any acts, actions, work or other activity done by the Supplier, its employees, subcontractors or any independent contractors working under the direction of either the Supplier or subcontractor in the performance of this contract.

16. LAWS AND REGULATIONS

16.1. All applicable State of Wisconsin and federal laws, ordinances, licenses and regulations of a governmental body having jurisdiction shall apply to the award throughout as the case may be, and are incorporated here by reference.

17. FORCE MAJEURE

17.1. For the purpose hereof, force majeure shall be any of the following events: acts of God or the public enemy; compliance with any order, rule, regulation, decree, or request of any governmental authority or agency or person purporting to act therefore; acts of war, public disorder, rebellion, terrorism, or sabotage; floods, hurricanes, or other similar unusual storms; strikes or labor disputes; or any other cause, whether or not of the class or kind specifically named or referred to herein, not within the reasonable control of the party affected.

17.2. A delay in or failure of performance of either party shall not constitute a default hereunder nor be the basis for, or give rise to, any claim for damages, if and to the extent such delay or failure is caused by force majeure.

17.3. The party who is prevented from performing by force majeure (i) shall be obligated, within a period not to exceed fourteen (14) days after the occurrence or detection of any such event, to give notice to the other party setting forth in reasonable detail the nature thereof and the anticipated extent of the delay, and (ii) shall remedy such cause as soon as reasonably possible.

END OF SECTION

SECTION 01 04 00
GENERAL REQUIREMENTS

PART 1 GENERAL

1.01 SUBMITTALS - PROCEDURES

A. Direct submittals to Installing Contractor, unless specified otherwise.

B. Number of Copies:

1. Shop Drawings: 4 copies and 1 electronic submittal.
2. Informational Submittals: 2 copies and 1 electronic submittal.
3. Operation and Maintenance data: As required below.

C. Electronic Submittals: Submittals may be made in electronic format.

1. Each submittal shall be an electronic file in Adobe Acrobat Portable Document Format (PDF). Use the latest version available at time of execution of the Agreement.
2. Electronic files that contain more than 10 pages in PDF format shall contain internal bookmarking from an index page to major sections of the document.
3. PDF files shall be set to open “Bookmarks and Page” view.
4. Add general information to each PDF file, including title, subject, author, and keywords.
5. PDF files shall be set up to print legibly at 8.5-inch by 11-inch or 11-inch by 17-inch. No other paper sizes will be accepted.
6. Submit new electronic files for each resubmittal.
7. Include a copy of the Transmittal of Submittal form with each electronic file.
8. Provide Engineer with authorization to reproduce and distribute each file as many times as necessary for Project documentation.

D. Transmittal of Submittal:

1. Supplier shall: Review each submittal and check for compliance with Contract Documents.
2. Identify each submittal with the following:
   a. Numbering and Tracking System:
      1) Sequentially number each submittal.
      2) Resubmission of submittal shall have original number with sequential alphabetic suffix.

b. Project title and Engineer's project number.
c. Date of transmittal.

3. Identify and describe each deviation or variation from Contract Documents.

E. Processing Time:

1. Time for review shall commence on Engineer's receipt of submittal.
2. Engineer will act upon Supplier's submittal and transmit response to Supplier not later than 30 days after receipt, unless otherwise specified.
3. Resubmittals will be subject to same review time.
4. No adjustment of Contract Times or Price will be allowed as a result of delays in progress of Work caused by rejection and subsequent resubmittals.

F. Resubmittals: Clearly identify each correction or change made.

G. Submittal Dispositions: Engineer will review, comment, stamp, and distribute as noted:

1. Approved: Supplier may incorporate product(s) or implement Work covered by submittal.
2. Approved as Noted: Supplier may incorporate product(s) or implement Work covered by submittal, in accordance with Engineer's notations.
3. Partial Approval, Resubmit as Noted:
   a. Make corrections or obtain missing portions, and resubmit.
   b. Except for portions indicated, Supplier may begin to incorporate product(s) or implement Work covered by submittal, in accordance with Engineer's notations.
4. Revise and Resubmit: Supplier may not incorporate product(s) or implement Work covered by submittal.

1.02 SUBMITTALS - GENERAL

A. Complete Supplier's specifications, including material description.

B. List of materials and supplies furnished with the equipment.

C. Shipping method(s) to Oak Creek, WI from point of manufacture.

D. Recommended handling method.

E. Requirements for storage and protection prior to installation.

F. Submittals as required by the specific Specification Section.

1.03 SHOP DRAWINGS

A. Supplier shall submit such shop drawings and/or catalog cuts required for the fabrication and installation of the equipment. These drawings shall be accurate in every detail, and shall contain all information necessary to relate the equipment to the Drawings and Specifications.

B. Where the installation of the equipment requires coordination with work performed by others, such as installation of required embedded items furnished either by Supplier or by others, such coordination shall be clearly identified and indicated on the shop drawings.

C. Each shop drawing and/or catalog cut shall have been thoroughly checked by Supplier for compliance with the Drawings and Specifications. Supplier shall submit at least four sets of shop drawings to Engineer. Two sets will be returned to Supplier after review by Engineer within 30 days of receipt.

D. No work shall be performed in connection with the fabrication or manufacture of materials and equipment, nor shall any accessory or appurtenance be purchased until the shop drawings and data have been reviewed and returned to Supplier as being approved or otherwise accepted, except at Supplier's own risk and responsibility.

E. Should Supplier propose any item on his shop drawings, or incorporate an item into the work, and that item should subsequently prove to be defective or otherwise unsatisfactory, (regardless of Engineer's review), Supplier shall, at his own expense, replace the item with another item that will perform satisfactorily.

1.04 SAMPLES AND TEST SPECIMENS

A. Where required in the Specifications, and as determined necessary by Engineer, test specimens or samples of materials, and fittings to be used or offered for use in connection with the work shall be submitted to Engineer at Supplier's expense, with information as to their sources, with all cartage charges prepaid, and in such quantities and sizes as may be required for proper examination and tests to establish the quality or equality thereof, as applicable.

1.05 INFORMATIONAL SUBMITTALS

A. Certificates:

1. General:
   a. Provide notarized statement that includes signature of entity responsible for preparing certification.
   b. Signed by officer or other individual authorized to sign documents on behalf of that entity.
2. Certificates of Successful Testing or Inspection: Submit when testing or inspection is required by Laws and Regulations or governing agency or specified in individual specification sections.
3. Manufacturer's Certificate of Compliance.
4. Manufacturer's Certificate of Proper Installation.
5. Special Guarantee: Supplier's written guarantee as required in individual specification sections.

B. Test, Evaluation, and Inspection Reports:

1. General: Shall contain signature of person responsible for test or report.
2. Factory:
   a. Identification of product and specification section, type of inspection or test with referenced standard or code.
   b. Date of test, Project title and number, and name and signature of authorized person.
   c. Test results.
   d. If test or inspection deems material or equipment not in compliance with Contract Documents, Supplier shall identify corrective action necessary to bring into compliance.
   e. Provide interpretation of test results, when requested by Engineer.
   f. Other items as identified in individual specification sections.
3. Field:
   a. As a minimum, include the following:
      1) Project title and number.
      2) Date and time.
      3) Record of temperature and weather conditions.
      4) Identification of product and specification section.
      5) Type and location of test, Sample, or inspection, including referenced standard or code.
      6) Date issued, testing laboratory name, address, and telephone number, and name and signature of laboratory inspector.
      7) If test or inspection deems material or equipment not in compliance with Contract Documents, identify corrective action necessary to bring into compliance.

8) Provide interpretation of test results, when requested by Engineer.
9) Other items as identified in individual specification sections.

C. Testing and Startup Data: In accordance with Specifications.

D. Training Data: In accordance with Specifications.

1.06 OPERATION AND MAINTENANCE (O&M) MANUALS

A. Definitions:

1. Preliminary Data: Initial and subsequent submissions for Engineer's review.
2. Final Data: Engineer-accepted data, submitted as specified herein, within 20 days of receipt.

B. Sequencing and Scheduling:

1. Preliminary Data:
   a. Do not submit O&M Manual until Shop Drawings for equipment or system have been reviewed and approved by Engineer. Review to be within 20 days of receipt.
   b. Submit three (3) copies not less than 90 days prior to equipment shipment date.
2. Final Data: Submit Instructional Manual Formatted data not less than 60 days prior to installation of equipment or system. Submit six (6) copies of compilation formatted and electronic media formatted data at least 90 days prior to substantial completion of project.

C. Data Format:

1. Prepare preliminary data in data compilation format.
2. Prepare final data in data compilation format and on electronic media.

D. Data Compilation Format:

1. Compile all Engineer-accepted preliminary O&M data into a hard-copy, hard-bound set.
2. Each set shall consist of the following:
   a. Binder: Commercial quality, permanent, three-ring or three-post binders with durable plastic cover.

b. Cover: Identify each volume with typed or printed title "OPERATION AND MAINTENANCE DATA, VOLUME NO. ___ OF ___", and list:
   1) Project title.
   2) Owner's and Engineer's name.
   3) Contractor's name, address, and telephone number.
   4) If entire volume covers equipment or system provided by one Supplier include the following:
      a) Identity of general subject matter covered in manual.
      b) Identity of equipment number and Specification section.

c. Provide each volume with title page and typed table of contents with consecutive page numbers. Place contents of entire set, identified by volume number, in each binder.

d. Table of contents neatly typewritten, arranged in a systematic order:
   1) Include list of each product, indexed to content of each volume.
   2) Designate system or equipment for which it is intended.
   3) Identify each product by product name and other identifying numbers or symbols as set forth in Contract Documents.

e. Section Dividers:
   1) Heavy, 80 pound cover weight, tabbed with numbered plastic index tabs.
   2) Fly-Leaf:
      a) For each separate product, or each piece of operating equipment, with typed description of product and major component parts of equipment.
      b) List with Each Product:
         (1) Name, address, and telephone number of subcontractor, supplier, installer, and maintenance contractor, as appropriate.
         (2) Identify area of responsibility of each.
         (3) Provide local source of supply for parts and replacement.
      c) Identity of separate structure as applicable.

f. Assemble and bind material, as much as possible, in same order as specified in the Contract Documents.

E. Electronic Media Format:

1. Portable Document Format (PDF):
   a. After all preliminary data has been found to be acceptable to Engineer, submit Operation and Maintenance data in PDF format on CD media.

b. Files to be exact duplicates of Engineer-accepted preliminary data. Arrange by specification number and name.
c. Files to be fully functional and viewable in most recent version of Adobe Acrobat.

2. Word and Excel Documents: All O&M documents and data files shall also be submitted in Word or Excel format on CD media.

F. Each instruction manual shall include, but not be limited to, the following:

1. Diagrams and illustrations.
2. Detailed description of the function of each principal component of the system.
3. Performance and nameplate data.
4. Installation instructions.
5. Procedure for starting.
6. Proper adjustment.
7. Test procedures.
8. Procedure for operating.
9. Shutdown instructions.
10. Emergency operating instructions and troubleshooting guide.
11. Safety precautions.
12. Maintenance and overhaul instructions which shall include detailed assembly drawings with part numbers, parts list, instructions for ordering spare parts, and complete preventive maintenance instructions required to ensure satisfactory performance and longevity of the equipment.
13. Procedures for calibrating equipment as appropriate.
14. MSDS for each item as appropriate.
15. Contact information for requesting assistance from Supplier.
16. Contact information for ordering spare parts.

G. The manual shall be complete in all respects for all equipment, accessories, and associated appurtenances. Incomplete manuals will be returned to Supplier within 20 days of receipt for corrections and resubmittal. If more than two resubmittals are required Supplier shall reimburse Owner for the additional Engineer’s review time at a rate of $150/hour.

1.07 SUPPLIER’S SERVICES DURING CONSTRUCTION

A. Competent and experienced technical representatives shall represent the Suppliers of all equipment and systems as may be necessary to resolve assembly or installation problems at the worksite which are attributable to, or associated with, the equipment furnished.

B. A Supplier's representative shall certify in writing stating that the system has been installed in accordance with the Supplier's recommendation and has been inspected by a Supplier's authorized representative, that it has been serviced with the proper initial lubricants, that applicable safety equipment has been properly installed and that the proper electrical and mechanical connections have been made.

C. Where functional or performance testing is called for in the Technical Specifications, the Supplier's representative shall assist with the initial test. Initial equipment and system adjustment and calibrations shall be performed in the presence of, and with the assistance of, the Supplier's representative. The above-mentioned Supplier's certification shall include the statement that proper adjustments have been made, and that the equipment or system is ready for plant startup and operation.

D. Where training is called for in the Technical Specifications, the Supplier's representative shall furnish detailed instructions to Owner's personnel for operation of the specified equipment. These training services shall include pre-startup classroom and onsite equipment instruction and/or post-startup classroom and onsite equipment instruction, as stated in the Technical Specifications.

1.08 SCHEDULE REQUIREMENTS

A. Within 14 days of Execution of Contract, provide Engineer with bar chart graphic schedule showing expected start date, duration, and completion date for the following:

1. Shop drawing submittal.
2. O&M manual submittal.
3. Meetings with Engineer.
4. Start of construction
5. Construction sequence
6. Shipment of major materials
7. Field services.

B. The following forms, bound at the end of this section, shall be used to report progress relative to schedule:

1. Notice of Schedule Impact.

C. Supplier shall assist Engineer in determining the latest available schedule information on the Contract items, including whether Supplier is on schedule or delayed. These requirements apply fully to telephone inquiries, personal visits, letters, or other communications.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 UNLOADING EQUIPMENT AT POINT OF RECEIPT

A. Unloading equipment at the jobsite shall be by Supplier or Installing Contractor. Installing Contractor, Owner and Engineer will require a 15-day advance notice of delivery day followed by a 48-hour notice prior to the expected delivery time at the designated location. The 48-hour notice must include the approximate hour of delivery which shall be during regular daytime working hours at the Oak Creek Water and Sewer Utility Water Treatment Facility site, Monday through Friday, 7:30 am to 3:00 pm.

3.02 SUPPLEMENTS

A. The supplements listed below, following “End of Section”, are part of this Specification.

1. Notice of Schedule Impact.

END OF SECTION

NOTICE OF SCHEDULE IMPACT

(Send this form to Owner and Engineer if delay is over 5 days)

DATE:_____

TO: Oak Creek Water and Sewer Utility
170 West Drexel Avenue
Oak Creek, WI 53154

ATTENTION: Ron J. Pritzlaff, P.E.

CC: Tony Myers, P.E.
CH2M HILL
135 South 84th Street, Suite 400
Milwaukee, WI, 53214

RE: Contract No.:_____

Name of Contract:_____

Type of Equipment Affected:_____

Nature of Delay Description:_____

_____

_____

New Estimated Date for Final Shop Drawings:_____

New Estimated Date for Start of Manufacture:_____

New Estimated Date for Finish Manufacture:_____

New Estimated Date for Shipment:_____

New Estimated Date for Arrival at Jobsite:_____

By:_____

Title:_____

ACTUAL MANUFACTURING:

Name:_____

Address:_____

City:_____ State:_____ Zip:_____ Telephone:_____

TECHNICAL

SPECIFICATIONS

SECTION 03 30 00
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 REFERENCES

A. The following is a list of standards that may be referenced in this section:

1. American Concrete Institute (ACI):
   a. 117, Specification for Tolerances for Concrete Construction and Materials.
   b. 301, Specifications for Structural Concrete.
   c. 305.1, Specification for Hot Weather Concreting.
   d. 306.1, Standard Specification for Cold Weather Concreting.
   e. 350.1, Specification for Tightness Testing of Environmental Engineering Concrete Containment Structures.
   f. CP-1, Technical Workbook for ACI Certification of Concrete Field Testing Technician – Grade 1.
2. ASTM International (ASTM):
   a. C31/C31M, Standard Practice for Making and Curing Concrete Test Specimens in the Field.
   b. C33/C33M, Standard Specification for Concrete Aggregates.
   c. C39/C39M, Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
   d. C94/C94M, Standard Specification for Ready-Mixed Concrete.
   e. C109/C109M, Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or 50-mm Cube Specimens).
   f. C143/C143M, Standard Test Method for Slump of Hydraulic-Cement Concrete.
   g. C150/C150M, Standard Specification for Portland Cement.
   h. C157/C157M, Standard Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete.
   i. C227, Standard Test Method for Potential Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar Method).
   j. C231/C231M, Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
   k. C260/C260M, Standard Specification for Air-Entraining Admixtures for Concrete.
   l. C494/C494M, Standard Specification for Chemical Admixtures for Concrete.

m. C595/C595M, Standard Specification for Blended Hydraulic Cements.
n. C618, Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete.
o. C881/C881M, Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete.
p. C979/C979M, Standard Specification for Pigments for Integrally Colored Concrete.
q. C989, Standard Specification for Slag Cement for Use in Concrete and Mortars.
r. C1012/C1012M, Standard Test Method for Length Change of Hydraulic-Cement Mortars Exposed to a Sulfate Solution.
s. C1017/C1017M, Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete.
t. C1074, Standard Practice for Estimating Concrete Strength by the Maturity Method.
u. C1077, Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation.
v. C1218/C1218M, Standard Test Method for Water-Soluble Chloride in Mortar and Concrete.
w. C1240, Standard Specification for Silica Fume Used in Cementitious Mixtures.
x. C1260, Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method).
y. C1293, Standard Test Method for Determination of Length Change of Concrete Due to Alkali-Silica Reaction.
z. C1567, Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method).
aa. C1582/C1582M, Standard Specification for Admixtures to Inhibit Chloride-Induced Corrosion of Reinforcing Steel in Concrete.
bb. C1602/C1602M, Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete.
cc. D4580, Standard Practice for Measuring Delaminations in Concrete Bridge Decks by Sounding.
dd. E329, Standard Specification for Agencies Engaged in Construction Inspection, Special Inspection, or Testing Materials Used in Construction.
ee. E1155, Standard Test Method for Determining F_F Floor Flatness and F_L Floor Levelness Numbers.

3. National Ready Mixed Concrete Association (NRMCA).

1.02 DEFINITIONS

A. Basin Train: Series of interconnected basins that operate as a unit with same water level.

B. Cold Weather: When ambient temperature is below 40 degrees F or is approaching 40 degrees F and falling.

C. Contractor's Licensed Design Engineer: Individual representing Contractor who is licensed to practice engineering as defined by statutory requirements of professional licensing laws in state or jurisdiction in which Project is to be constructed.

D. Defective Area: Surface defects that include honeycomb, rock pockets, indentations, and surface voids greater than 3/16-inch deep, surface voids greater than 3/4 inch in diameter, cracks in liquid containment structures and below grade habitable spaces that are 0.005-inch wide and wider, and cracks in other structures that are 0.010-inch wide and wider, spalls, chips, embedded debris, sand streaks, mortar leakage from form joints, deviations in formed surface that exceed specified tolerances and include but are not limited to fins, form pop-outs, and other projections. At exposed concrete, defective areas also include texture irregularities, stains, and other color variations that cannot be removed by cleaning.

E. Exposed Concrete: Concrete surface that can be seen inside or outside of structure regardless of whether concrete is above water, dry at all times, or can be seen when structure is drained.

F. Hot Weather: As defined in ACI 305.1.

G. Hydraulic Structure: Liquid containment structure.

H. New Concrete: Less than 60 days old.

I. Slurry Mixture: Mixture of sand, 3/8-inch maximum nominal aggregate size, cement, and water for wall construction joints with waterstop.

1.03 SUBMITTALS

A. Action Submittals:

1. Mix Designs:
   a. Contain proportions of materials and admixtures to be used on Project, signed by mix designer.

b. Documentation of average strength for each proposed mix design in accordance with ACI 301.
c. Manufacturer's Certificate of Compliance, in accordance with Section 01 61 00, Common Product Requirements, for the following:
    1) Portland cement.
    2) Fly ash.
    3) Slag cement.
    4) Aggregates, including specified class designation for coarse aggregate.
    5) Admixtures.
    6) Concrete producer has verified compatibility of constituent materials in design mix.
d. Test Reports:
    1) Cement: Chemical analysis report.
    2) Supplementary Cementitious Materials: Chemical analysis report and report of other specified test analyses.
    3) Water-Soluble Chloride-Ion Content in Hardened Concrete: Unless otherwise permitted, in accordance with ASTM C1218/C1218M at an age between 28 days and 42 days.
    4) Shrinkage Test Results: In accordance with ASTM C157/C157M as modified herein.
e. Aggregates:
    1) Coarse Aggregate Gradation: List gradings and percent passing through each sieve.
    2) Fine Aggregate Gradation: List gradings and percent passing through each sieve.
    3) Percent of fine aggregate weight to total aggregate weight. Combined gradation for coarse and fine aggregates. List gradings and percent passing through each sieve.
    4) Deleterious substances in fine aggregate per ASTM C33/C33M, Table 2.
    5) Deleterious substances in coarse aggregate per ASTM C33/C33M, Table 4.
    6) Test Reports:
        a) Alkali Aggregate Reactivity: Aggregate shall be classified as nonpotentially reactive in accordance with Article Concrete Mix Design. Include documentation of test results per applicable standards.
f. Admixtures: Manufacturer's catalog cut sheets and product data sheets for each admixture used in proposed mix designs.

2. Product Data: Specified ancillary materials.
3. Detailed plan for curing and protection of concrete placed and cured in cold weather. Details shall include, but not be limited to, the following:
    a. Procedures for protecting subgrade from frost and accumulation of ice or snow on reinforcement, other metallic embeds, and forms prior to placement.
    b. Procedures for measuring and recording temperatures of reinforcement and other embedded items prior to concrete placement.
    c. Methods for temperature protection during placement.
    d. Types of covering, insulation, housing, or heating to be provided.
    e. Curing methods to be used during and following protection period.
    f. Use of strength accelerating admixtures.
    g. Methods for verification of in-place strength.
    h. Procedures for measuring and recording concrete temperatures.
    i. Procedures for preventing drying during dry, windy conditions.
4. Detailed plan for hot weather placements including curing and protection for concrete placed in ambient temperatures over 80 degrees F. Plan shall include, but not be limited to, the following:
    a. Procedures for measuring, and recording temperatures of reinforcement and other embedded items prior to concrete placement.
    b. Use of retarding admixture.
    c. Methods for controlling temperature of reinforcement and other embedded items and concrete materials before and during placement.
    d. Types of shading and wind protection to be provided.
    e. Curing methods, including use of evaporation retardant.
    f. Procedures for measuring and recording concrete temperatures.
    g. Procedures for preventing drying during dry and windy conditions.
5. Repair plan with products used for defective concrete in the new concrete work.
6. Concrete shrinkage limit at 28 days drying age for base slab, walls and ground floor suspended slab shall meet the following:
    a. 0.04 percent maximum for laboratory trial mixes of proposed concrete made with 3/4-inch aggregate with or without super plasticizer.
    b. 0.038 percent maximum for laboratory trial mixes of proposed concrete made with 1-1/2-inch aggregate with or without super plasticizer.

B. Informational Submittals:

1. Preinstallation Conference minutes.
2. Statement of Qualification:
   a. Batch Plant: Certification as specified herein.
   b. Mix designer.
   c. Installer.
   d. Testing agency.
3. Field test reports.
4. Recorded temperature data from concrete placement where specified.
5. Tightness test results.
6. Concrete Delivery Tickets:
   a. For each batch of concrete before unloading at Site.
   b. In accordance with ASTM C94/C94M, including requirements 14.2.1. through 14.2.10.
   c. Indicate amount of mixing water withheld and maximum amount that may be permitted to be added at Site.

1.04 QUALITY ASSURANCE

A. Concrete construction shall conform to requirements of ACI 117 and ACI 301, except as modified herein.

B. Qualifications:

1. Batch Plant: NRMCA Program for Certification of Ready-Mixed Concrete Production Facilities or approved equivalent program.
2. Mix Designer: Person responsible for developing concrete mixture proportions certified as NRMCA Concrete Technologist Level 2 or DOT certified mix designer in jurisdiction of the Work. Requirement may be waived if individual is Contractor’s Licensed Design Engineer.
3. Flatwork Finisher: Unless otherwise permitted, at least one person on finishing crew shall be certified as an ACI Flatwork Finisher.
4. Testing Agency: Unless otherwise permitted, an independent agency, acceptable to authorities having jurisdiction, qualified according to ASTM C1077 and ASTM E329 for testing indicated.
   a. Where field testing is required of Contractor, personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.
   b. Personnel performing laboratory tests shall be ACI-certified Concrete Strength Testing Technician and Concrete Laboratory Testing Technician - Grade I. Testing Agency laboratory

supervisor shall be an ACI-certified Concrete Laboratory Testing Technician - Grade II.

C. Preinstallation Conference:

1. Required Meeting Attendees:
   a. Contractor, including pumping, placing and finishing, and curing subcontractors.
   b. Ready-mix producer.
   c. Admixture representative.
   d. Testing and sampling personnel.
2. Schedule and conduct prior to incorporation of respective products into Project. Notify Engineer of location and time.
3. Agenda shall include:
   a. Admixture types, dosage, performance, and re-dosing at Site.
   b. Mix designs, test of mixes, and Submittals.
   c. Placement methods, techniques, equipment, consolidation, and form pressures.
   d. Slump and placement time to maintain slump.
   e. Finish, curing, and water retention.
   f. Protection procedures for weather conditions.
   g. Other specified requirements requiring coordination.
4. Conference minutes as specified in Section 01 31 19, Project Meetings.

PART 2 PRODUCTS

2.01 MATERIALS

A. Cementitious Materials:

1. Cement:
   a. Portland Cement: Unless otherwise specified, conform to requirements of ASTM C150/C150M.
   b. Blended Hydraulic Cement:
      1) Unless otherwise specified, conform to requirements of ASTM C595/C595M.
      2) Portland cement used in blended hydraulic cement, conform to requirements of ASTM C150/C150M.
   c. Furnish from one source.

2. Supplementary Cementitious Materials (SCM):
    a. Fly Ash (Pozzolan): Class F and Class C fly ash in accordance with ASTM C618, except as modified herein:
        1) Shall not be produced from process that has utilized hazardous or potentially hazardous materials.
        2) ASTM C618, Table 1, Loss on Ignition: Unless permitted otherwise, maximum 3 percent.
    b. Slag Cement: In accordance with ASTM C989, Grade 100 or Grade 120.
        1) Shall not be produced from process that has utilized hazardous or potentially hazardous materials.

B. Aggregates: Unless otherwise permitted, furnish from one source for each aggregate type used in a mix design.

1. Normal-Weight Aggregates:
    a. In accordance with ASTM C33/C33M, except as modified herein.
        1) Class Designation: 4S unless otherwise specified.
    b. Free of materials and aggregate types causing popouts, discoloration, staining, or other defects on surface of concrete.
    c. Alkali Silica Reactivity: See Article Concrete Mix Design.
2. Fine Aggregates:
    a. Clean, sharp, natural sand.
    b. ASTM C33/C33M.
    c. Limit deleterious substances in accordance with ASTM C33/C33M, Table 2 and as follows:
        1) Limit material finer than 75-µm (No. 200) sieve to 5 percent mass of total sample.
        2) Limit coal and lignite to 1.0 percent.
3. Coarse Aggregate:
    a. Natural gravels, combination of gravels and crushed gravels, crushed stone, or combination of these materials containing no more than 15 percent flat or elongated particles (long dimension more than five times the short dimension).
    b. Limit deleterious substances in accordance with ASTM C33/C33M, Table 4 for specified class designation.

C. Admixtures: Unless otherwise permitted, furnish from one manufacturer.

1. Characteristics:
    a. Compatible with other constituents in mix.
    b. Contain at most, only trace amount chlorides in solution.
    c. Do not use admixtures known to be toxic after concrete is 30 days.

d. Furnish type of admixture as recommended by manufacturer for anticipated temperature ranges.

2. Air-Entraining Admixture: ASTM C260/C260M.
3. Water-Reducing Admixture: ASTM C494/C494M, Type A or Type D.
   a. Manufacturers and Products:
      1) BASF Admixtures Inc., Shakopee, MN; Pozzolith Series or PolyHeed Series.
      2) Euclid Chemical Co., Cleveland, OH; Eucon Series.
      3) W. R. Grace & Co., Cambridge, MA; Daracem Series or Mira Series.
4. Retarding Admixture: ASTM C 494/C 494M, Type B.
5. Accelerating Admixture: ASTM C 494/C 494M, Type C.
6. High-Range, Water-Reducing Admixture: ASTM C494/C494M, Type F or Type G.
   a. Manufacturers and Products:
      1) BASF Admixtures Inc., Shakopee, MN; Glenium Series, PS 1460, or Rheobuild 1000.
      2) Euclid Chemical Co., Cleveland, OH; Eucon Series or Plastol Series.
      3) W. R. Grace & Co., Cambridge, MA; ADVA Series, Daracem Series, or EXP 950.
7. Plasticizing Admixture: ASTM C1017/C1017M, Type I or Type II.
8. Corrosion Inhibiting Admixtures: ASTM C1582/C1582M.
9. Shrinkage Reducing Admixture:
   a. Manufacturers and Products:
      1) BASF Admixtures Inc., Shakopee, MN; Tetraguard AS20.
      2) Euclid Chemical Co., Cleveland, OH; Eucon SRA Series.
      3) W. R. Grace & Co., Cambridge, MA; Eclipse Series.

D. Water and Ice: Mixing water for concrete and water used to make ice shall be potable water, unless alternative sources of water are permitted.

   1. Water from alternative sources shall comply with requirements of ASTM C1602/C1602M, and concentration of chemicals in combined mixing water shall be less than:
      a. Chloride Content: 1,000 ppm.
      b. Sulfate Content as SO_4: 3,000 ppm.
      c. Alkalis as (Na_2O + 0.658 K_2O): 600 ppm.
      d. Total Solids by Mass: Less than 50,000 ppm.

E. Fiber Reinforcement: As specified in Section 03 24 00, Fibrous Reinforcing.

2.02 CONCRETE MIX DESIGN

A. General:

1. See Supplement at the end of this section for mix design requirements for each class of concrete used on Project.
2. Prepare design mixtures for each type and strength of concrete, selecting and proportioning ingredients in accordance with requirements of ACI 301, unless otherwise specified.
3. Selection of constituent materials and products in mix design are optional, unless specified otherwise.
4. Unless otherwise permitted, use water-reducing admixture or water-reducing admixture and high-range, water-reducing admixture, or plasticizing admixture in pumped concrete, in concrete with a water-cementitious materials ratio below 0.50, and in concrete that is part of a liquid-containment structure.
5. Unless otherwise permitted, use water-reducing admixture and high-range, water-reducing admixture, or plasticizing admixture in columns, piers, pilasters, and walls.
6. Use water-reducing admixture or high-range, water-reducing admixture , or plasticizing admixture to achieve fresh properties that facilitate handling, placing, and consolidating of concrete, and specified hardened properties.
7. Use water-reducing and retarding admixture when anticipated high temperatures, low humidity, or other adverse placement conditions can adversely affect fresh properties of concrete.
8. Unless otherwise specified, desired fresh properties of concrete shall be determined by Contractor, and coordinated with concrete producer. Fresh properties of concrete shall remain stable to satisfaction of Contractor, for duration of placement and consolidation, and shall remain in conformance with requirements of Contract Documents.

B. Potential alkali-aggregate reactivity of concrete:

1. Do not use aggregates known to be susceptible to alkali-carbonate reaction (ACR).
2. Aggregates shall have been tested to determine potential alkali-aggregate reactivity in concrete in accordance with ASTM C1260 or ASTM C1567.
    a. Aggregates that indicate expansion greater than 0.10 percent at 16 days after casting shall not be used unless they have been shown to be non-deleteriously reactive in accordance with ASTM C227 or ASTM C1293, with less than 0.04 percent

expansion at 1 year for cement-aggregate combinations or less than 0.04 percent expansion at 2 years for combinations with pozzolan or slag.

b. Alkali content of cement used in proposed concrete mixture shall not be greater than alkali content of cement used in test for potential alkali-aggregate reactivity.

c. Use low-alkali cement or incorporate pozzolans into concrete mixture as necessary to satisfy testing for potential alkali reactivity. Alternately, a chemical inhibitor such as a lithium based admixture may be proposed.

C. Proportions:

1. Design mix to meet aesthetic, durability, and strength requirements.
2. Where fly ash is included in mix, minimum fly ash content shall be a minimum of 15 percent of weight of total cementitious materials.

D. Concrete Shrinkage Limits: Where shrinkage limits are specified, design mix for following shrinkage limits and test in accordance with ASTM C157/C157M, with the following modifications:

1. Prisms shall be moist cured for 7 days prior to 28-day drying period.
2. Comparator reading at end of 7-day moist cure shall be used as initial length in length change calculation.
3. Reported results shall be average of three prisms.
4. If shrinkage of a specimen departs from average of that test age by more than 0.004 percent, disregard results obtained from that specimen.
5. Unless otherwise specified, results at end of 28-day drying period shall not exceed 0.040 percent if 3-inch prisms are used, or exceed 0.038 percent if 4-inch prisms are used. Aggregate will be rejected if test values exceed these limits.

E. Slump Range at Site:

1. Prior to submitting mix design, consult with concrete producer and select a target slump value at point of delivery, for each application of each design mix. Unless otherwise permitted, target slump value will then be enforced for duration of Project. Unless otherwise permitted, target slump value is 4 inches at point of delivery, for concrete without high-range, water reducing admixture.

2. Design mixes that include a high-range, water-reducing or a plasticizing admixture shall have a minimum slump of 2 inches prior to addition of admixture. Unless otherwise permitted, slump shall be 8 inches maximum at point of delivery, for concrete with a high-range, water-reducing admixture.
3. Slump tolerance shall meet requirements of ACI 117.

F. Combined Aggregate Gradation:

1. Combined Gradation Limits: Fine aggregate shall be in range of 36 percent to 40 percent of total aggregate weight.
2. Combined Gradation Limits: Limits shown are for coarse aggregates and fine aggregates mixed together (combined). Select one of the gradations shown in the following table:

	Combined Gradation Percentage Passing		
Sieve Sizes	**1-1/2" Max.**	**1" Max.**	**3/4" Max.**
2"	100	-	-
1-1/2"	95 - 100	100	-
1"	65 - 85	90 - 100	100
3/4"	55 - 75	70 - 90	92 – 100
1/2"	-	-	68 - 86
3/8"	40 - 55	45 - 65	57 - 74
No. 4	30 - 45	31 - 47	38 - 57
No. 8	23 - 38	23 - 40	28 - 46
No. 16	16 - 30	17 - 35	20 - 36
No. 30	10 - 20	10 - 23	14 - 25
No. 50	4 - 10	2 - 10	5 - 14
No. 100	0 – 3	0 - 3	0 – 5
No. 200	0 – 2	0 - 2	0 - 2

2.03 CONCRETE MIXING

A. General: In accordance with ACI 301, except as modified herein.

B. Truck Mixers:

1. For every truck, test slump of samples taken per ASTM C94/C94M, paragraph 12.5.1.
2. Where specified slump is more than 4 inches, and if slump tests differ by more than 2 inches, discontinue use of truck mixer, unless causing condition is corrected and satisfactory performance is verified by additional slump tests.

2.04 SOURCE QUALITY CONTROL

A. Source Quality Control Inspection: Engineer shall have access to and have right to inspect batch plants, cement mills, and supply facilities of suppliers, manufacturers, and Subcontractors, providing products included in this section.

PART 3 EXECUTION

3.01 PLACING CONCRETE

A. Preparation: Meet requirements ACI 301, except as modified herein.

B. Inspection: Notify Engineer and Special Inspector at least 1 full working day in advance before starting to place concrete.

C. Placement into Formwork:

1. Reinforcement: Secure in position before placing concrete.
2. Place concrete as soon as possible after leaving mixer, without segregation or loss of ingredients, without splashing forms or steel above, and in layers not over 1.5 feet deep, except for slabs which shall be placed full depth. Place and consolidate successive layers prior to initial set of first layer to prevent cold joints.
3. Placement frequency shall be such that lift lines will not be visible in exposed concrete finishes.
4. Use placement devices, for example chutes, pouring spouts, and pumps as required to prevent segregation.
5. Vertical Free Fall Drop to Final Placement:
   a. Forms 8 Inches or Less Wide: 5 feet.
   b. Forms Wider than 8 Inches: 8 feet, except as specified.

6. For placements where drops are greater than specified, use placement device such that free fall below placement device conforms to required value.
    a. Limit free fall to prevent segregation caused by aggregates hitting steel reinforcement.
7. Do not use aluminum conveying devices.
8. Provide sufficient illumination in the interior of forms so concrete deposition is visible, permitting confirmation of consolidation quality.
9. Joints in Footings and Slabs:
    a. Ensure space beneath plastic waterstop completely fills with concrete.
    b. During concrete placement, make visual inspection of entire waterstop area.
    c. Limit concrete placement to elevation of waterstop in first pass, vibrate concrete under waterstop, lift waterstop to confirm full consolidation without voids, and place remaining concrete to full height of slab.
    d. Apply procedure to full length of waterstop.
10. Trowel and round off top exposed edges of walls with 1/4-inch radius steel edging tool.
11. Cure concrete as specified in Section 03 39 00, Concrete Curing.

D. Conveyor Belts and Chutes:

1. Design and arrange ends of chutes, hopper gates, and other points of concrete discharge throughout conveying, hoisting, and placing system for concrete to pass without becoming segregated.
2. Do not use chutes longer than 50 feet.
3. Minimum Slopes of Chutes: Angled to allow concrete to readily flow without segregation.
4. Conveyor Belts:
    a. Wipe clean with device that does not allow mortar to adhere to belt.
    b. Cover conveyor belts and chutes.

E. Retempering: Not permitted for concrete where cement has partially hydrated.

F. Pumping of Concrete:

1. Provide standby pump, conveyor system, crane and concrete bucket, or other system onsite during pumping, for adequate redundancy to ensure completion of concrete placement without cold joints in case of primary placing equipment breakdown.

2. Minimum Pump Hose (Conduit) Diameter: 4 inches.
3. Replace pumping equipment and hoses (conduits) that are not functioning properly.

G. Maximum Size of Concrete Placements:

1. Limit size of each placement to allow for strength gain and volume change as a result of shrinkage.
2. Locate expansion, control, and contraction joints where shown on Drawings.
3. Construction Joints: Unless otherwise shown or permitted, locate construction joints as follows:
    a. Locate construction joints as shown on Drawings or where approved in joint location submittal required in Section 03 15 00, Concrete Joints and Accessories.
    b. Provide vertical construction joints in walls and slabs at maximum spacing of 40 feet, unless shown or approved otherwise.
    c. When vertical expansion, contraction, or control joint spacing does not exceed 60 feet, intermediate construction joints are not required.
    d. Uniformly space vertical construction joints within straight sections of walls and slabs, avoiding penetrations.
4. Consider beams, girders, brackets, column capitals, and haunches as part of floor or roof system and place monolithically with floor or roof system.
5. Should placement sequence result in cold joint located below finished water surface, install waterstop in joint.

H. Minimum Time between Adjacent Placements:

1. Construction Joints: 7 days unless otherwise specified.
2. Construction joint between top of footing or slab, and column or wall: As soon as can safely be done without damaging previously cast concrete or interrupting curing thereof, but not less than 24 hours.
3. Expansion or Contraction Joints: 1 day.
4. For columns and walls with a height in excess of 10 feet, wait at least 2 hours before depositing concrete in beams, girders, or slabs supported thereon.
5. For columns and walls 10 feet in height or less, wait at least 1 hour prior to depositing concrete in beams, girders, brackets, column capitals, or slabs supported thereon.

I. Consolidation and Visual Observation:

1. Consolidation Equipment and Methods: ACI 301.
2. Provide at least one standby vibrator in operable condition at Site prior to placing concrete.
3. Provide sufficient windows in forms or limit form height to allow for concrete placement through windows and for visual observation of concrete.
4. Vibrate concrete in vicinity of joints to obtain impervious concrete.

J. Hot Weather:

1. Prepare ingredients, mix, place, cure, and protect in accordance with ACI 301, ACI 305.1, and as follows:
   a. Maintain concrete temperature below 90 degrees F at time of placement, or furnish test data or other proof that admixtures and mix ingredients do not produce flash set plastic shrinkage, or cracking as a result of heat of hydration. Cool ingredients before mixing to maintain fresh concrete temperatures as specified or less.
   b. Provide for windbreaks, shading, fog spraying, sprinkling, ice, wet cover, or other means as necessary to maintain concrete at or below specified temperature.
2. Concrete Curing: As specified in Section 03 39 00, Concrete Curing.

K. Cold Weather Placement:

1. Unless otherwise permitted, shall be in accordance with requirements of ACI 306.1 and as follows:
   a. Cold weather requirements shall apply when ambient temperature is below 40 degrees F or approaching 40 degrees F and falling.
   b. Do not place concrete over frozen earth or against surfaces with frost or ice present. Frozen earth shall be thawed to acceptance of Engineer.
   c. Unless otherwise permitted, do not place concrete in contact with surfaces less than 35 degrees F; requirement is applicable to all surfaces including reinforcement and other embedded items.
   d. Provide supplemental external heat as needed when other means of thermal protection are unable to maintain minimum surface temperature of concrete as specified in ACI 306.1.
   e. Maintain minimum surface temperature of concrete as specified in ACI 306.1 for no less than 3 days during cold weather conditions.

f. Cure concrete as specified in Section 03 39 00, Concrete Curing.
   1) Protect concrete from freezing until end of curing period and until concrete has attained a compressive strength of 3,500 psi or design compressive strength if less than 3,500 psi.

2. Provide maximum and minimum temperature sensors placed on concrete surfaces spaced throughout Work to allow monitoring of concrete surface temperatures representative of Work. Unless otherwise permitted, record surface temperature of concrete at least once every 12 hours during specified curing period.
3. External Heating Units: Do not exhaust heater flue gases directly into enclosed area as it causes concrete carbonation as a result of concentrated carbon dioxide.
4. Maintain curing conditions as specified in Section 03 39 00, Concrete Curing.

3.02 REPAIRING CONCRETE

A. General:

1. Inject cracks that leak with crack repair epoxy as specified in Section 03 64 23, Crack Repair Epoxy Injection Grouting.
2. Repair defective areas of concrete.
3. Develop repair techniques with material manufacturer on surface that will not be visible in final construction prior to starting actual repair work and show how finish color will blend with adjacent surfaces. Obtain approval from Engineer.
4. Obtain quantities of repair material and manufacturer’s detailed instructions for use to provide repair with finish to match adjacent surface or apply sufficient repair material adjacent to repair to blend finish appearance.
5. Repair of concrete shall provide structurally sound surface finish, uniform in appearance or upgrade finish by other means until acceptable to Engineer.

B. Tie Holes:

1. Unless otherwise specified, fill with specified repair material.
   a. Prepare substrate and mix, place, and cure repair material per manufacturer’s written recommendations.
   b. Fill with site-mixed portland-cement repair mortar per ACI 301.
   c. Cure repair mortar with water.

C. Exposed Metal Objects:

1. Remove metal objects not intended to be exposed in as-built condition of structure including wire, nails, and bolts, by chipping back concrete to depth of 1 inch and then cutting or removing metal object.
2. Repair area of chipped-out concrete as specified for defective areas.

D. Blockouts at Pipes or Other Penetrations: Where shown install in accordance with requirements of Drawings.

3.03 CONCRETE WALL FINISHES

A. Type W-1 (Ordinary Wall Finish):

1. Patch tie holes.
2. Knock off projections.
3. Repair defective areas.
4. Inject cracks in accordance with requirements of Section 03 64 23, Crack Repair Epoxy Injection Grouting.

B. Type W-2 (Smooth Wall Finish):

1. Patch tie holes.
2. Grind off fins and other projections.
3. Repair defective areas to provide smooth uniform appearance.
4. Inject cracks in accordance with requirements of Section 03 64 23, Crack Repair Epoxy Injection Grouting.

C. Type W-5 (Finish for Painting): In accordance with requirements for Type W-2 except as follows: eave surface ready for painting as specified in Section 09 90 00, Painting and Coating.

3.04 CONCRETE SLAB FINISHES

A. General:

1. Use manual screeds, vibrating screeds, or roller compacting screeds to place concrete level and smooth.
2. Do not use “jitterbugs” or other special tools designed for purpose of forcing coarse aggregate away from surface and allowing layer of mortar, which will be weak and cause surface cracks or delamination, to accumulate.
3. Finish slab in accordance with specified slab finish.
4. Do not dust surfaces with dry materials nor add water to surfaces.
5. Cure concrete as specified in Section 03 39 00, Concrete Curing.

B. Type S-1 (Steel Troweled Finish):

1. Finish by screeding and floating with straightedges to bring surfaces to required finish elevation.
2. Wood float to true, even plane with no coarse aggregate visible.
3. Use sufficient pressure on wood floats to bring moisture to surface.
4. After surface moisture has disappeared, hand steel trowel concrete to produce smooth, smooth dense surface, free from trowel marks.
5. Provide light steel-troweled finish (two trowelings) at air-entrained slabs. Provide hard steel-troweled finish (ringing sound from the trowel) for non-air-entrained slabs.
6. Do not use dry cement or additional water during troweling, nor will excessive troweling be permitted.
7. Power Finishing:
    a. Approved power machine may be used in lieu of or in addition to hand finishing in accordance with directions of machine manufacturer.
    b. Do not use power machine when concrete has not attained necessary set to allow finishing without introducing high and low spots in slab.
    c. Do first steel troweling for slab S-1 finish by hand.

C. Type S-2 (Wood Float Finish):

1. Finish slab to receive fill and mortar setting bed by screeding with straightedges to bring surface to required finish plane.
2. Wood float finish to compact and seal surface.
3. Remove laitance and leave surface clean.
4. Coordinate with other finish procedures.

D. Type S-6 (Sidewalk Finish):

1. Slope walks down 1/4 inch per foot away from structures, unless otherwise shown.
2. Strike off surface by means of strike board and float with wood or cork float to true plane, then flat steel trowel before brooming.
3. Broom surface at right angles to direction of traffic or as shown.
4. Lay out sidewalk surfaces in blocks, as shown or as directed by Engineer, with grooving tool.

E. Concrete Curbs:

1. Float top surface of curb smooth, and finish all discontinuous edges with steel edger.
2. After concrete has taken its initial set, remove front form and give exposed vertical surface an ordinary wall finish, Type W-1.

3.05 CONCRETE SLAB TOLERANCES

A. Slab Elevation and Thickness:

1. Finish Slab Elevation: Slope slabs to floor drains and gutter. Slabs shall adequately drain regardless of tolerances.
2. Thickness: Maximum 1/4 inch minus or 1/2 inch plus from thickness shown. Where thickness tolerance will not affect slope, drainage, or slab elevation, thickness tolerance may exceed 1/2 inch plus.

3.06 BEAM AND COLUMN FINISHES

A. Type B-1: Match wall Type W-1.

B. Type B-2: Match wall Type W-2.

3.07 BACKFILL AGAINST STRUCTURES

A. Do not backfill against walls until concrete has obtained specified 28-day compressive strength.

B. Refer to General Structural Notes on the Drawings for additional requirements, including elevated slab and diaphragm completion prior to backfill.

C. Unless otherwise permitted, place backfill simultaneously on both sides of structure, where such fill is required, to prevent differential pressures.

3.08 FIELD QUALITY CONTROL

A. General:

1. Provide adequate facilities for safe storage and proper curing of concrete test specimens onsite for first 24 hours, and for additional time as may be required before transporting to test lab.
2. Unless otherwise specified, sample concrete for testing for making test specimens, from point of delivery.

3. When concrete is pumped, sample and test air content at point of delivery and at point of placement.
    a. For Each Concrete Mixture: Provided results of air content tests for first load of the day are within specified limits, testing need only be performed at point of delivery for subsequent loads of that concrete mixture except that testing should be performed at point of placement every 4 hours.
4. Evaluation will be in accordance with ACI 301 and Specifications.
5. Test specimens shall be made, cured, and tested in accordance with ASTM C31/C31M and ASTM C39/C39M.
6. Frequency of testing may be changed at discretion of Engineer.
7. Pumped Concrete: Take concrete samples for slump, ASTM C143/C143M, and test specimens, ASTM C31/C31M and ASTM C39/C39M,and shrinkage specimens (ASTM C157/C157M) at placement (discharge) end of line.
8. If measured air content at delivery is greater than specified limit, check test of air content will be performed immediately on a new sample from delivery unit. If check test fails, concrete has failed to meet requirements of Contract Documents. If measured air content is less than lower specified limit, adjustments will be permitted in accordance with ASTM C94/C94M, unless otherwise specified. If check test of adjusted mixture fails, concrete has failed to meet requirements of Contract Documents. Concrete that has failed to meet requirements of Contract Documents shall be rejected.

B. Concrete Strength Test:

1. Unless otherwise specified, one specimen at age of 7 days for information, and two 6-inch diameter or when permitted three 4-inch diameter test specimens at age of 28 days for acceptance.
2. If result of 7-day concrete strength test is less than 50 percent of specified 28-day strength, extend period of moist curing specified in Section 03 39 00, Concrete Curing, by 7 additional days.
3. Provide a minimum of one spare test specimen per sample. Test spare cylinder as directed by Engineer.

C. High-Range, Water-Reducer (Superplasticizer) Admixture Segregation Test: Test each truck prior to use on Project.

1. Segregation Test Objective: Concrete with 4-inch to 8-inch slump shall stay together when slumped. Segregation is assumed to cause mortar to flow out of mix even though aggregate may stay piled enough to meet slump test.

2. Test Procedure: Make slump test and check for excessive slump and observe to see if mortar or moisture flows from slumped concrete.
3. Reject concrete if mortar or moisture separates and flows out of mix.

D. Cold Weather Placement Tests:

1. During cold weather concreting, cast cylinders for field curing as follows. Use method that will produce greater number of specimens:
   a. Six extra test cylinders from last 100 cubic yards of concrete.
   b. Minimum three specimens for each 2 hours of placing time or for each 100 cubic yards.
2. These specimens shall be in addition to those cast for lab testing.
3. Protect test cylinders from weather until they can be placed under same protection provided for concrete of structure that they represent.
4. Keep field test cylinders in same protective environment as parts of structure they represent to determine if specified strength has been obtained.
5. Test cylinders in accordance with applicable sections of ASTM C31/C31M and ASTM C39/C39M.
6. Use test results to determine specified strength gain prior to falsework removal or for prestressing.

E. Tolerances:

1. Walls: Measure and inspect walls for compliance with tolerances specified in Section 03 10 00, Concrete Forming and Accessories.
2. Slab Finish Tolerances and Slope Tolerances:
   a. Slab Flatness and Levelness: Make measurements within 72 hours of concrete placement.
      1) Flatness measurements are not applicable to unshored form surfaces or shored form surfaces after removal of shores.
      2) Levelness measurements are not applicable to cambered or sloped surfaces.
   b. Slab flatness and levelness shall be determined in accordance with ASTM E1155.

F. Liquid Tightness Tests:

1. Purpose: To determine integrity and liquid-tightness of finished exterior and interior concrete surfaces of liquid containment structures.
2. Test the following structures for liquid-tightness:
3. Water source will be Client:
   a. Provide means to transport water to structure to be tested.

b. If additional tightness tests are required because of failure to meet criteria, provide water for subsequent tests.

4. After testing has been completed, dispose of test water in a manner approved by Owner Liquid-Tightness Test Requirement:
   a. Perform tightness tests in accordance with ACI 350.1 and as specified herein.
   b. Do not place backfill or install brick facing, grout topping slab, coatings, or other work that will cover concrete surfaces until tightness testing has been completed and approved.
   c. Measure evaporation, precipitation, and temperature as specified.
5. Measure water surface at two points 180 degrees apart when possible where attachments, such as ladders exist, at 24-hour intervals.
6. Acceptance Criteria:
   a. Volume loss shall not exceed 0.050percent of contained liquid volume per 24-hour period, adjusted for evaporation, precipitation, and temperature.
   b. Acceptance that structure has passed tightness test shall be based on total volume loss at end of specified test period.
7. Repairs When Test Fails:
   a. Dewater structure; fill leaking cracks with crack repair epoxy as specified in Section 03 64 23, Crack Repair Epoxy Injection Grouting.
   b. Patch areas of damp spots previously recorded, and repeat water leakage test in its entirety until structure successfully passes test.

3.09 MANUFACTURER'S SERVICES

A. Provide representative at Site in accordance with Section 01 43 33, Manufacturers' Field Services, for installation assistance, inspection, and certification of proper installation for concrete ingredients, mix design, mixing, and placement.

1. Concrete Producer Representative:
   a. Observe how concrete mixes are performing.
   b. Be present during first placement of each type of concrete mix.
   c. Assist with concrete mix design, performance, placement, weather problems, and problems as may occur with concrete mix throughout Project, including instructions for re-dosing.
   d. Establish control limits on concrete mix designs.
   e. Provide equipment for control of concrete re-dosing for air entrainment or high-range, water-reducing admixture, superplasticizers, at Site to maintain proper slump and air content if needed.

2. Admixture Manufacturer's Representative: Available for consultations as required to ensure proper installation and performance of specified products.
3. Bonding Agent Manufacturer's Representative: Available for consultations as required to ensure proper installation and performance of specified products.

3.10 PROTECTION OF INSTALLED WORK

A. After curing as specified in Section 03 39 00, Concrete Curing, and after applying final floor finish, cover slabs with plywood or particle board or plastic sheeting or other material to keep floor clean and protect it from material and damage as a result of other construction work.

B. Repair areas damaged by construction, using specified repair materials and approved repair methods.

3.11 SCHEDULE OF CONCRETE FINISHES

A. Form Tolerances: As specified in Section 03 10 00, Concrete Forming and Accessories.

B. Provide concrete finishes as scheduled:

Area	Type of Finish	Required Form Tolerances
Exterior Wall Surfaces		
Abovegrade/exposed (above point 6" below finish grade)	W-2	W-B
Backfilled/waterproofed (below point 6" below finish grade)	W-1	W-A
Backfilled/not waterproofed (below point 6" below final grade)	W-1	W-A
Interior Wall Surfaces		
Open top water-holding tanks and basins/not painted or coated	W-2	W-A
Buildings, pipe galleries, and other dry areas/not painted or coated	W-2	W-A

Area	Type of Finish	Required Form Tolerances
Buildings, pipe galleries, and other dry areas/painted or coated	W-5	W-A
Exterior Slabs		
Water-holding tanks and basins/top of wall	S-5	S-B
Sidewalks	S-6	S-B
Other exterior slabs	S-5	S-A
Interior Slabs		
Buildings, pipe galleries, and other dry areas	S-1	S-B
Slabs to receive mortar setting bed for tile	S-2	S-A
Slabs to receive resilient flooring or carpet	S-1	S-A
Hydraulic channels	S-1	S-A

3.12 SUPPLEMENTS

A. Requirements of concrete mix designs following "End of Section," are a part of this Specification and supplement requirements of Part 1 through Part 3 of this section:

1. Concrete Mix Design, Class 4500F2S1P1C1.
2. Concrete Mix Design, Class SM00F2S1P1C1.
3. Concrete Mix Design, Class 5000F3S1P0C2.
4. Concrete Mix Design, Class 3000F0S0P0C1.
5. Concrete Mix Design, Class GT00F1S1P0C1.

END OF SECTION

CONCRETE MIX DESIGN, CLASS 4500F2S1P1C1

A. Mix Locations: Typical unless otherwise specified in the Contract Documents.

B. Exposure Categories and Classifications: F2S1P1C1.

C. Mix Properties:

1. Limit water to cementitious materials ratio (W/Cm) in mix design to maximum value of 0.45.
2. Minimum concrete compressive strength (f'c) shall be 4,500 psi at 28 days.
    a. Designed to conform to shrinkage limits.
    b. Air-entraining admixtures are prohibited in concrete mixtures and total air content shall not be greater than 3 percent, for the following:
        1) Slabs to receive a hard-troweled finish.
        2) Slabs to receive a dry shake floor hardener.
        3) Slabs to receive a topping placed monolithically as a two-course floor on top of plastic concrete.
    c. Unless otherwise specified, provide air content based on nominal maximum size of aggregate as follows:

Nominal Maximum Aggregate Size in. ‡	**Air Content (%)***
3/8	7.5
1/2	7.0
3/4	6.0
1	6.0
1-1/2	5.5
2§	5.0
3§	4.5

‡See ASTM C33/C33M for tolerance on oversize for various nominal maximum size designations.

*Tolerance of air content is +1-1/2 percent.

§Air contents apply to total mixture. When testing concretes, however, aggregate particles larger than 1-1/2 inches are to be removed by sieving and air content will be measured on sieved fraction (tolerance on air content as delivered applies to this value). Air content of total mixture is computed from value measured on sieved fraction passing 1-1/2-inch sieve in accordance with ASTM C231/C231M.

3. Provide cementitious materials in accordance with one of the following:
   a. ASTM C150/C150M Type II; inclusion of supplementary cementitious materials in design mix is optional.
   b. ASTM C150/C150M types other than Type II, plus supplementary cementitious materials in accordance with one of the following:
      1) Tricalcium Aluminate Content of Total Cementitious Materials: Maximum 8 percent by weight.
      2) Provide documentation of test results in accordance with ASTM C1012/C1012M, for combinations of cementitious materials providing sulfate resistance with expansion less than 0.10 percent at 6 months.
      3) ASTM C595/C595M Type IP or Type IS (less than 70), tested to comply with moderate sulfate resistance option (MS).
4. Limit water-soluble, chloride-ion content in hardened concrete to 0.30 percent, unless otherwise specified.
   a. Limits are stated in terms of chloride ions in percent by weight of cement.
   b. Unless otherwise permitted, provide documentation from concrete tested in accordance with ASTM C1218/C1218M at an age between 28 days and 42 days.

D. Refer to PART 1 through PART 3 of this section for additional requirements.

CONCRETE MIX DESIGN, CLASS SM00F2S1P1C1

A. Mix Locations: Slurry mixture at horizontal construction joints with waterstop in wall.

B. Exposure Categories and Classifications: F2S1P1C1.

C. Mix Properties:

1. Limit water to cementitious materials ratio (W/Cm) in mix design to maximum value of 0.45.
2. Minimum concrete compressive strength (f'c) shall be same as concrete mix for wall.
3. Maximum Nominal Aggregate: 3/8 inch.
4. Unless otherwise specified, provide 7.5 percent air content.
    a. See ASTM C33/C33M for tolerance on oversize for various nominal maximum size designations.
    b. Tolerance of air content is plus or minus 1.5 percent.
5. Provide cementitious materials in accordance with one of the following:
    a. ASTM C150/C150M Type II; inclusion of supplementary cementitious materials in design mix is optional.
    b. ASTM C150/C150M types other than Type II, plus supplementary cementitious materials in accordance with one of the following:
        1) Tricalcium Aluminate Content of Total Cementitious Materials: Maximum 8 percent by weight.
        2) Provide documentation of test results in accordance with ASTM C1012/C1012M, for combinations of cementitious materials providing sulfate resistance with expansion less than 0.10 percent at 6 months.
    c. ASTM C595/C595M Type IP or Type IS (less than 70), tested to comply with moderate sulfate resistance option (MS).
        1) Provide documentation of test results in accordance with ASTM C1012/C1012M, for combinations of cementitious materials providing sulfate resistance with expansion less than 0.10 percent at 6 months.
6. Unless otherwise permitted, minimum cementitious materials content in mix design shall be 600 pounds per cubic yard for 3/8-inch nominal maximum size aggregate.
7. Limit water-soluble, chloride-ion content in hardened concrete to 0.30 percent, unless otherwise specified.
    a. Limits are stated in terms of chloride ions in percent by weight of cement.

b. Unless otherwise permitted, provide documentation from concrete tested in accordance with ASTM C1218/C1218M at an age between 28 days and 42 days.

D. Refer to PART 1 through PART 3 of this section for additional requirements.

CONCRETE MIX DESIGN, CLASS 5000F3S1P0C2

A. Mix Locations: Exterior concrete curbs, sidewalks, equipment pads.

B. Exposure Categories and Classifications: F3S1P0C2.

C. Mix Properties:

1. Limit water to cementitious materials ratio (W/Cm) in mix design to maximum value of 0.40.
2. Minimum concrete compressive strength (f'c) shall be 5000 psi at 28 days
3. Air-entraining admixtures are prohibited in concrete mixtures and total air content shall not be greater than 3 percent, for the following:
   a. Slabs to receive hard-troweled finish.
4. Unless otherwise specified, provide air content based on nominal maximum size of aggregate as follows:

Nominal Maximum Aggregate Size in. ‡	**Air Content (%)***
3/8	7.5
1/2	7.0
3/4	6.0
1	6.0
1-1/2	5.5
2§	5.0
3§	4.5

‡See ASTM C33/C33M for tolerance on oversize for various nominal maximum size designations.

*Tolerance of air content is +1-1/2 percent.

§Air contents apply to total mixture. When testing concretes, however, aggregate particles larger than 1-1/2 inches are to be removed by sieving and air content will be measured on the sieved fraction (tolerance on air content as delivered applies to this value). Air content of total mixture is computed from value measured on the sieved fraction passing the 1-1/2-inch sieve in accordance with ASTM C231/C231M.

5. Limit supplementary cementitious materials measured as a percent of weight of total cementitious materials in a mix design, as follows:
   a. Fly Ash and other Pozzolans: 25 percent.

b. Slag Cement: 50 percent.
c. Combined Fly Ash and other Pozzolans50 percent, with fly ash and other pozzolans not exceeding 25 percent. Total cementitious materials include ASTM C150/C150M and ASTM C595/C595M cement.
    1) Fly ash and other pozzolans in Type IP, blended cement, ASTM C595/C595M.
    2) Slag used in the manufacture of an IS blended cement, ASTM C595/C595M.

6. Provide cementitious materials in accordance with one of the following:
    a. ASTM C150/C150M Type II.
    b. ASTM C150/C150M types other than Type II, plus supplementary cementitious materials in accordance with one of the following:
        1) Tricalcium Aluminate Content of Total Cementitious Materials: Maximum 8 percent by weight.
        2) Provide documentation of test results in accordance with ASTM C1012/C1012M, for combinations of cementitious materials providing sulfate resistance with expansion less than 0.10 percent at 6 months.
    c. ASTM C595/C595M Type IP or Type IS (less than 70), tested to comply with moderate sulfate resistance option (MS).
        1) Provide documentation of test results in accordance with ASTM C1012/C1012M, for combinations of cementitious materials providing sulfate resistance with expansion less than 0.10 percent at 6 months.
7. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent, unless otherwise specified.
    a. Limits are stated in terms of chloride ions in percent by weight of cement.
    b. Unless otherwise permitted, provide documentation from concrete tested in accordance with ASTM C1218/C1218M at an age between 28 days and 42 days.

D. Refer to PART 1 through PART 3 of this section for additional requirements.

CONCRETE MIX DESIGN, CLASS 3000F0S0P0C1

A. Mix Locations: Concrete fill, interior equipment pads, duct banks and pipe encasements.

B. Exposure Categories and Classifications: F0S0P0C1.

C. Mix Properties:

1. Minimum concrete compressive strength (f'c) shall be 3000 psi at 28 days
2. Air-entraining admixtures are prohibited in concrete mixtures and total air content shall not be greater than 3 percent, for the following:
   a. Slabs to receive hard-troweled finish.
3. Unless otherwise specified, provide air content based on nominal maximum size of aggregate as follows:

Nominal Maximum Aggregate Size in. ‡	Air Content (%)*
3/8	6.0
1/2	5.5
3/4	5.0
1	4.5
1-1/2	4.5
2§	4.0
3§	3.5

‡See ASTM C33/C33M for tolerance on oversize for various nominal maximum size designations.

*Tolerance of air content is +1-1/2 percent.

§Air contents apply to total mixture. When testing concretes, however, aggregate particles larger than 1-1/2 inches are to be removed by sieving and air content will be measured on the sieved fraction (tolerance on air content as delivered applies to this value). Air content of total mixture is computed from value measured on the sieved fraction passing the 1-1/2-inch sieve in accordance with ASTM C231/C231M.

4. Limit supplementary cementitious materials measured as a percent of weight of total cementitious materials in a mix design, as follows:
   a. Fly Ash and other Pozzolans: 25 percent.
   b. Slag Cement: 50 percent.

c. Combined Fly Ash and other Pozzolans50 percent, with fly ash and other pozzolans not exceeding 25 percent. Total cementitious materials include ASTM C150/C150M and ASTM C595/C595M cement.
   1) Fly ash and other pozzolans in Type IP, blended cement, ASTM C595/C595M.
   2) Slag used in the manufacture of an IS blended cement, ASTM C595/C595M.

5. Provide cementitious materials in accordance with one of the following:
   a. ASTM C150/C150M Type II.
   b. ASTM C150/C150M types other than Type II, plus supplementary cementitious materials in accordance with one of the following:
      1) Tricalcium Aluminate Content of Total Cementitious Materials: Maximum 8 percent by weight.
      2) Provide documentation of test results in accordance with ASTM C1012/C1012M, for combinations of cementitious materials providing sulfate resistance with expansion less than 0.10 percent at 6 months.
   c. ASTM C595/C595M Type IP or Type IS (less than 70), tested to comply with moderate sulfate resistance option (MS).
      1) Provide documentation of test results in accordance with ASTM C1012/C1012M, for combinations of cementitious materials providing sulfate resistance with expansion less than 0.10 percent at 6 months.
6. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent, unless otherwise specified.
   a. Limits are stated in terms of chloride ions in percent by weight of cement.
7. Unless otherwise permitted, provide documentation from concrete tested in accordance with ASTM C1218/C1218M at an age between 28 days and 42 days.
8. Fiber Reinforcement:
   a. Concrete fill shall be fiber reinforced.
   b. Where required, provide polypropylene micro-fibers in design mix in accordance with Section 03 24 00, Fibrous Reinforcing.
   c. Add fiber-reinforcement to mix in concrete plant.

D. Refer to PART 1 through PART 3 of this section for additional requirements.

CONCRETE MIX DESIGN, CLASS GT00F1S1P0C1

A. Mix Locations: Grout topping slab in Prestressed Concrete Water Storage Tank.

B. Exposure Categories and Classifications: F1S1P0C1.

C. Mix Properties:

1. Limit water to cementitious materials ratio (W/Cm) in mix design to maximum value of 0.40.
2. Minimum compressive strength (f'c) shall be 3,500 psi at 28 days and 4,500 psi at 56 days.
3. Design mix shall be designed to conform to shrinkage limits except as follows:
    a. Results at end of 28 day drying period shall not exceed 0.030 percent if 3-inch prisms are used, or exceed 0.028 percent if 4-inch prisms are used. Aggregate will be rejected if test values exceed these limits.
4. Aggregate Grading: Aggregate shall conform to requirements for fine aggregate in accordance with ASTM C33/C33M.
5. Air-entraining admixtures are prohibited in concrete mixtures and total air content shall not be greater than 3 percent, for the following:
    a. Slabs to receive hard-troweled finish.
    b. Slabs to receive dry shake floor hardener.
    c. Slabs to receive topping placed monolithically as two-course floor on top of plastic concrete.
6. Unless otherwise specified, provide 6 percent air content.
    a. See ASTM C33/C33M for tolerance on oversize for various nominal maximum size designations.
    b. Tolerance of air content is plus or minus 1.5 percent.
7. Provide cementitious materials in accordance with one of the following:
    a. ASTM C150/C150M Type II; inclusion of supplementary cementitious materials in design mix is optional.
    b. ASTM C150/C150M types other than Type II, plus supplementary cementitious materials in accordance with one of the following:
        1) Tricalcium Aluminate Content of Total Cementitious Materials: Maximum 8 percent by weight.
        2) Provide documentation of test results in accordance with ASTM C1012/C1012M, for combinations of cementitious materials providing sulfate resistance with expansion less than 0.10 percent at 6 months.

c. ASTM C595/C595M Types IP or IS (less than 70), tested to comply with moderate sulfate resistance option (MS).
   1) Provide documentation of test results in accordance with ASTM C1012/C1012M, for combinations of cementitious materials providing sulfate resistance with expansion less than 0.10 percent at 6 months.

8. Unless otherwise permitted, minimum cementitious materials content in mix design shall be 600 pounds per cubic yard.
9. Limit water-soluble, chloride-ion content in hardened concrete to 0.10 percent, unless otherwise specified.
   a. Limits are stated in terms of chloride ions in percent by weight of cement.
   b. Unless otherwise permitted, provide documentation from concrete tested in accordance with ASTM C1218/C1218M at an age between 28 days and 42 days.
10. Fiber Reinforcement:
   a. Provide polypropylene micro-fibers in design mix in accordance with Section 03 24 00, Fibrous Reinforcing.
   b. Add fiber-reinforcement to grout topping in concrete plant.
   c. Slump as required to maintain homogeneous mix and to allow placement.

D. Grout Strength Tests:

1. Make three 2-inch by 2-inch cubes for each 150 cubic feet of grout. Use restraining caps for cube molds in accordance with ASTM C109/C109M.
2. Independent testing laboratory shall prepare, store, cure, and test cubes in accordance with ASTM C109/C109M, except that the proposed grout topping mix design shall be tested in lieu of the mix specified in ASTM C109/C109M.
3. Store cubes at 70 degrees F.
4. Nonshrink grout cubes shall test equal to or greater than minimum strength specified.
5. Strength Test Failures: Unless otherwise permitted, grout work failing strength tests shall be removed and replaced.

E. Refer to PART 1 through PART 3 of this section for additional requirements.

SECTION 33 05 01.02
DUCTILE IRON PIPE AND FITTINGS

PART 1 GENERAL

1.01 REFERENCES

A. The following is a list of standards that may be referenced in this section:

1. American Association of State Highway and Transportation Officials (AASHTO): T99, Standard Method of Test for the Moisture-Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12-in.) Drop.
2. American Society of Mechanical Engineers (ASME):
   a. B16.21, Nonmetallic Flat Gaskets for Pipe Flanges.
   b. B16.42, Ductile Iron Pipe Flanges and Flanged Fittings Classes 150 and 300.
3. American Water Works Association (AWWA):
   a. C104/A21.4, Cement-Mortar Lining for Ductile-Iron Pipe and Fittings.
   b. C105/A21.5, Polyethylene Encasement for Ductile-Iron Pipe Systems.
   c. C110/A21.10, Ductile-Iron and Gray-Iron Fittings.
   d. C111/A21.11, Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
   e. C115/A21.15, Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Fittings.
   f. C116/A21.16, Protective Fusion-Bonded Epoxy Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings for Water Supply Service.
   g. C150/A21.50, Thickness Design of Ductile-Iron Pipe.
   h. C151/A21.51, Ductile-Iron Pipe. Centrifugally Cast, for Water.
   i. C153/A21.53, Ductile-Iron Compact Fittings for Water Service.
   j. C600, Installation of Ductile-Iron Water Mains and Their Appurtenances.
   k. C606, Grooved and Shouldered Joints.
4. ASTM International (ASTM):
   a. A307, Standard Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength.
   b. A563, Standard Specification for Carbons and Alloy Steel Nuts.
   c. D882, Standard Test Method for Tensile Properties of Thin Plastic Sheeting.
   d. D1330, Standard Specification for Rubber Sheet Gaskets.

e. D1922, Standard Test Method for Propagation Tear Resistance of Plastic Film and Thin Sheeting by Pendulum Method.
f. D2000, Standard Classification System for Rubber Products in Automotive Applications.
g. D4976, Standard Specification for Polyethylene Plastics Molding and Extrusion Materials.

5. International Organization for Standardization (ISO): 9001, Quality Management Systems – Requirements.

1.02 SUBMITTALS

A. Action Submittals:

1. Shop Drawings: Marking plan and details of standard pipe section showing dimensions, pipe joints, fitting and special fitting pressure rating and thickness, size, coating and lining data.

B. Informational Submittals:

1. Manufacturer's Certificate of Compliance, in accordance with Section 01 61 00, Common Product Requirements
2. Manufacturer shall furnish sworn certificates that pipe and fittings have been manufactured, tested, and inspected in accordance with this and all applicable Specifications.
3. Field Hydrostatic Testing Plan: Submit at least 15 days prior to testing and at minimum, include the following:
   a. Testing dates.
   b. Piping systems and section(s) to be tested.
   c. Method of isolation.
   d. Method of conveying water from source to system being tested.
   e. Calculation of maximum allowable leakage for piping section(s) to be tested.
4. Certifications of Calibration: Approved testing laboratory certificate if pressure gauge for hydrostatic test has been previously used. If pressure gauge is new, no certificate is required.
5. Test documentation form and results.

1.03 QUALITY ASSURANCE

A. Pipe manufacturer shall be ISO 9001 registered or provide the services of an independent inspection agency.

B. Prior to start of manufacturing, manufacturer not meeting or having ISO registration requirements shall submit name of at least two independent inspection agencies for approval.

1. Independent inspection agency shall be responsible, on a daily basis, for sample monitoring of chemical and mechanical tests, sample visual inspection of quality assurance tests performed on in-process pipe and fittings, and sample visual and dimensional inspection on finished products.

PART 2 PRODUCTS

2.01 MATERIALS

A. General:

1. Ductile iron pipe shall be manufactured, lined, coated, and tested domestically in the United States of America.
2. Ductile iron fittings shall be manufactured, lined, coated, and tested domestically or for fittings produced outside of the United States of America they shall bear the name of the domestic manufacturer supplying the pipe.
3. Pipe manufacturer shall certify source manufacturing facility has been producing ductile iron pipe of the specified diameters, pressure, dimensions and standards for a period of not less than 10 years.
4. Ductile iron pipe and fitting shall be supplied by a single manufacturer.
   a. Mixing of components and sources is not permitted.
   b. Fitting from outside the United States of America shall be produced in a facility with a minimum of 5 years' documented experience manufacturing, coating, testing, and delivery of size and type specified to projects in the United States of America.

B. Pipe:

1. General:
   a. Pipe shall be new and recently manufactured. Refurbished pipe shall not be provided.
   b. Lined and coated as specified.
2. Meet requirements of AWWA C150/A21.50, AWWA C151/A21.51, and AWWA C111/A21.11.
3. Centrifugally cast, grade 60-42-10 iron.
4. Pressure rating of pipe from 8 inches to 16 inches in diameter shall be 350 psi. Pressure rating of pipe larger than 20 inches in diameter shall be 250 psi.

5. Pipe wall thickness of threaded pipe for a flanged pipe end shall be minimum special thickness Class 53 from 12-inch to 54-inch pressure Class 350 for 60-inch to 64-inch diameter pipe in accordance with AWWA C115/A21.15.
6. Grooved end pipe shall be minimum Special Class 53.

C. Joints:

1. Restrained Joint:
   a. Manufactured proprietary joint that mechanically restrains pipe to adjoining pipe.
   b. Manufacturers and Products:
      1) American Cast Iron Pipe; Flex-Ring, Field Flex-Ring, and Lok-Ring.
      2) Pacific States Pipe; Thrust-Lock.
      3) U.S. Pipe; TR Flex and HP Lok.
2. Mechanical Wedge Action Type Joint:
   a. Use only in areas where adjoining to fixed points where laying length is determined in field.
   b. Prior to purchase and installation, type and application of this joint shall be approved by Engineer.
3. Use of set screws for restraint or field-lock gaskets shall not be allowed.
4. Ball Joint:
   a. Meet requirements of AWWA C151/A21.51.
   b. Minimum Working Pressure:
      1) 4-inch through 12-inch Diameter: 350 psi.
      2) Larger than 12-inch Diameter: 250 psi.
   c. Manufacturers and Products:
      1) American Cast Iron Pipe; Flex-Lock.
      2) U.S. Pipe; USIFLEX.

D. Fittings:

1. Fittings shall be new and recently manufactured. Refurbished fittings will not be accepted.
2. Mechanicalor Restrained Joint: In accordance with the following table:

Minimum Pressure Ratings for AWWA C110/A21.10 and C115/A21.15 Ductile Iron Fittings		
Diameter (inches)	**Rubber Gasket Joints (Mechanical, Restrained) (psi)**	
3 to 24	350	
30 to 48	250	
Minimum Pressure Ratings for AWWA C153/A21.53 Ductile Iron Fittings		
Diameter (inches)	**Rubber Gasket Joints (Mechanical, Restrained) (psi)**	
3 to 24	350	
30 to 48	250	
54 to 64	150	

3. Rubber Gasket Joints Including Mechanical Joints: In accordance with AWWA C111/A21.11.
4. Mechanical Joint Fittings: In accordance with AWWA C110/A21.10 and AWWA C153/A21.53.

E. Welded Outlet: Only weld to pipe in manufacturer's shop.

F. Lining:

1. Pipe and fittings for clean water applications shall be cement-lined as recommended by manufacturer in accordance with AWWA C104/A21.4.

G. Polyethylene Encasement (Bagging):

1. Encasement Tube: Black polyethylene encasement tube, 8 mils minimum thickness, conforming to AWWA C105/A21.5, free of gels, streaks, pinholes, foreign matter, undispersed raw materials, and visible defects such as tears, blisters, and thinning at folds.
2. Securing Tape: Thermoplastic tape, 8 mils minimum thickness, 1 inch wide, pressure sensitive adhesive face capable of bonding to metal, bituminous coating, and polyethylene encasement tube.

H. Bolting:

1. Grooved End Connections Bolts: Manufacturer's standard.

I. Gaskets:

1. Grooved End Joint Gaskets: Halogenated butyl, conforming to ASTM D2000 and AWWA C606.

2.02 SOURCE QUALITY CONTROL

A. Factory Tests:

1. General:
   a. Tests shall be performed on pipe with metal thickness equal to that specified.
   b. Only pipe that passes leak test shall be shipped.
2. Hydrostatic Proof Test:
   a. All Pipe: Perform at 500 psi for a minimum duration of 10 seconds.
   b. Pipe 30 Inches and Larger: Additionally test to 75 percent of minimum yield strength during test duration which shall not be less than 15 seconds.
   c. Record each test cycle on a strip chart.
   d. Each test cycle for 30-inch and larger pipe shall be marked by pipe number.
   e. Inspect each pipe during testing for leaks.
   f. Pipe which shows evidence of leaks shall be scrapped.
   g. Repair welding of leaks is not permitted.
3. Perform a 15-psi air test on welded-on outlet pipe.
4. Pipe ends (spigot end, bell and socket) shall be gauged with suitable gauges at sufficiently frequent intervals to ensure compliance to standard dimensions of AWWA C151/A21.51.
   a. In addition, each socket and spigot shall be inspected in a well lighted area for injurious defects which could affect the joint performance.
   b. Remove defects by cutting of pipe ends.
   c. Pipe with injurious defects in the bell shall be scrapped.
   d. Manufacturer shall have a recommended ovality tolerance for pipes 18 inches inch and larger.
   e. Each end of each 18-inch and larger pipe shall be measured and approved by manufacturer's quality assurance inspector to meet tolerances.

5. Submit a certified inspection report from the independent agency of witnessed tests within 10 days of the inspection.
   a. Test results shall show restrained joints in the sizes specified have been successfully tested to at least twice the specified pressure rating of the joint without leakage or failure.
6. In accordance with AWWA C104/A21.4, C110/A21.10 C111/A21.11, C115/A21.15, C151/A21.51, C153/A21.53 and C606.

PART 3 EXECUTION

3.01 EXAMINATION

A. Inspect pipe and fittings to ensure no cracked, broken, or otherwise defective materials are being used.

3.02 PREPARATION

A. Trench Grade:

1. When specified, grade bottom of trench by hand to specified line and grade with proper allowance for pipe thickness and pipe base. Trench bottom shall form a continuous and uniform bearing and support for pipe between bell holes.
2. Before laying each section of pipe, check grade and correct irregularities found. Grade may be disturbed for removal of lifting tackle.

B. Pipe Bedding: Place and compact pipe bedding material as follows:

1. Install to full width of trench, from the following depths below bottom to springline of pipe:
   a. Pipe 12-Inch Diameter: 4 inches to 6 inches.
   b. Pipe Larger than 12-Inch Diameter: 6 inches to 8 inches.
2. Compact to at least 95 percent of its maximum density as determined by AASHTO T99.
3. Ensure that no unfilled or uncompacted areas occur beneath pipe.

C. Bell (Joint) Holes: At each joint, dig bell holes of ample dimensions in bottom of trench, and at sides where necessary, to permit joint to be made properly and to permit easy visual inspection of entire joint.

3.03 INSTALLATION

A. General:

1. Provide and use proper implements, tools, and facilities for safe and proper prosecution of the Work.
2. Lower pipe, fittings, and appurtenances into trench, piece by piece, by means of a crane, slings, or other suitable tools and equipment, in such a manner as to prevent damage to pipe materials, protective coatings and linings.
3. Do not drop or dump pipe materials into trench.

B. Cleaning Pipe and Fittings:

1. Remove lumps, blisters, and excess coal tar coating from bell and spigot ends of each pipe. Wire brush outside of spigot and inside of bell and wipe clean, dry, and free from oil and grease before pipe is laid.
2. Wipe ends of mechanical joint pipe and fittings and of rubber gasket joint pipe and fittings clean of dirt, grease, and foreign matter.

C. Laying Pipe:

1. Direction of Laying: Lay pipe with bell end facing in direction of laying. For lines on an appreciable slope, face bells upgrade at discretion of Engineer.
2. Restrained Joint Pipe: After first length of pipe is installed in trench, secure pipe in place with approved backfill material tamped under and along sides to prevent movement. Keep ends clear of backfill. After each section is jointed, place backfill as specified to prevent movement.
3. Take precautions necessary to prevent floating of pipe prior to completion of backfill operation.
4. When using movable trench shield, take necessary precautions to prevent pipe joints from pulling apart when moving shield ahead.
5. Do not allow foreign material to enter pipe while it is being placed in trench.
6. Close and block open end of last laid section of pipe to prevent entry of foreign material or creep of gasketed joints when laying operations are not in progress, at close of day’s work, or whenever workers are absent from job.

D. Joining Push-On Joint Pipe and Mechanical Joint Fittings:

1. Join pipe with push-on joints and mechanical joint fittings in accordance with manufacturer’s recommendations.

2. Provide special tools and devices, such as, special jacks, chokers, and similar items required for installation.
3. Lubricate pipe gaskets using lubricant furnished by pipe manufacturer. No substitutes will be permitted.
4. Clean ends of fittings of dirt, mud, and foreign matter by washing with water and scrubbing with a wire brush, after which, slip gland and gasket on plain end of pipe. If necessary, lubricate end of pipe to facilitate sliding gasket in place, then guide fitting onto spigot of pipe previously laid.

E. Ball Joint Pipe:

1. Assemble and install in accordance with manufacturer's recommendations.
2. Hydrostatic Test:
   a. Conduct on ball joint pipe independent of other pipe systems/type being installed.
   b. Conduct test in accordance with requirements of these Specifications and manufacturer's recommendations.

F. Cutting Pipe:

1. General: Cut pipe for inserting valves, fittings, or closure pieces in a neat and workmanlike manner without damaging pipe or lining and so as to leave a smooth end, at right angles to axis of pipe.
2. Pipe: Cut pipe with milling type cutter or saw. Do not flame cut.
3. Dressing Cut Ends: Dress cut end of mechanical joint pipe to remove sharp edges or projections, which may damage rubber gasket. Dress cut ends of push-on joint pipe by beveling, as recommended by manufacturer.

G. Field Welding:

1. Use of field welded outlets will not be allowed. Welding for outlets shall be performed only in pipe manufacturer's shop.
2. Field installed outlets may be installed with saddle approved by Engineer. Opening in pipe shall be machined cut and not with cutting torch.
3. Field welding of bars for restrained joint systems will not be allowed. Welding shall be performed in pipe manufacturer's shop.

H. Line and Grade:

1. Minimum Pipe Cover: 4 feet, unless otherwise indicated.
2. No high points will be allowed between air valves.

3. Maintain pipe grade between invert elevations to provide minimum clearance at air valve locations of 4 feet from existing ground surface to top of pipe.
4. Install air valves as shown and field verify intervening low points. When field conditions warrant, exceptions may be made upon approval of Engineer.
5. Deviations exceeding 6 inches from specified line or 1 inch from specified grade will not be allowed without express approval of Engineer.
6. Pipeline sections that are not installed to elevations shown or installed as approved by Engineer shall be reinstalled to proper elevation.

I. Thrust Restraint:

1. Restrained joints. Use of thrust blocking will not be allowed except as approved by the Engineer.

J. Backfill for Pipe Zone: Place and compact pipe zone material as follows:

1. After pipe bedding is in place, place imported granular material at approximately same rate on each side of pipe.
2. Place such that backfill elevation of is approximately equal on each side of pipe at all times.
3. Place to the following depths:
   a. 12-Inch Diameter Pipe: 4 inches to 6 inches above top of pipe barrel.
   b. Pipe Larger than 12 Inches in Diameter: 6 inches to 12 inches above top of pipe barrel.
4. Compact material to top of pipe zone in 6-inch lifts, to at least 95 percent of its maximum density, as determined by AASHTO T99.

K. Polyethylene Encasement:

1. Encase pipe, fittings, and valves where specified in accordance with AWWA C105/A21.5, Method A.
2. Cut polyethylene tube approximately 2 feet longer than pipe length.
3. Slip tube around pipe, centering to provide 1-foot overlap on each adjacent section.
4. Pull encasement to take out slack and wrap snug around pipe.
5. Secure overlap in place and fold at quarter points of pipe length.
6. Wrap and tape encasement snug around fittings and valves.

L. Cathodic Protection, Joint Bonding, and Test Stations:

1. Cathodic protection shall conform to Section 26 42 00, Cathodic Protection System.
2. Joint bonds and test stations shall conform to Section 26 42 01, Pipe Bonding and Test Stations.

3.04 HYDROSTATIC TESTING

A. Pipeline Hydrostatic Test:

1. General:
   a. Notify Engineer in writing 5 days in advance of testing. Perform testing in presence of Engineer.
   b. Test newly installed pipelines. Using water as test medium, pipes shall successfully pass a leakage test prior to acceptance.
   c. Furnish testing equipment and perform tests in manner satisfactory to Engineer. Testing equipment shall provide observable and accurate measurements of leakage under specified conditions.
   d. Isolate new pipelines that are connected to existing pipelines.
   e. Conduct tests on entire pipeline after trench has been backfilled. Testing may be done prior to placement of asphaltic concrete or roadway structural section.
   f. Contractor may, if field conditions permit and as determined by Engineer, partially backfill trench and leave joints open for inspection and conduct an initial service leak test. Hydrostatic test shall not, however, be conducted until backfilling has been completed.
   g. Supply of temporary water shall be as stated in Section 01 50 00, Temporary Facilities and Controls.
   h. Dispose of water used in testing.
2. Procedure:
   a. Maximum filling velocity shall not exceed 0.25 foot per second, calculated based on the full area of pipe.
   b. Expel air from pipe system during filling. Expel air through air release valve or through corporation stop installed at high points and other strategic points.
   c. Test pressure shall be no less than 100 psi above the normal operating pressure without exceeding the rating of the pipe and appurtenances.
   d. Apply and maintain specified test pressure with hydraulic force pump. Valve off piping system when test pressure is reached.

e. Maintain hydrostatic test pressure continuously for 2 hours minimum, adding additional make-up water only as necessary to restore test pressure.
f. Determine actual leakage by measuring quantity of water necessary to maintain specified test pressure for duration of test.
g. If measured leakage exceeds allowable leakage or if leaks are visible, repair defective pipe section and repeat hydrostatic test.

3. Allowable Leakage: Maximum allowable leakage shall not exceed amount stated in AWWA C600.

END OF SECTION

SECTION 33 16 13.15
PRESTRESSED CONCRETE TANK

PART 1 GENERAL

1.01 REFERENCES

A. The following is a list of standards which may be referenced in this section:

1. American Ladder Institute (ALI): A14.3, Ladders - Fixed - Safety Requirements.
2. American Concrete Institute (ACI):
   a. 506R, Guide to Shotcrete.
   b. 506.2, Specification for Shotcrete.
   c. 372R-13, Guide to Design and Construction of Circular Wire- and Strand-Wrapped Prestressed Concrete Structures.
3. ASTM International (ASTM):
   a. A82, Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.
   b. A185, Standard Specification for Steel Welded Wire Fabric, Plain, for Concrete Reinforcement.
   c. A366, Standard Specification for Commercial Steel (CS) Sheet, Carbon, (0.15 Maximum Percent) Cold-Rolled.
   d. A615, Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
   e. A666, Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
   f. C42, Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
   g. C144, Standard Specification for Aggregate for Masonry Mortar.
   h. C150, Standard Specification for Portland Cement.
   i. C207, Standard Specification for Hydrated Lime for Masonry Purposes.
   j. C216, Standard Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale).
   k. C270, Standard Specification for Mortar for Unit Masonry.
   l. C920, Standard Specification for Elastomeric Joint Sealants.
   m. D1056, Standard Specification for Flexible Cellular Materials – Sponge or Expanded Rubber.
4. American Water Works Association (AWWA): D110-13, Wire- and Strand-Wound, Circular, Prestressed Concrete Water Tanks.

5. Federal Specifications: FS TT-P-0035 (1), Paint, Cementitious, Powder, White and Colors (for Interior and Exterior Use).
6. NSF International (NSF): NSF/ANSI 61, Drinking Water System Components - Health Effects.
7. Occupational Safety and Health Administration (OSHA): 29 CFR 1910.27, Fixed Ladders.
8. Precast/Prestressed Concrete Institute (PCI): MNL-120, PCI Design Handbook-Precast and Prestressed Concrete.
9. Sheet Metal and Air Conditioning Contractors National Association (SMACNA): 1793, Architectural Sheet Metal Manual.
10. Wisconsin Department of Natural Resources (WDNR): Wisconsin Administrative Code Chapter NR 811.

1.02 DEFINITIONS

A. Prestressed Tank System: Consists of a cast-in-place concrete floor slab, a core wall, baffle walls, and roof.

B. Shotcrete: Mortar projected directly upon intended surface.

1.03 DESIGN REQUIREMENTS

A. Obtain services of a qualified design engineer, as defined in Article Quality Assurance, to design Prestressed Tank System conforming to attributes specified in this section.

B. Floor Slab: Cast-in-place concrete, minimum reinforcing in slab equals 0.005 times concrete section.

C. Roof: Cast-in-place concrete dome with minimum thickness of 3 inches and minimum reinforcing of 0.0025 times concrete section with a minimum area of reinforcing steel each way equal to 0.120 inch squared.

D. Walls: Cast-in-place concrete core wall with plastic water stops at construction joints or shotcrete core wall with continuous internal steel diaphragm or precast concrete core wall with steel diaphragm, vertical joint seals, and shotcrete coverings. Walls placed on elastomeric bearing pads, free to move radially, and plastic water stop connection between wall and footing. Satisfy allowable stress requirements when calculating wall thicknesses.

E. Openings and Penetrations: Except for access manholes, other openings or penetrations through wall not permitted. Pipe penetrations shall be through floor slab and under footings. Pipe sleeves are allowed through footing for shotcrete equipment.

F. Design Loads and Foundation Criteria:

1. Dead Loads: Self Weight.
2. Roof Live Load: 20 psf for dome roof.
3. Snow Load: See structural drawings.
4. Wind Load: See structural drawings.
5. Differential Drying Allowance: 10 degrees F shall be additive to temperature differential during winter.
6. Maximum Foundation Bearing Pressure: See structural drawings.
7. Maximum Differential Settlement: See geotechnical report.
8. Seismic Design Criteria: See structural drawings.

1.04 SUBMITTALS

A. Action Submittals:

1. Shop Drawings:
   a. Design Data:
      1) Proposed details, concepts, stress calculations, and manhole opening for prestressed tank walls.
      2) For design loads and foundation criteria, show calculations and details based on the seismic forces.
      3) Details of vertical post-tensioning system.
      4) Details for sealing vertical joints of steel diaphragm shell.
      5) Details of prestressed tank accessories.
      6) Calculations stamped by professional engineer registered in the state of Wisconsin.
      7) Design drawings stamped by a professional engineer.
   b. Curing methods for dome concrete.
   c. Description of construction method and materials.
   d. Manufacturer’s literature showing compliance with specification.
2. Samples: Vertical joint of steel diaphragm shell together with integral pumped epoxy material or other approved method to show evidence of satisfactory seal.

B. Informational Submittals:

1. Manufacturer’s Certificate of Compliance, in accordance with Section 01 61 00, Common Product Requirements:
   a. Shotcrete sand.
   b. Concrete and shotcrete admixtures do not contain chlorides or other corrosive chemicals.

c. Vertical Post-Tensioning System: Manufacturer's load strain curves certifying physical properties of steel and standard test data that components of anchorage units conform to specified requirements.

2. Manufacturer's Certificate of Proper Installation, in accordance with Section 01 43 33, Manufacturers' Field Services.
3. Certificates of Inspection: Vertical post-tensioning units have been inspected prior to shipment and contain no apparent defects.
4. Statements of Qualification:
   a. Registered professional engineer registered in the state of Wisconsin.
   b. Prestressed tank installer.
5. Written Test Reports of Each Test and Inspection:
   a. Shotcrete.
   b. Mill test data of chemical composition for vertical post-tensioning system.
   c. Test reports for prestressing steel components.
   d. Mill test data for circumferential prestressing material regardless of manufacture. Include chemical composition, physical properties, and dimensions of steel prior to galvanizing. Mill test data for at least three samples of final prestressing material taken from material delivered to Site. Identify each roll that Samples were taken from. Identify packages or rolls of prestressing material with mill and heat number.

1.05 QUALITY ASSURANCE

A. Qualifications:

1. Qualified Design Engineer: Registered in the state of Project.
2. Prestressed Tank Installer: Company specializing in design and construction of prestressed tanks. Minimum 5 years' experience on tanks of similar size (1.5MG to 2.5MG) and type required for Project. Company has designed and built no less than five comparable prestressed (wire or strand wrapped) tanks now in use and are giving satisfactory service. Tanks shall have been constructed within the last 5 years. Include name, address, and phone number of owners with proposal.

B. Shotcrete Panel Mockups:

1. When not using automated equipment, assemble test panel at least 30 inches by 30 inches for each mix being considered.

2. Assemble test panels to same thickness as structure, but not less than 3 inches.
3. Take minimum three cubes or cores from panels for strength testing of shotcrete.
4. Cut or broken surfaces shall be dense and free from laminations and sand pockets.
5. Retain and maintain test panels during construction to establish standards by which completed shotcrete Work will be judged.
6. Independent Testing Laboratory Services will:
    a. Test proposed materials, including water.
    b. Test proposed mix proportions.
    c. Test specimens.
    d. Secure production samples of materials at plants or stockpiles during construction and test.
    e. Test strength of shotcrete as Work progresses.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Materials delivered prior to time required, store in a dry, ventilated building, heat if necessary to prevent accumulation of moisture on materials or in wrapping. Do not store on ground or expose to weather.

B. Do not bend vertical post-tensioning bars during handling and storage. Replace bent bars, bars with surface damage, and bars with excessive rusting.

1.07 ENVIRONMENTAL REQUIREMENTS

A. Delay Work under the following conditions:

1. During high winds, when shotcreting, which may cause sand to separate at the nozzle.
2. When placing concrete, or shotcrete, as weather approaches freezing defined as below 40 degrees F when temperature is falling, or until temperature is 35 degrees F when temperature is rising.
3. During rains of high intensity which can wash cement out of fresh material.

B. Cold Weather: Take precautions to avoid low temperatures detrimental to epoxy grout or the ability to pump. If grouting procedure cannot be postponed, keep wall temperatures within the required temperature range.

C. Hot Weather: When temperatures exceed 90 degrees F, obtain approval for method used to protect shotcrete from excessive heat and drying.

D. Do not expose circumferential prestressing on walls to weather for more than 72 hours. Exercise precautions during adverse weather conditions.

PART 2 PRODUCTS

2.01 CONCRETE

A. In accordance with Section 03 30 00, Cast-in-Place Concrete, except that a 3/8-inch maximum size aggregate may be used for dome concrete if designed for strength and maximum density.

B. Minimum Design (28 day) Strengths:

1. Dome Roof: 4,000 psi.
2. Core Wall: 4,000 psi.
3. Floor Slab: 3,000 psi.

C. Admixtures: As specified in Section 03 30 00, Cast-in-Place Concrete.

2.02 SHOTCRETE

A. Fine Aggregates (Sand):

1. Saturated, surface dry, hard, dense, uncoated rock fragments free from injurious amounts of foreign or deleterious substances as specified in Section 03 30 00, Cast-in-Place Concrete.
2. Fineness Modulus for Sand: Range from 2.70 to 3.00 with maximum particle size of 1/4 inch.
3. Maintain sand at 3 to 6 percent moisture content; dampen or dry with sand dryers if necessary.
4. Gradation:

Sieve Size	Percent Passing by Weight
No. 4	97 - 100
No. 8	90 - 98
No. 16	70 - 85
No. 30	35 - 55
No. 50	12 - 25
No. 100	2 - 8

B. Screen sand for finish coat to produce uniform dense surface in texture and appearance.

C. Water and Cement: As specified in Section 03 30 00, Cast-in-Place Concrete.

D. Admixtures: As specified in Section 03 30 00, Cast-in-Place Concrete.

E. Minimum design strength 4,000 psi.

2.03 WELDED WIRE FABRIC

A. In accordance with ASTM A82 and ASTM A185.

2.04 MILD STEEL REINFORCING

A. Deformed Grade 40 bars with maximum service load design, allowable stress of 18,000 psi in accordance with ASTM A615.

2.05 CIRCUMFERENTIAL PRESTRESSING STEEL

A. High Tensile Wire:

1. Diameter Tolerance of Wire: Plus or minus 0.002 inch.
2. Tensile Strength: Minimum 210,000 psi.
3. Yield Strength at 1 Percent Extension: Minimum 170,000 psi.
4. Elongation in 10 Inches at Fracture: Minimum 4 percent.
5. Bending (R equals 5D): Minimum 6 bends per 90 degrees.

B. Hot-Dipped Galvanized Seven-Wire Continuous Strand:

1. Strand Diameter Tolerance: Plus or minus 1/32 inch.
2. Pitch: 12-16 (strand diameter).
3. Tensile Strength: Minimum 240,000 psi.
4. Yield Strength at 1 Percent Extension: Minimum 180,000 psi.
5. Elongation in 24-inch fracture minimum 4.5 percent.
6. Zinc Coating Weight: Minimum 0.75 ounce per square foot.

C. Anchorage: Prestressing manufacturer’s standard and capable of safely developing full strength of units, and not susceptible to galvanic action with prestressed steel.

D. Prestressing Steel Requirements:

1. Initial prestress force in circumferential prestressing units after anchoring shall not exceed 70 percent of guaranteed ultimate strength.

Coordinate value with tolerance requirements and reflect values in calculations.

2. Final prestress force in circumferential prestressing units, when using nonelectronic or electronic wrapping machine, not capable of close stress tolerance, shall be determined by using stress loss of 25,000 psi for concrete shrinkage, plastic flow, and creep in steel plus 6 percent of initial wire stress system tolerances.
3. Calculate final circumferential prestress force and location on wall. Final prestress force shall provide for minimum residual compression in wall, above that required to resist internal water pressure of 100 psi. Maximum compression in core wall limited to 0.45 times design strength of core wall when using final prestress force after all losses. Maximum initial compression in core wall limited to 0.55 times design strength of core wall. Calculate wall thickness to comply with these requirements and bending requirements.

2.06 VERTICAL TENDONS

A. Solid High Strength Alloy Steel Bar:

1. Minimum Ultimate Tensile Strength: 145,000 psi.
2. Minimum Yield Stress at 0.2 Percent Offset: 125,000 psi.
3. Approximate Modulus of Elasticity: 30,000,000 psi.
4. Minus Elongation in 20 Diameters After Rupture: 4 percent.
5. Minimum Reduction of Area After Rupture: 20 percent.

B. Tendon Ducts:

1. Rigid galvanized metallic sheath or tubing or PVC pipe.
2. Sufficient strength to maintain its shape under potential forces created during handling, placing, and vibrating of concrete.
3. Inside diameter of grout and vent pipe 3/8 inch larger than diameter of vertical tendon.

C. Anchorage:

1. Furnish anchor plates of steel to dimensions which will show no permanent physical distortion when tested with a unit of size required, together with standard anchorage devices, and to 100 percent of ultimate tensile strength of unit.
2. Size plate so concrete stresses shall meet allowable concrete bearing stresses in accordance with PCI MNL-120.

2.07 STEEL DIAPHRAGM SHELL

A. Tank diaphragm in accordance with ASTM A366 for Commercial Quality cold-rolled steel sheet. Minimum of 26-gauge sheet and form corrugations of a pattern to form a continuous positive watertight seal and a strong mechanical key between shotcrete and steel. Furnish steel sheets in one continuous length to full height of wall. Vertical joints between sheets.

2.08 SHOTCRETE MIX PROPORTIONS

A. Adjacent to Steel Diaphragm and Over Wires: 1 part cement to 3 parts sand.

B. All Other: 1 part cement to 4 parts sand.

2.09 ACCESSORIES

A. Manway:

1. Liquid tight quick-opening manway that opens into drinking water storage tank, anchored into tank per manway manufacturer's recommendations.
2. Material: Type 316 stainless steel.
3. Size: 48 inch clear opening with 55 inch outside diameter.
4. Gasket: EPDM gasket all around manway hatch.
5. Hardware: Heavy-duty stainless steel hinges and handwheel release mechanism.
6. Lock: Provide keyed cut resistant padlock to prevent entry.
7. Paint: Paint exterior of manway to match tank wall color.
8. Manufacturer and Model: Chase Associated, Inc.; CM-1.

B. Vent:

1. Mushroom cap vent with an automatically resetting pressure-vacuum relief frost proof mechanism in accordance with WDNR NR 811.
2. Material: Type 316 stainless steel.
3. Size: 24 inch diameter vent pipe with a 50 inch diameter dome.
4. Screen: 16x16 removable stainless steel screen. The skirted sides of mushroom cap shall totally cover screens from view from side.
5. Lock: Provide keyed padlock to prevent entry.
6. Paint: Paint exterior of manway to match tank roof color.
7. Manufacturer: Omega Vent Security Shroud.

C. Hatch with Safety Chains and Posts:

1. Roof hatch mounted to concrete curb with watertight cover which overlaps the framed opening and extends down around the frame a minimum of 2 inches in accordance with WDNR NR 811.
2. Material: Type 316 stainless steel.
3. Size: 48 inch by 48 inch.
4. Gasket: EPDM gasket between hatch frame and concrete curb and between roof hatch and frame, all around.
5. Safety Chains and Posts: Stainless steel safety posts and chains to provide areaway fall protection when the cover is in the open position.
6. Hardware: Heavy-duty stainless steel hinges, latch and lifting mechanism.
7. Lock: Provide keyed cut resistant padlock to prevent entry.
8. Paint: Paint exterior of manway to match tank roof color.

D. Gutters, Collectors, and Downspouts:

1. Stainless Steel: ASTM A666, Type 304 or Type 316, soft temper; No. 2D, dull finish, 0.018 inch minimum thickness for collectors and downspouts and 0.125 inch minimum thickness for gutter angles.
2. Fabrication:
   a. Field measure prior to fabrication.
   b. Fabricate in accordance with SMACNA 1793 that applies to design, dimensions, metal, and other characteristics of item indicated.
   c. Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
   d. Rigid Joints and Seams: Make mechanically strong. Solder stainless steel metal joints. Do not use solder to transmit stress.
   e. Neutralize soldering flux.
   f. Form downspouts and gutters in maximum lengths as practicable to sizes and shapes indicated on Drawings:
      1) Telescope end joints 1-1/2 inches and lock longitudinal joints of downspouts.
      2) Provide elbows at bottom where downspouts empty onto concrete foundation and sidewalk.
3. Paint: Paint gutter angles to match tank roof color. Paint exterior of collectors and downspouts to match brick and wall colors.

2.10 FRP LADDER

A. Fabricate ladders with rails, rungs, and safety climb device to meet applicable requirements of OSHA, CFR Part 1910.27 and ALI A14.3

B. Fiberglass Reinforced Plastic (FRP) Ladder:

1. Ladder Criteria:
   a. Capable of supporting a 250-pound concentrated load plus 30 percent impact at midspan of rung.
   b. Side Rails: 1-3/4-inch square tubes, 0.25 inch thick.
   c. Rungs: Minimum 1-inch diameter thermal cure rod with pigmented epoxy, nonskid grit surface, or 1-1/4-inch minimum diameter pultruded, fluted, nonslip surface of vinyl ester resin.
2. Manufacturers:
   a. Strongwell Corp., Bristol, VA.
   b. Fibergrate Composite Structures, Inc., Addison, TX.

C. Safety Climb Device:

1. General:
   a. Belt and harness shall withstand minimum drop test of 250 pounds in 6-foot free fall.
   b. Fall Prevention System Material: Stainless steel, AISI Type 316.
2. Components and Accessories:
   a. Main Components: Sleeve or trolley, safety harness, and carrier or climbing rail.
   b. Ladder rung clamps with stainless steel, AISI Type 316, mounting brackets and hardware.
   c. Removable extension kit with tiedown rod or trolley gate, mandrel, and carrier rail for ladders under manholes and hatches.
3. Manufacturers and Products:
   a. Miller Equipment, Franklin, PA; Sure Track Rail System.
   b. TS Products, St. Charles, IL; TS Safety Rail System

D. Ladder Safety Post: Stainless steel telescoping tubular, spring balanced and automatically locking in raised position, with release lever for unlocking.

2.11 CEMENTITIOUS COATINGS

A. Cement-based, polymer-modified coating to protect and decorate concrete.

B. Manufacturer: The Euclid Chemical Company.

C. Products:

1. Concrete Roof Base Coat: Tamoseal mixed with Akkro-7T admixture.
2. Concrete Wall Base Coat: Tammscoat.
3. Concrete Roof and Wall Finish Coat: Tammscoat

D. Colors: See Storage Tank Architectural Drawings. Color and texture as selected by Engineer or Owner.

E. Surface preparation and installation in accordance with manufacturer's instructions.

2.12 MASONRY VENEER

A. Color, Texture, and Pattern: Match existing Administration and Filtration Facility as approved by the Engineer or Owner.

B. Facing Brick: ASTM C2l6, Grade SW, Type FBX. Minimum compressive strength for individual brick: 2,500 psi; nominal size: 4-inch by 2-2/3-inch by 8-inch.

C. Mortar Materials:

1. Portland Cement: ASTM C150, Type I, low alkali content (0.60 percent maximum).
2. Lime: ASTM C207, Type S.
3. Mortar: ASTM C270, Type S. Consisting of one part portland cement, from 1/4 to 1/2 part lime putty or hydrated lime, and clean well-graded sand in the proportion of three times the sum of the cementitious material; or 1/2 part portland cement, one part masonry cement, and clean well-graded sand in the proportion of three times the sum of the cementitious material.
    a. Add color in a consistent manner to provide final uniformity.
    b. No antifreeze liquid, salts, or other substances are allowed to lower the freezing point. No calcium chloride is allowed in the mortar.
    c. Color: Match existing as approved by the Engineer or Owner.
4. Tuck-Pointing Mortar: Prehydrated Type N, one part portland cement, one part Type S hydrated lime, and six parts sand, by volume.
5. Sand: ASTM C144, in addition not less than 5 percent passes the No. 100 sieve.
6. Water: Fresh, clean, and free of deleterious acids, alkalies, chlorides, and organic materials.

D. Masonry Accessories:

1. Wall Ties: 22 gauge stainless steel corrugated wall ties spaced 16 inches on center in both directions anchored into shotcrete with stainless steel Tapcon anchors, maximum 2 inch embedment.
2. Weep Holes:
   a. Cell vent and weep hole head joints to weep and vent masonry cavity wall.
   b. Nominal Size: 3/8-inch by 3-3/8-inch by 2-1/2-inch.
3. Mortar Dropping Control Device:
   a. Manufacturers and Products:
      1) Dur-O-Wall, Inc.; Mor-Control.
      2) Form and Building Supply, Inc.; Mortar Maze.
4. Premolded Joint Filler: ASTM D1056, closed cell neoprene sponge, 3 inches wide by 3/8 inch thick.

E. Joint Sealant:

1. Multipart Polyurethane, Nonsag, Immersible: Polyurethane base, multicomponent, chemical curing; ASTM C920, Type M, Grade NS, Class 25.
2. Capable of being continuously immersed in water.
3. Approved for potable water contact and conforming to NSF/ANSI 61, where required.
4. Manufacturers and Products:
   a. Pecora; DynaTrol II.
   b. Tremco; Dymeric 240.
   c. BASF; Sonneborn NP-2.
   d. Sika Chemical Corp.; Sikaflex 2c NS.
5. Backer Rod: Nongassing, extruded, closed-cell round polyurethane foam or polyethylene foam rod, compatible with sealant used, and as recommended by sealant manufacturer.

PART 3 EXECUTION

3.01 GENERAL

A. Foundation: Encase tank piping under foundations in concrete.

B. Welded Wire Fabric: Adequately support prior to placement of concrete.

3.02 CORE WALL

A. Do not begin prestressing until core wall has obtained a compressive field strength of 4,000 psi or higher as determined by tests. Exterior surface of core wall, if of cast-in-place or precast concrete, sand or water blasted prior to application of prestressing wire.

B. Sand or water blasting Core Wall:

1. Sand or water blast exterior surfaces of core wall after inspecting patches for corrosive chemicals, to remove traces of original surface smoothness and original surface color, form oil, and laitance.
2. Complete sand or water blasting prior to installation of circumferential prestressing.
3. Use dry type method of sandblasting with No. 16 silica sand.
4. Sand or water blast far enough in advance of prestressing operation not to interfere with other operations.
5. Leave wall clean, heavily pitted, and uniform in appearance.
6. Sand or water blasting operation shall not prevent satisfactory curing of wall.

3.03 CIRCUMFERENTIAL PRESTRESSING

A. Apply uniformed stressed steel wire or strand to core wall using a wrapping machine to provide the final prestressing force per linear foot of wall height. Electronic servo controlled wrapping systems with automatic electronic recording shall be used. Nonelectronic wrapping machines may also be used.

B. Stress Measurement and Recording:

1. Apparatus capable of measuring stress of circumferential prestressing units accurately.
2. Gauges or other stress measuring apparatus calibrated by a recognized gauge manufacturer or testing laboratory on wire or strand samples taken from prestressing steel delivered to Site to be used in the Work.
3. Perform calibration work performed within 15 days prior to prestressing.
4. Recalibrate stress measuring apparatus during progress of Work.
5. If stresses measured exceed values specified, discontinue operation and make satisfactory adjustments prior to proceeding with wrapping.
6. Apply additional wire or strand to compensate for understressed wire or strand.

7. Base measurements of wire or strand stress on a continuous sensing of applied force on wire between tensioning drum and wall when, and as, wire is being wrapped and laid on wall.

C. Splicing of Wire or Strand:

1. Do not weld splice wire or strand, except when terminating one complete coil or in event of a defect.
2. Join ends of wire or strand with steel sleeves or splicing devices which will develop full strength of wire or strand without slippage or loss of stress.
3. Anchor stressed prestressing steel, or tie off at frequent intervals as stressing proceeds to minimize loss of stress in event of breakage.
4. Remove from Work, coils of prestressing steel which have broken three or more times.
5. Stress prestressing steel only once.
6. Anchor wrapped prestressing steel to wall at least once for every coil or reel.
7. Do not permanently anchor one wire or strand to previously wrapped wire.

D. Spacing:

1. Space at minimum five wires of 0.162 to 0.192 inch in diameter, or four strands of 0.375 inch in diameter, per foot of wall height, and maximum 22 wires or 12 strands per foot.
2. Minimum clear spacing between units not less than 1.5 unit diameters or 3/8 inch, whichever is larger.
3. Spread or remove from Work prestressing steel wrapped closer together.
4. Space wire or strand of other diameters.

3.04 SHOTCRETING OF CIRCUMFERENTIAL PRESTRESSING STEEL

A. In accordance with ACI 506.2 and ACI 506R. Application of dry or wet mix is acceptable.

B. Cover each layer and outer layer of prestressing steel with a coating of shotcrete. Work from bottom to top of wall.

C. Completely embed the prestressing steel without voids. Maintain uniform flow and uniform thickness of material from nozzle.

D. Cut out slugs, sand spots, or wet sloughs resulting from nonuniform material flow and repair as Work progresses.

E. Time the intervals between successive applications to allow for initial set to develop. After initial set, stiff broom shotcrete layers receiving another coat to remove laitance and to provide a bond with succeeding applications.

F. Adjust amount of water in shotcrete placed on vertical surfaces. Thickness of shotcrete application shall be approximately 3/4 inch.

G. Remove deposits of loose sand before placing succeeding layers of shotcrete. Clear rebound away continuously from the Work, and do not reuse rebounded sand. Clear rebound away from Work before initial set occurs.

H. Slope construction joints or day's work joints off to thin, clean, and to regular feathered slope edge. Thoroughly clean sloped portion and adjacent shotcrete with mortar film coating. Wet and scour with air jet, or sandblast with silica sand before placing adjoining Work.

I. Where more than one layer of circumferential prestressing units are required, maintain minimum 1/4-inch cover over each underlayer. Shotcrete cover over outer layer shall be a minimum of 1-inch thickness applied in a minimum of three coats. Provide 1/4-inch minimum cover over prestressing unit for first coat. Apply finish coat approximately 1/4-inch thickness. Layers of shotcrete shall be broomed after initial set except finish coat.

J. Cover the reservoir with plastic sheeting upon final application of shotcrete to maintain moisture for curing.

3.05 VERTICAL POST-TENSIONING

A. Install post-tensioning units level and plumb in tank wall, tie units securely in position.

B. Tendon Ducts:

1. Encase vertical post-tensioning units in rigid grout-tight tendon ducts to prevent mortar from entering and hindering free movement of bars.
2. Maintain shape of ducts during handling, placing, and vibrating of concrete.
3. Attach by threads, vent pipe to tubing for venting and grouting.
4. Thread end of grout tube at bottom and project from concrete.
5. Thread bottom of vent pipe at both ends, attach pipe securely during construction and remove after grouting.

C. Connections shall be tight between anchors, tubing or pipe, and forms to prevent movement or leakage of grout into units during pouring operations. Provide threaded hose connections to threaded vent pipe and connections shall be tight to keep water from entering forms below.

D. Tension units from top ends.

E. Flush the tendon ducts with water through top vent pipe several times during wall pour allowing water to drain from bottom grout pipe, extending through wall form.

F. After completion of pour and flushing operation, give pipes a short burst of air at top pipe to clear out accumulated water at bottom of tendon duct. Do not clean tendon ducts with air or water connected to bottom grout pipe.

G. Allowable Stresses:

1. Determine initial post-tensioning force for vertical bar units by using a 25,000-psi stress loss allowance for concrete shrinkage, plastic flow, and steel relaxation.
2. Temporary jacking stresses up to 80 percent of ultimate strength for unit are acceptable to overcome losses due to tendon friction, anchorage seating, and elastic shortening.
3. Initial stress in bar unit after anchorage losses have occurred shall not exceed 70 percent of ultimate strength of unit.
4. Do not stress units before the 28-day concrete field strength has been obtained.

3.06 GROUTING VERTICAL TENDONS

A. Provide neat cement for grouting vertical post-tensioning units after stressing. Mix neat cement and screen through fine screen. Provide enough water to obtain a creamy consistency to ensure cement and water do not separate in tendon ducts.

B. Introduce grout through bottom grout pipe until it flows from a 3-foot extension attached to upper end of tendon ducts. Valve off bottom grout pipe no earlier than the day following grouting operation and remove bottom tube. Secure tendon duct tight enough to allow grout to enter the extension pipe without leakage in vicinity of top baseplate.

C. After tensioning units, flush tendon ducts out with water and blow out with air. Provide machine capable of 150 psi to clear obstructions in tendon ducts. Fill tendon ducts with grout under pressure of approximately 80 psi.

3.07 FINISHING OF SHOTCRETE

A. Underlayers or Exposed Surfaces:

1. On completing surfaces, bring shotcrete to an even plane and to well-formed corners by working up to ground wires or other thickness or alignment guides, using lower placing velocity than normal.
2. Screed exposed surfaces or underlayers by working upward against gravity with thin-edged screed using a slicing motion to trim off high spots and expose low spots.
3. Avoid pulling and breaking surface with subsequent checking.

B. Finish Coat:

1. Apply coat to remove rough areas after ground wires have been removed.
2. Carefully screen sand for finish coat to remove oversize particles which rebound and mar surfaces.
3. Surface of finish coat shall be; of natural texture and coloration; free from spotting, cement or dust streaking, lap lines, uneven surfaces, and rebounded material.
4. Do not hand-patch.
5. Check coatings for bond by tapping lightly to test for hollow sounding spots.
6. Cut out areas where bond is not fully developed and repair.

C. Corrosion Protection:

1. Inspect core wall and patched surfaces.
2. Test surfaces for chlorides or other chemicals that cause corrosion of prestressing.
3. Remove corrosive chemicals from surfaces prior to sandblasting.
4. Patch surfaces by building out in uniform circular area level with surface.
5. Sandblast patches and core wall surfaces prior to application of prestressing and shotcrete.

3.08 CURING

A. Dome Concrete:

1. Water cure dome concrete for 7 days by keeping surface continuously wet.
2. Schedule wire wrapping and application of shotcrete so curing shall not be interrupted, and water from curing shall not wash or damage shotcrete wire coats.
3. Begin curing after initial concrete set has occurred.

B. Shotcrete:

1. Keep shotcrete between layers of wire and cover damp by hand watering or fine mist spray.
2. Continuously water cure completed shotcrete surfaces for period of 7 days after application, or until subsequent shotcrete coats are applied prior to end of the 7-day curing period.
3. Remove laitance from wall by light sandblasting after curing period.
4. Do not use curing compounds.

3.09 TESTS

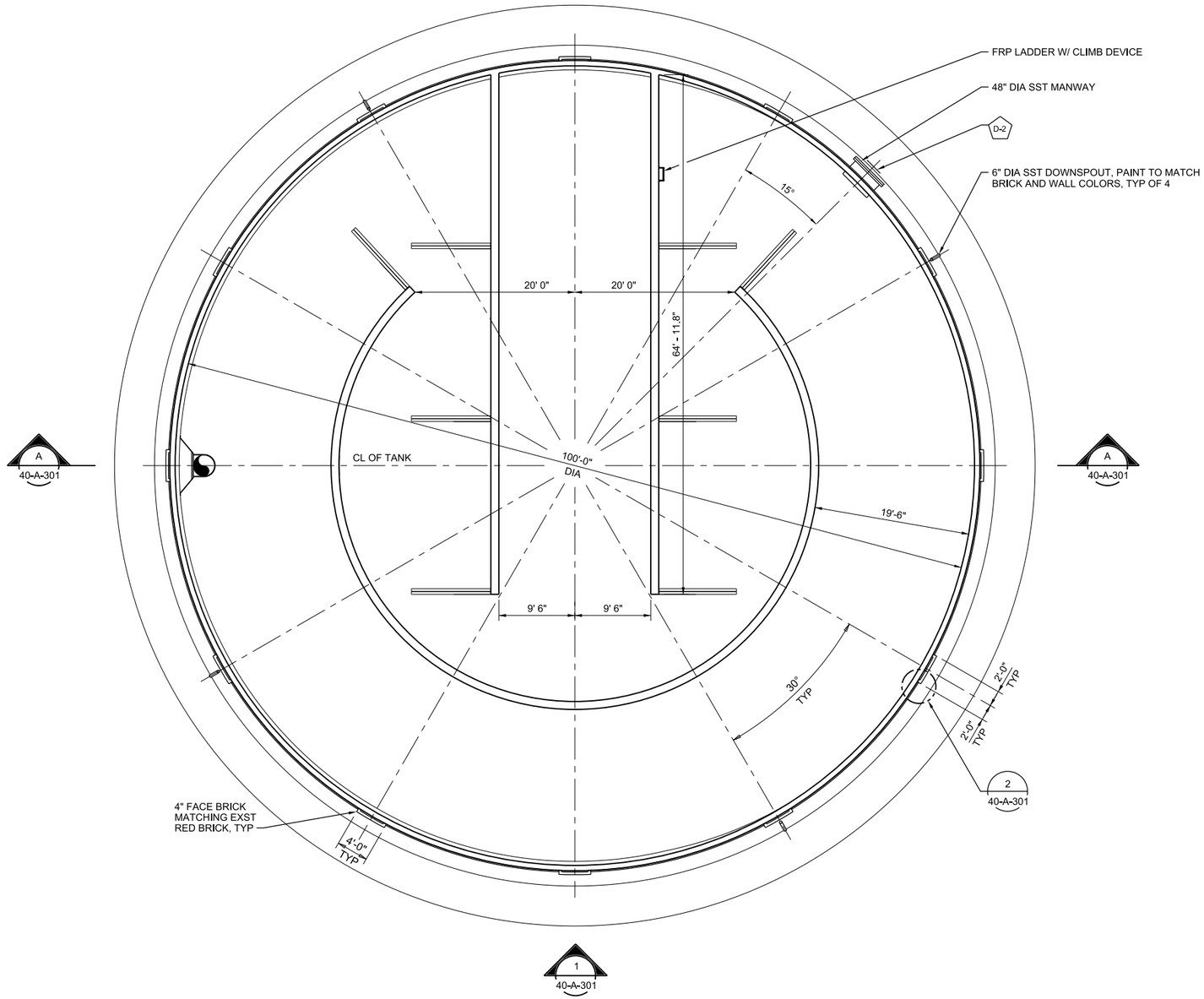
A. Shotcrete Panel Field Tests:

1. When length of core is less than twice diameter, apply correction factors in accordance with ASTM C42 to obtain compressive strength of individual cores.
2. Average compressive strength of three cores taken from test panel equal or exceed 0.85 f'c with no individual core less than 0.75 f'c. Average of three cubes taken from a panel equal or exceed f'c with no individual cube less than 0.88 f'c.
3. Shotcrete will be based on results obtained from cores or sawed cubes.
4. Use of data obtained from impact hammers, ultrasonic equipment, or nondestructive testing devices is not permitted. However, these devices may be used for determining uniformity of shotcrete.
5. Remove and replace shotcrete found not meeting tests, or cut cores and further test shotcrete, or repair and replace as approved by Engineer.

B. Water test tank as specified in Section 03 30 00, Cast-in-Place Concrete.

END OF SECTION

DRAWINGS



PLAN AT GRADE LEVEL

1/8"=1'-0"

NO.	DATE	DSGN	DR	CHK	APVD	BY	APVD
		RG SIEBERS	PA KARABAN				

REVISION

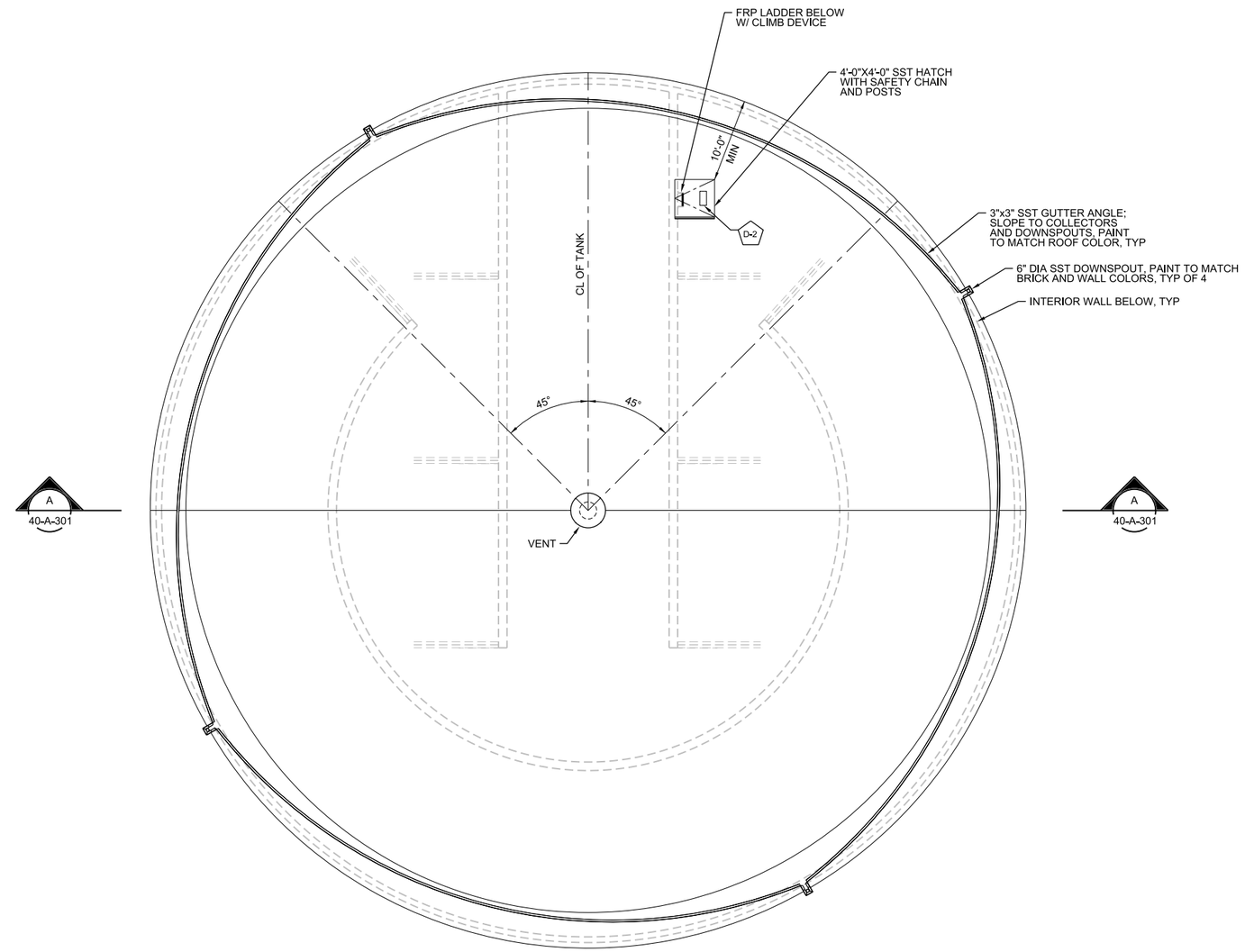
OAK CREEK WATER AND SEWER UTILITY
2016 WATER TREATMENT PLANT
IMPROVEMENTS
CITY OF OAK CREEK, WISCONSIN

CH2MHILL®

ARCHITECTURAL
STORAGE / CT TANK
PLAN AT GRADE LEVEL

1/8"=1'-0"	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	MARCH 2015
PROJ	653463
DWG	40-A-231
SHEET	of

FILENAME: 40-A-231_653463.dgn PLOT DATE: 2015\04\15 PLOT TIME: 1:49:19 PM



ROOF PLAN
1/8"=1'-0"

N

NO.	DATE	REVISION	BY	APVD
DSGN	RG SIEBERS	DR PA KARABAN	CHK	APVD

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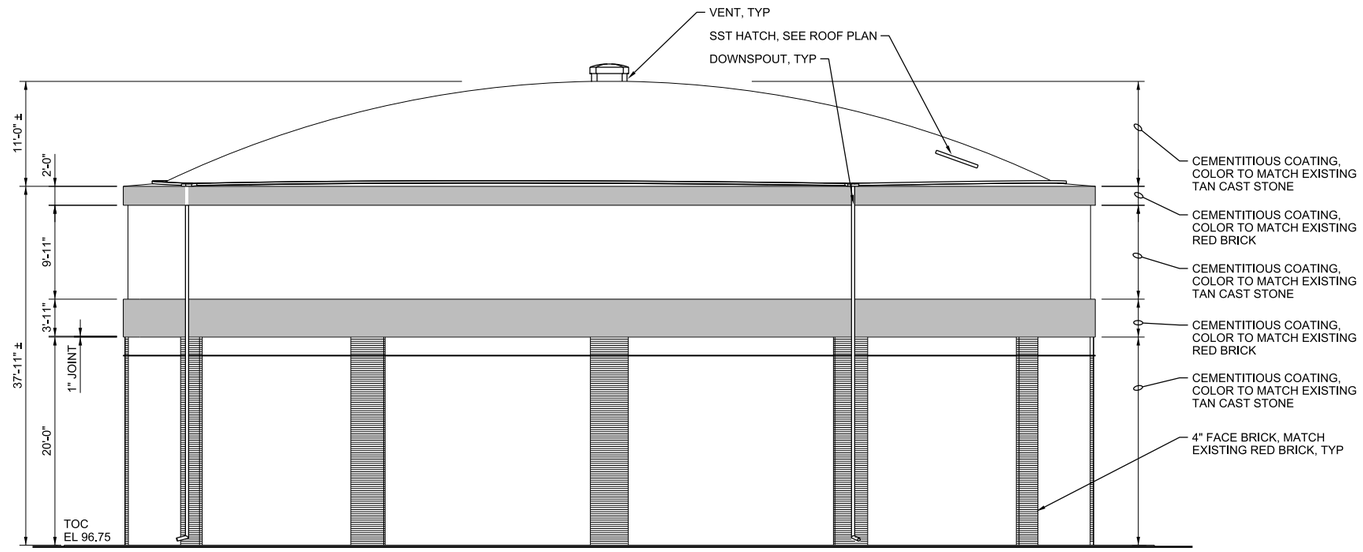
2016 WATER TREATMENT PLANT
IMPROVEMENTS
CITY OF OAK CREEK, WISCONSIN

ARCHITECTURAL
STORAGE / CT TANK
ROOF PLAN

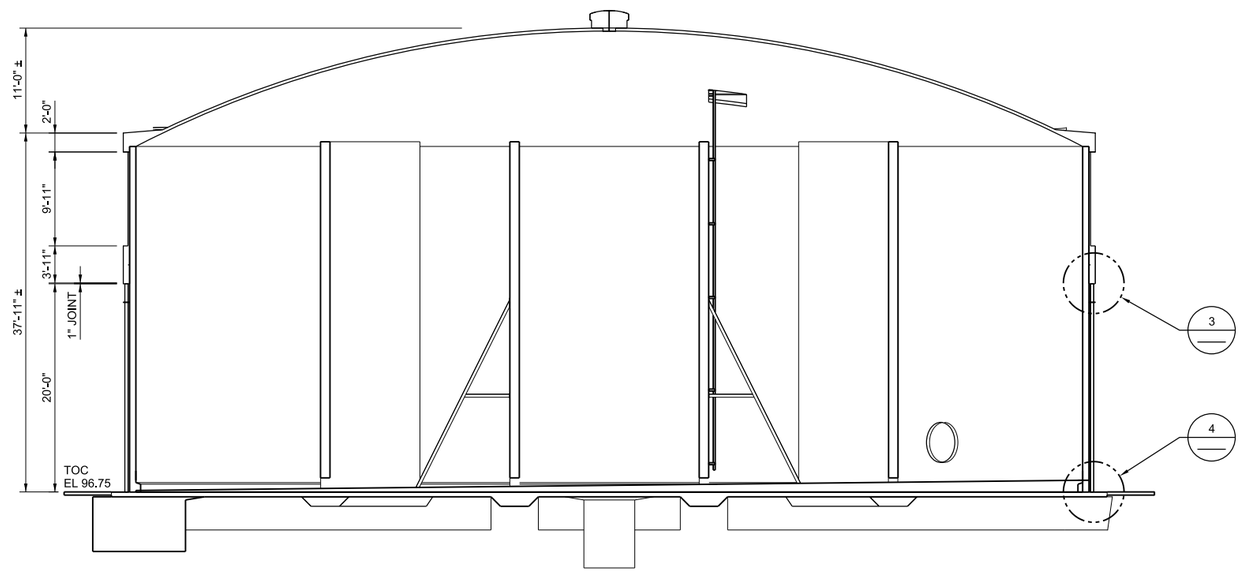
1/8"=1'-0"
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MARCH 2015
PROJ	653463
DWG	40-A-241
SHEET	of

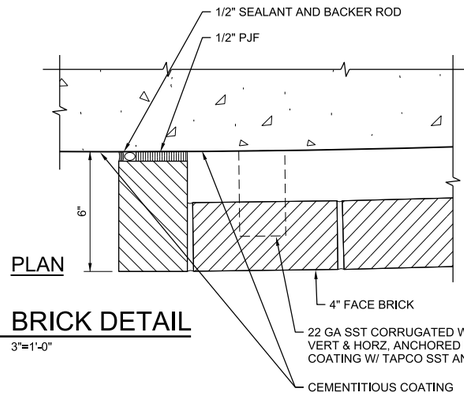
FILENAME: 40-A-241_653463.dgn PLOT DATE: 2015\04\15 PLOT TIME: 1:53:57 PM



1 EAST ELEVATION
1/8"=1'-0"
40-A-231
40-A-241

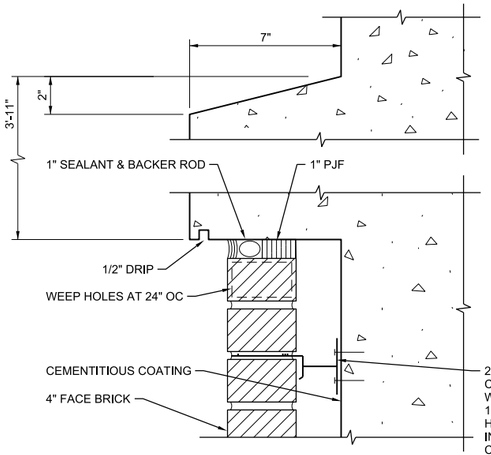


A SECTION
1/8"=1'-0"
40-A-231
40-A-241

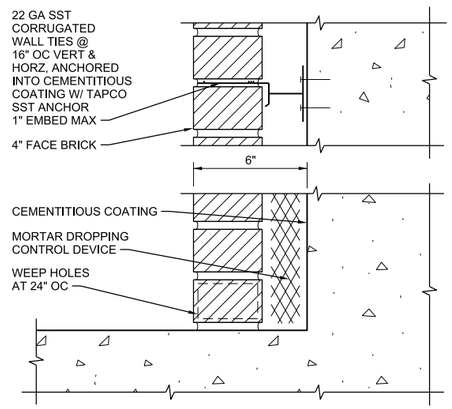


PLAN

2 BRICK DETAIL
3"=1'-0"
40-A-231



3 BRICK DETAIL
3"=1'-0"



4 BRICK DETAIL
3"=1'-0"

NO.	DATE	DSGN	DR	CHK	APVD	BY	APVD
		RG SIEBERS	PA KARABAN			REVISION	

CH2MHILL®

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2016 WATER TREATMENT PLANT IMPROVEMENTS
CITY OF OAK CREEK, WISCONSIN

ARCHITECTURAL
STORAGE / CT TANK
ELEVATION, SECTION AND DETAILS

3/16"=1'-0"
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MARCH 2015
PROJ	653463
DWG	40-A-301
SHEET	of

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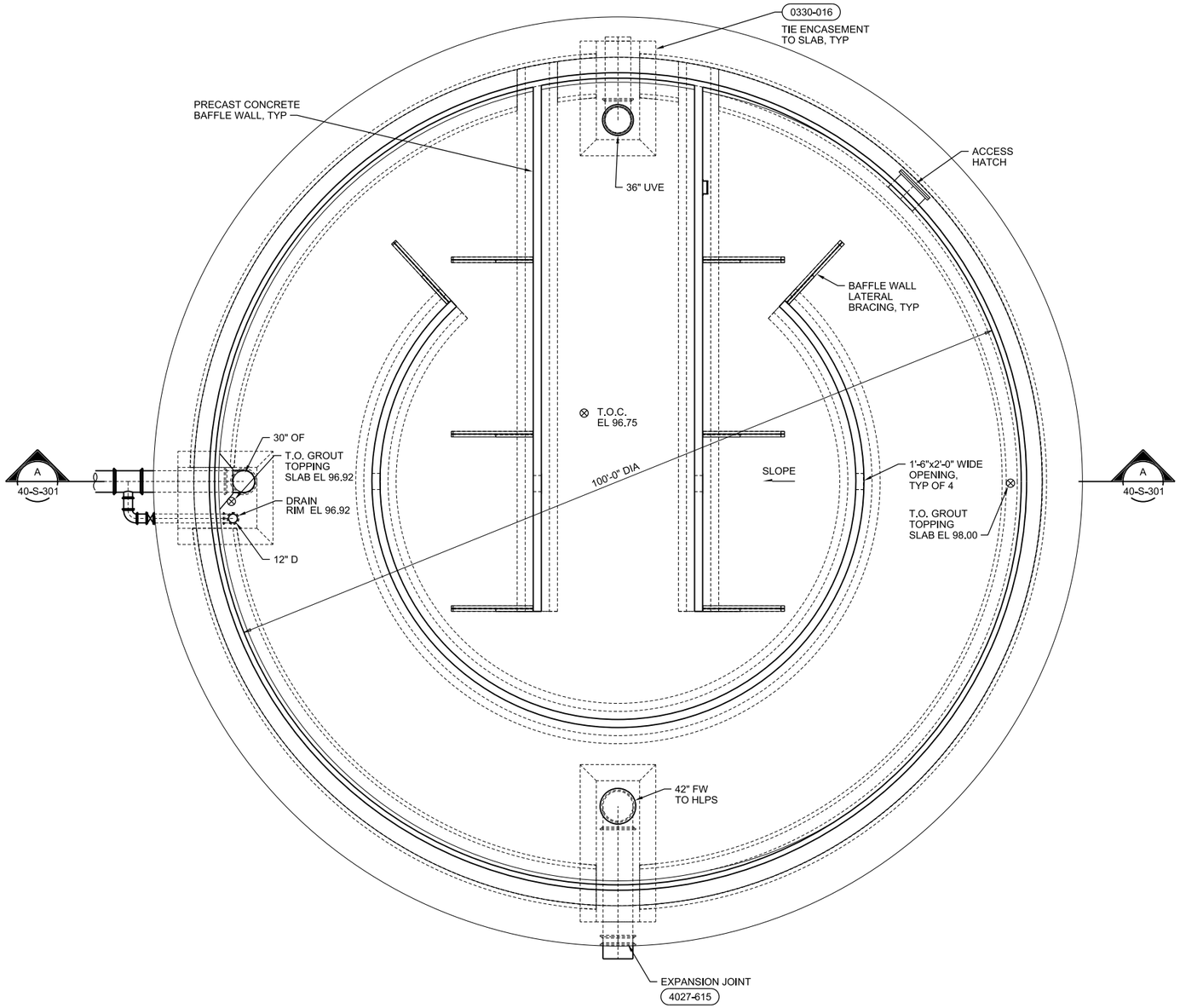


PLAN AT GRADE LEVEL

1/8"=1'-0"

N

NO.	DATE	REVISION	BY	APVD
DSGN	DR LANGE	DR PA KARABAN	CHK	APVD

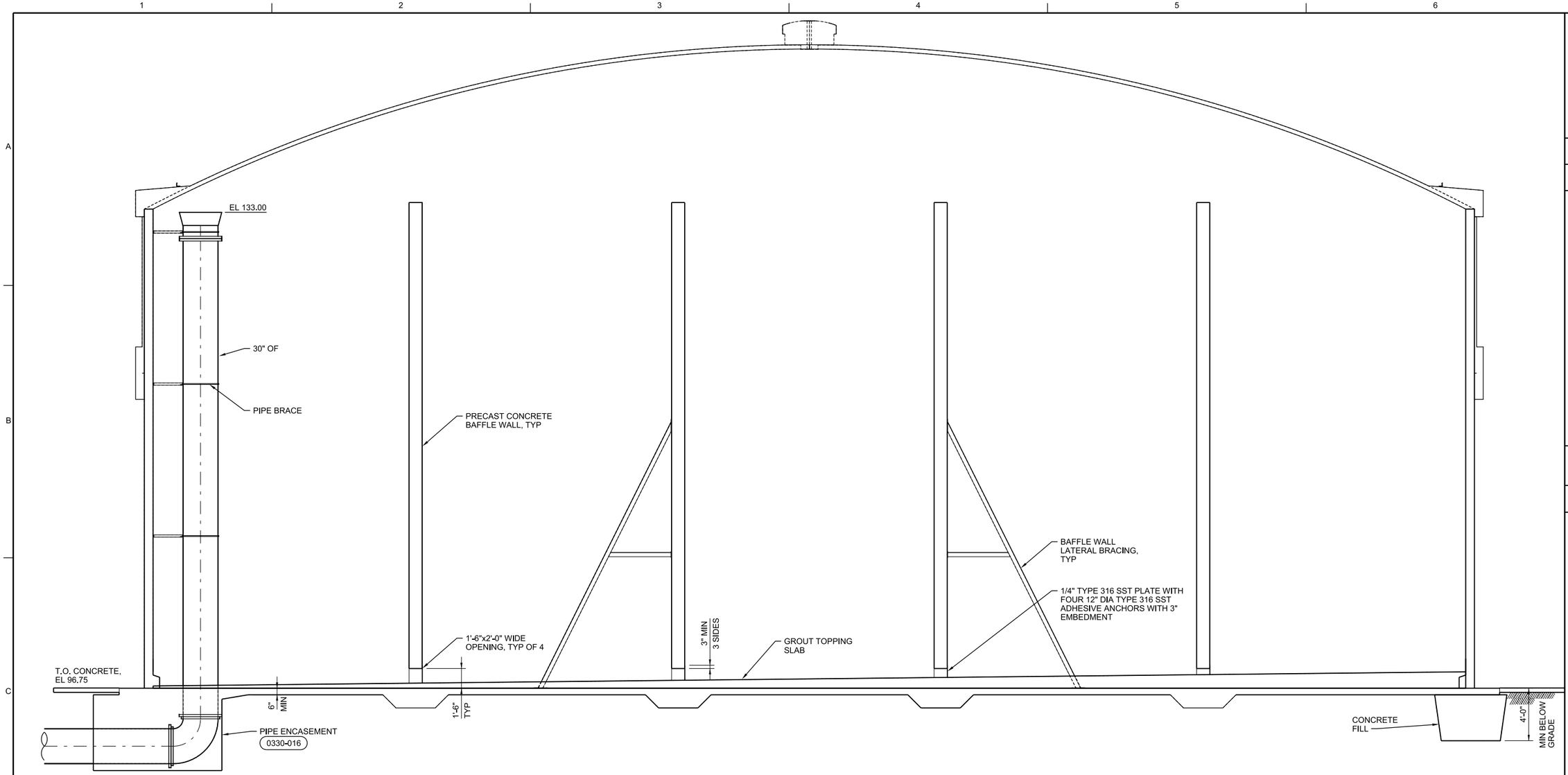
OAK CREEK WATER AND SEWER UTILITY
2016 WATER TREATMENT PLANT
IMPROVEMENTS
CITY OF OAK CREEK, WISCONSIN

CH2MHILL®

STRUCTURAL/PROCESS MECHANICAL

STORAGE TANK
PLAN AT GRADE LEVEL

	1/8"=1'-0"
	VERIFY SCALE
	BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
DATE	MARCH 2015
PROJ	653463
DWG	40-SD-231
SHEET	of



A SECTION
1/4"=1'-0"
40-S-231

NO.	DATE	REVISION	DR	CHK	APVD	BY	APVD
DSGN	DR LANGE		PA KARABAN				

OAK CREEK WATER AND SEWER UTILITY
2016 WATER TREATMENT PLANT
IMPROVEMENTS
CITY OF OAK CREEK, WISCONSIN

CH2MHILL®

STRUCTURAL/ PROCESS MECHANICAL
STORAGE TANK
SECTION

1/4"=1'-0"
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	MARCH 2015
PROJ	653463
DWG	40-SD-301
SHEET	of

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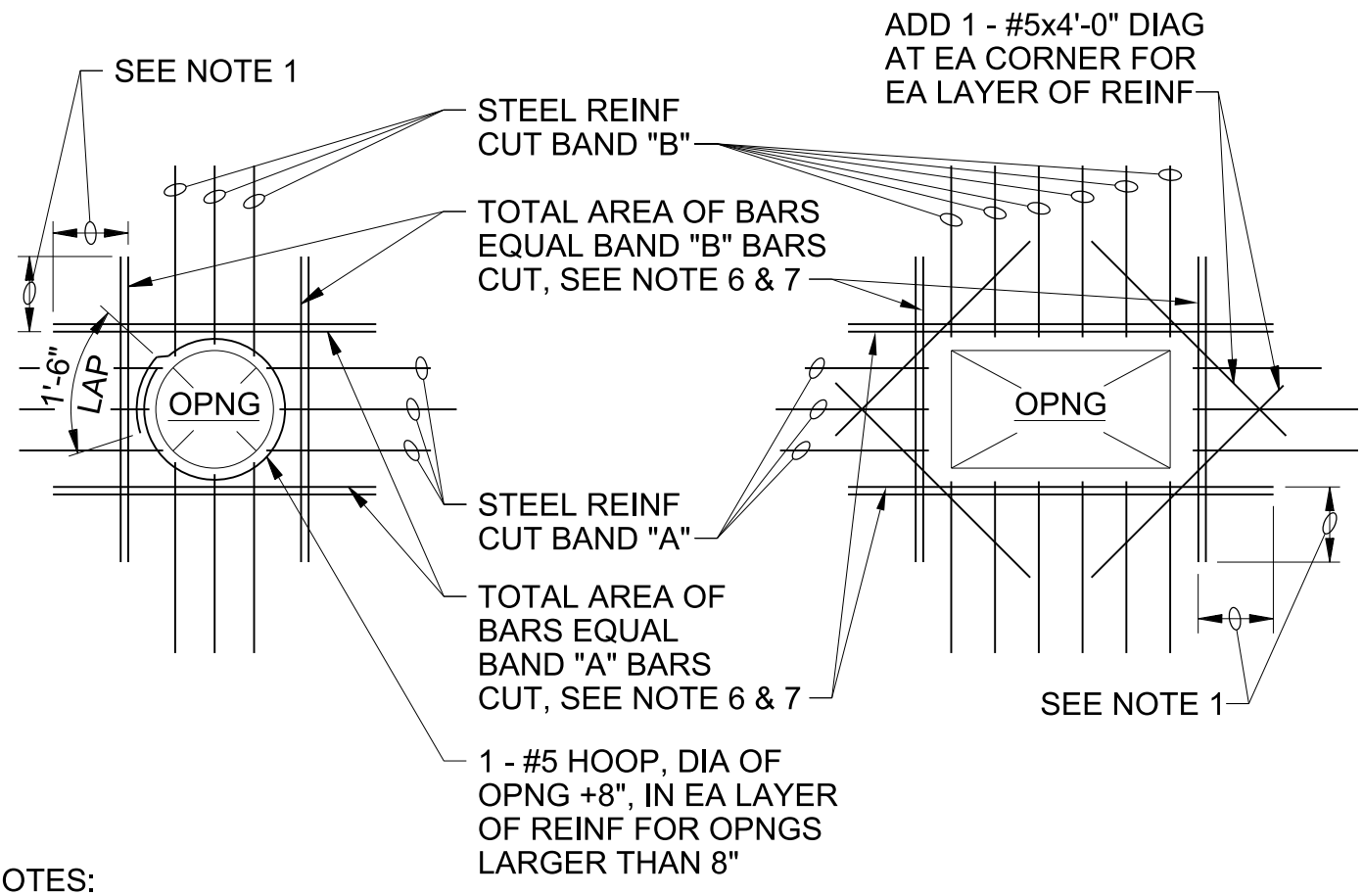


NOTES:

1. PROVIDE MINIMUM LAP, SEE GENERAL STRUCTURAL NOTES.
2. TYPICAL FOR ALL OPENINGS IN CONCRETE WALLS OF BELOW GRADE AND HYDRAULIC STRUCTURES AND ALL STRUCTURAL CONCRETE SLABS UNLESS INDICATED OTHERWISE ON PLANS.
3. DO NOT WELD REINFORCEMENT TO PIPE SLEEVES AND INSERTS.
4. PROVIDE A MINIMUM OF 2 "A" BARS AND 2 "B" BARS EACH SIDE OF OPENING (1 EACH FACE), INCLUDING DOWELS AND CORNER BARS, TYPICAL.
5. FOR OPENINGS LARGER THAN 8'-0", REINFORCE SAME AS FOR 8'-0" OPENINGS.
6. SPACE AT 3 BAR DIAMETERS (OR 3" MINIMUM) ON CENTER. LOCATE HALF OF TOTAL AREA ON EACH SIDE OF OPENING.
7. AT OPENINGS WITHIN 12" OF AN INTERSECTING WALL OR SLAB, PROVIDE ONLY THE EXTRA REINFORCEMENT WHICH WILL FIT, AT THE BAR SPACING IN NOTE 6.

OPENING REINFORCING

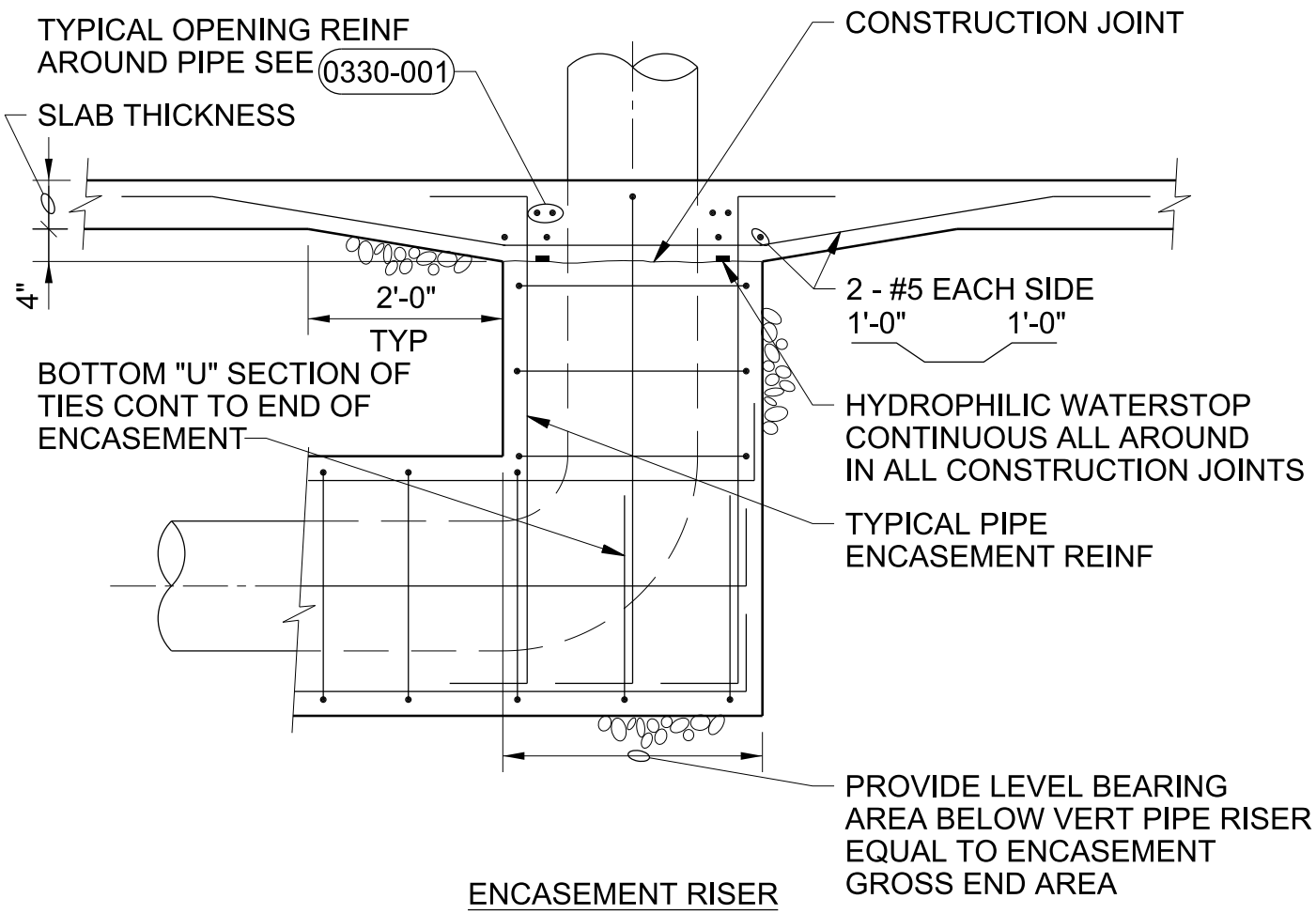
NTS

NOTE TO DESIGNER:

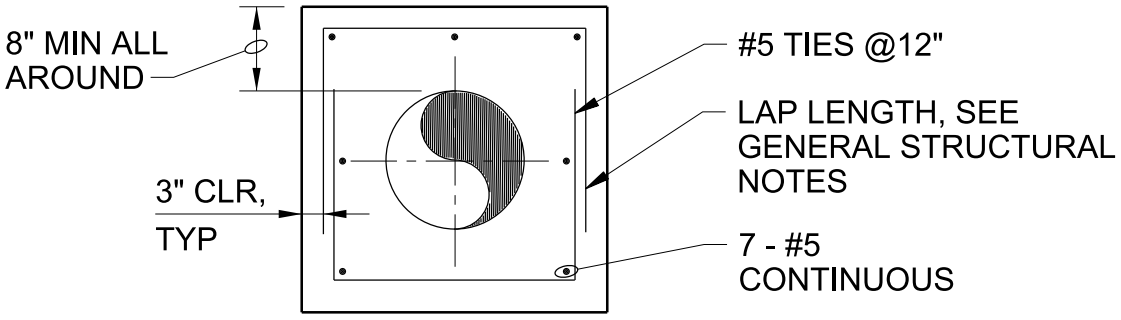
USE WITH DETAILS 0330-016 AND 0330-017. NOT INTENDED FOR USE WITH CONCRETE PIPE. COORDINATE WITH PROCESS ENGINEER.

0330-001

DATE 03-DEC-98
TDC CRIVELLO
TDR FREY
LCT BURTON



ENCASEMENT RISER



SECTION

NOTES:

1. SECTION APPLIES TO PIPES W/ DIAMETERS 18" AND SMALLER. FOR 20" DIAMETER PIPES AND LARGER, SEE 0330-017
2. WHEN PIPE ENCASEMENT IS CLOSER THAN 4" TO SLAB ABOVE, TIE SLAB & ENCASEMENT TOGETHER. SEE 0330-018

PIPE ENCASEMENT

NTS

NOTE TO DESIGNER:

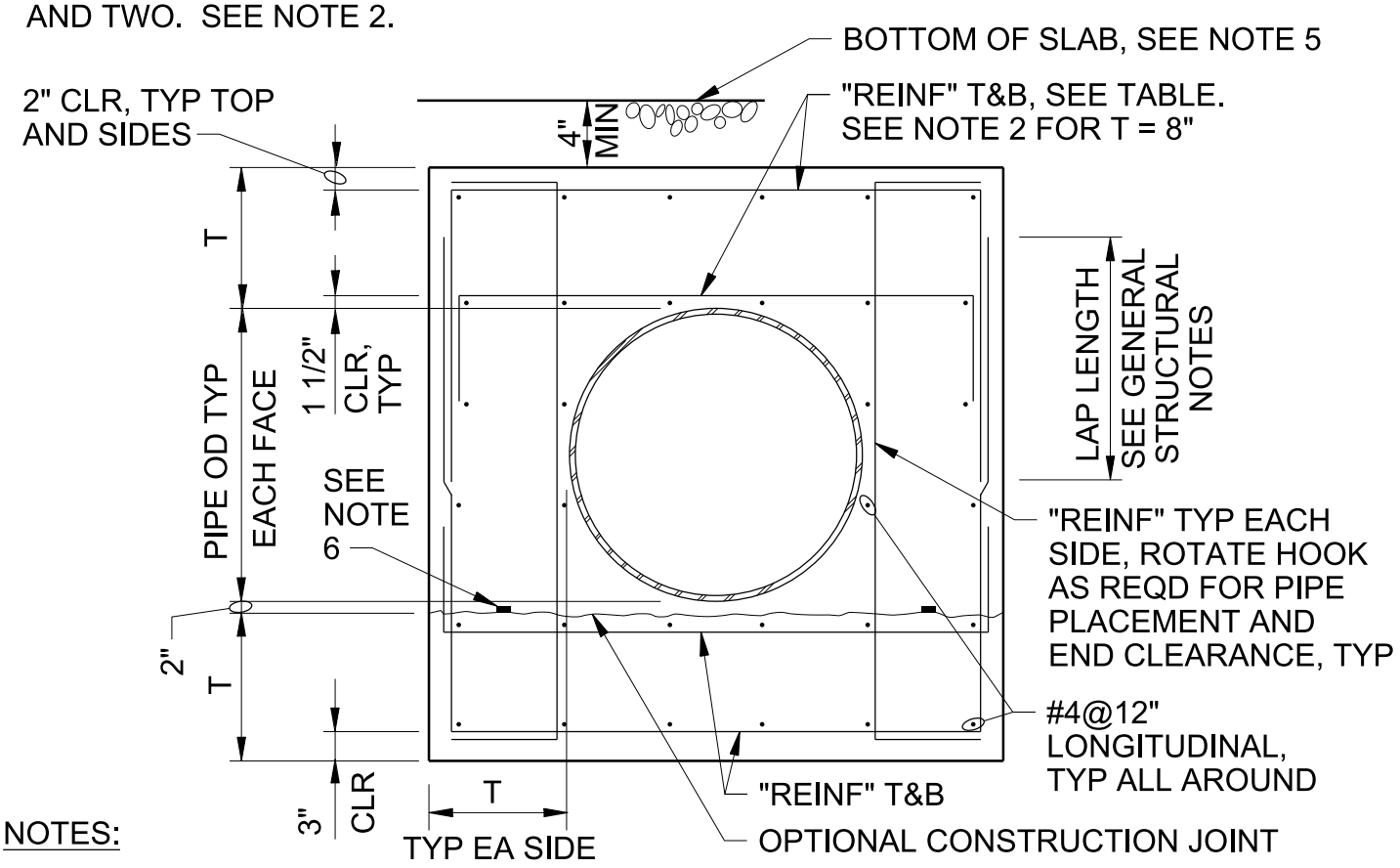
USE FOR SMALL PIPING 18" OR LESS WITH 40 FEET OR LESS BACKFILL LOAD. CHECK WITH STRUCTURAL ENGINEER FOR USE WITH HEAVY EXTERIOR LOADS. SEE DETAIL 0330-017 FOR LARGER DIAMETER PIPES.

0330-016

DATE 17-NOV-09
TDC CRIVELLO
TDR FREY
LCT BURTON

PIPE ENCASEMENT TABLE								
PIPE DIA (IN.)	H=10 FEET		H=20 FEET		H=30 FEET		H=40 FEET	
	T (in)	REINF	T (in)	REINF	T (in)	REINF	T (in)	REINF
20 THRU 30	8	#5@12"	10	#5@12"	10	#5@12"	10	#6@12"
36 THRU 42	10	#5@12"	10	#6@12"	10	#7@12"	10	#6@6"
48 THRU 54	10	#6@12"	10	#7@12"	10	#7@6"	12	#7@6"
UP TO 60	10	#6@12"	10	#6@6"	14	#7@6"	14	#7@6"

HEAVY DARK LINE INDICATES BREAK BETWEEN ONE LAYER OF REINFORCING AND TWO. SEE NOTE 2.



NOTES:

1. THIS DETAIL APPLIES TO PIPE DIAMETER OF 20" AND LARGER. FOR SMALLER THAN 20", SEE DETAIL (0330-016) .
2. FOR T=8" REINFORCING SHALL BE ONE LAYER AND CENTERED IN SLABS OR WALLS. SIM (0330-016) .
3. FOR ENCASEMENT AT PIPE RISER, SEE (0330-016) .
4. "H" IS FILL HEIGHT OR WATER DEPTH OR COMBINATION ABOVE PIPE.
5. WHEN PIPE ENCASEMENT CLOSER THAN 4" TO SLAB ABOVE, TIE SLAB & ENCASEMENT TOGETHER. SEE (0330-018) .
6. HYDROPHILIC WATERSTOP CONTINUOUS ALL AROUND IN ALL CONSTRUCTION JOINTS.

PIPE ENCASEMENT

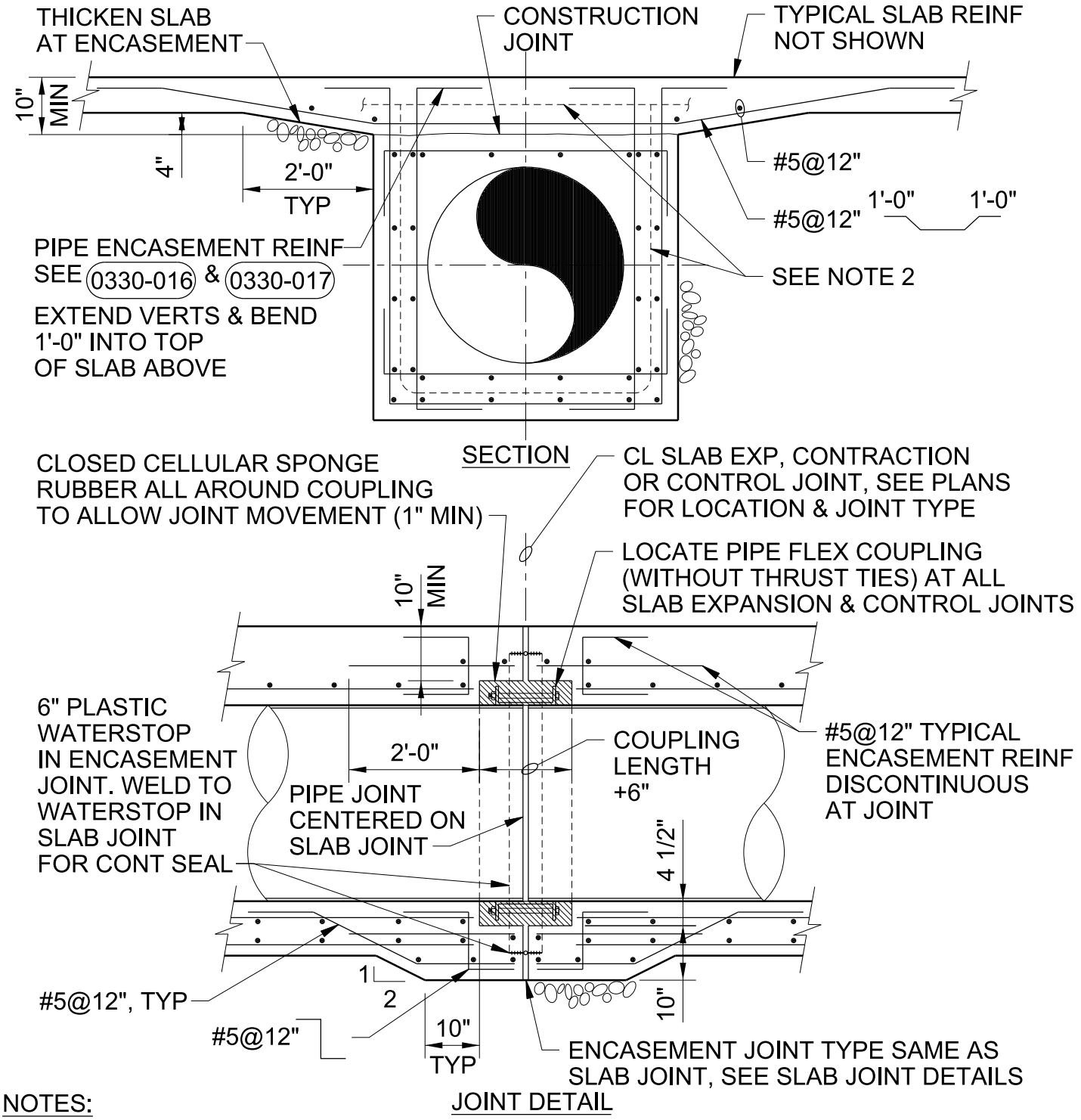
NTS

NOTE TO DESIGNER:

USE FOR 20" TO 60" DIAMETER PIPE WITH 40 FEET OR LESS BACKFILL LOAD. SEE DETAIL 0330-016 FOR SMALLER DIAMETER PIPES. CHECK WITH STRUCTURAL ENGINEER FOR USE WITH HEAVY EXTERIOR LOADS.

0330-017

DATE 18-DEC-08
TDC CRIVELLO
TDR FREY
LCT BURTON



NOTES:

1. TIE PIPE ENCASEMENT TO SLAB AS SHOWN WHEN DISTANCE BETWEEN PIPE ENCASEMENT AND BOTTOM OF SLAB IS LESS THAN 4".
2. 6" PLASTIC WS IN ENCASEMENT JOINTS. WELD TO WS IN SLAB JOINTS.

PIPE ENCASEMENT AT SLAB

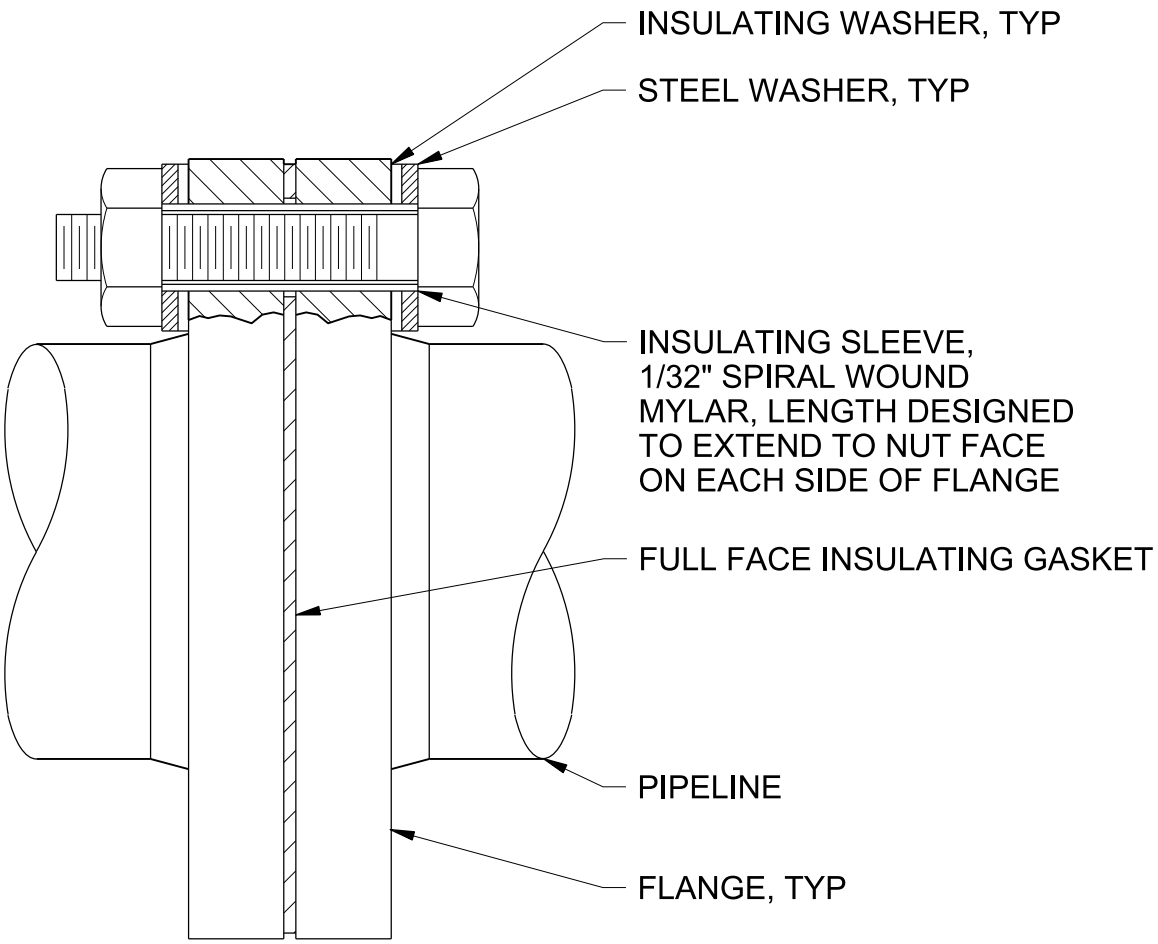
NTS

NOTE TO DESIGNER:

USE WITH DETAILS 0330-016 AND 0330-017. NOT INTENDED FOR USE WITH CONCRETE PIPE. COORDINATE WITH PROCESS ENGINEER.

0330-018

DATE 03-DEC-98
TDC CRIVELLO
TDR FREY
LCT BURTON



NOTES:

1. ABOVE GRADE INSULATING FLANGE INSTALLATION SHOWN.

2. FOR BURIED OR SUBMERGED INSULATING FLANGE INSTALLATION DO NOT INSTALL INSULATING WASHER ON PROTECTED OR NEW SIDE OF FLANGE.

3. COAT BURIED OR SUBMERGED INSULATED FLANGES WITH COLD APPLIED COAL TAR MASTIC AFTER ASSEMBLING JOINT AND WRAP WITH A BUTYL RUBBER ADHESIVE, POLYETHYLENE BACKED TAPE.

CATHODIC PROTECTION
INSULATING FLANGE

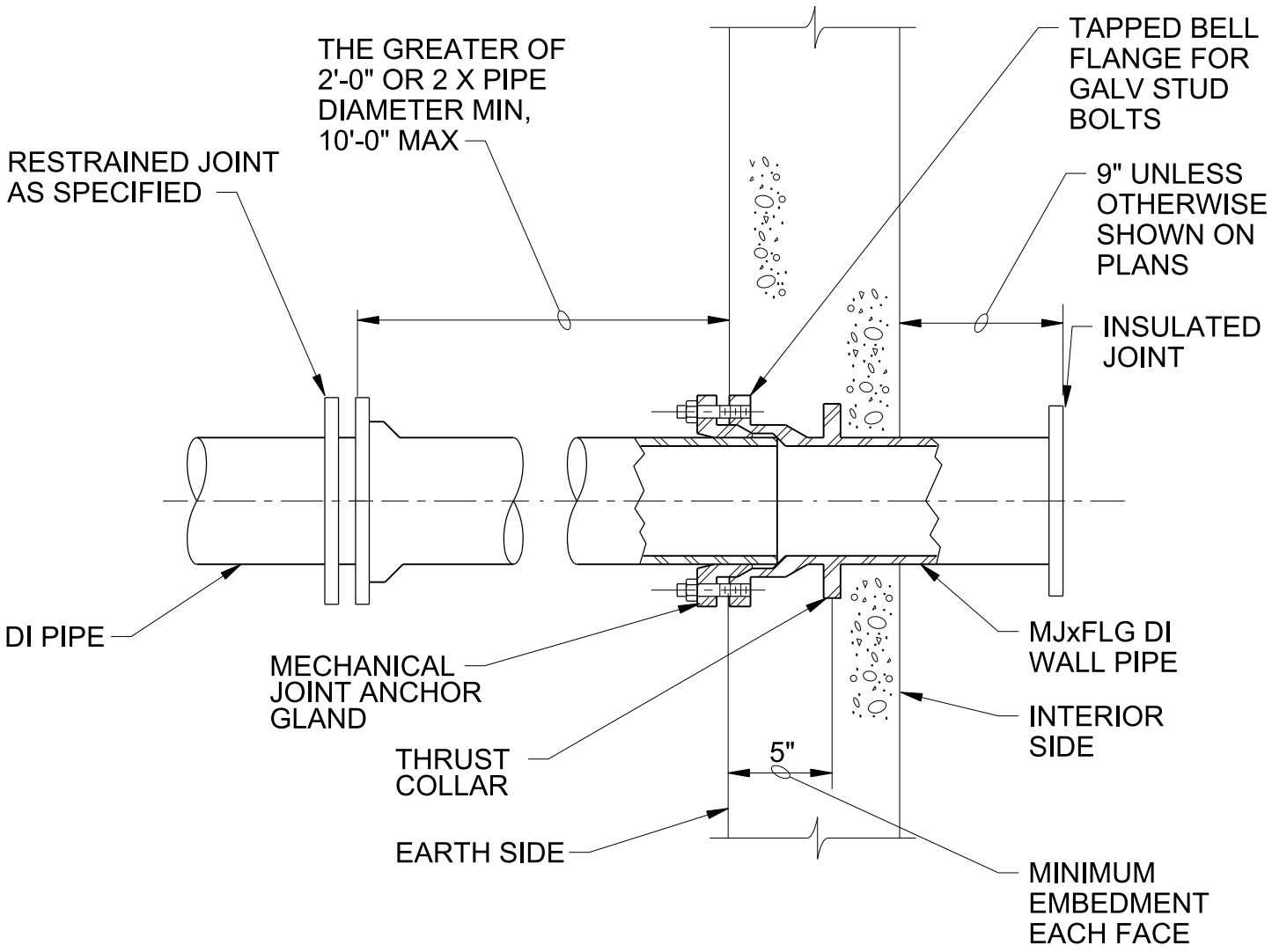
NTS

NOTE TO DESIGNER:

CONTACT CORROSION DEPT. BEFORE USING.

2642-925

DATE 05-JUN-90
TDC DUPPONG
TDR SHOTTS
LCT OLSON



NOTES:

1. COAT WALL PIPE WITH SPECIFIED PAINT SYSTEM PRIOR TO CONCRETE PLACEMENT.

MECHANICAL JOINT WALL PIPE FOR DIP

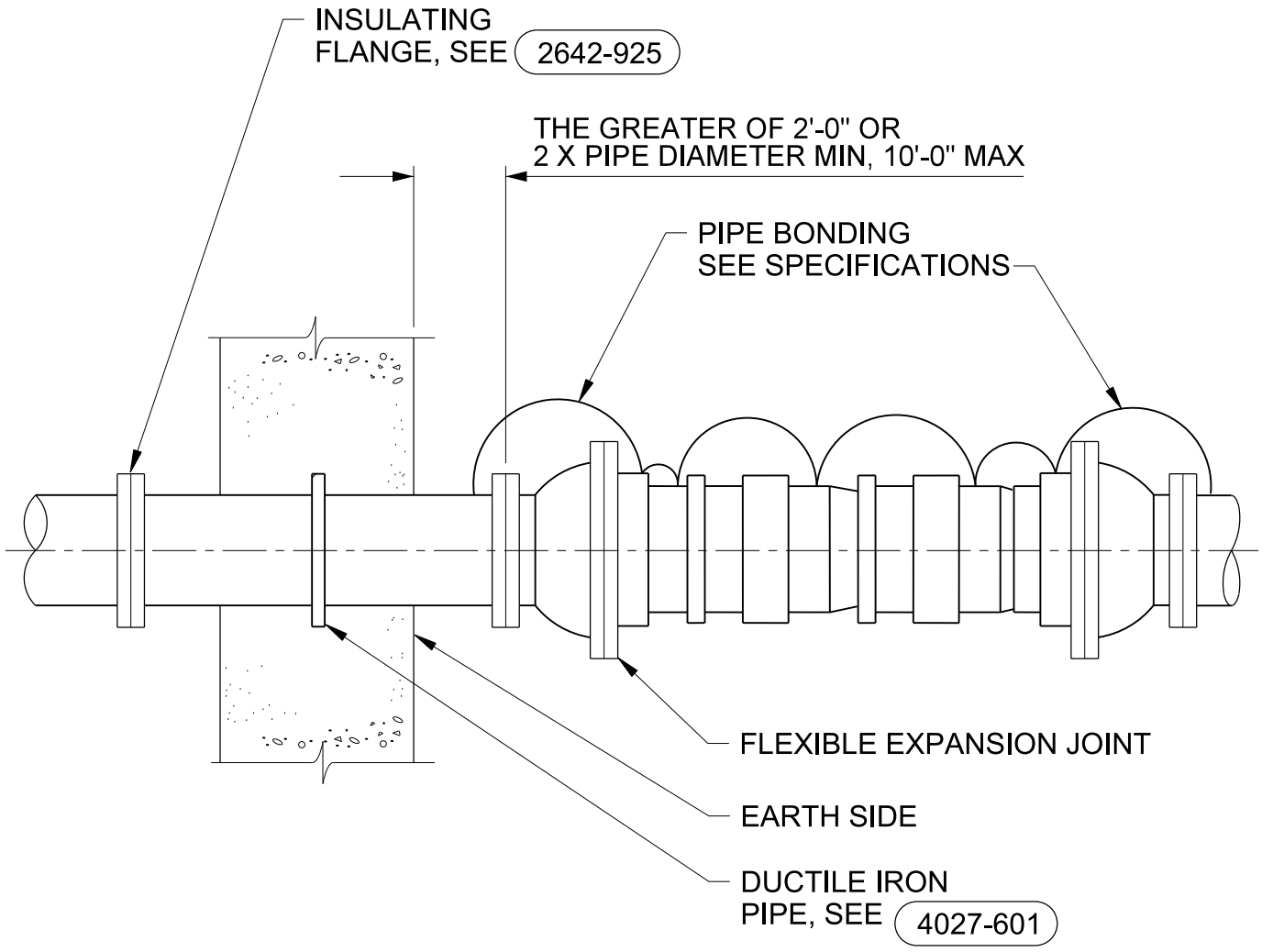
NTS

NOTE TO DESIGNER:

1. USE THIS DETAIL WHERE UNEQUAL SETTLING OF BUILDING AND EXTERIOR PIPE CAN OCCUR.
2. THE DESIGNER SHALL VERIFY THAT USING THIS STANDARD DETAIL FOR THE PROJECT SPECIFIC DIFFERENTIAL SETTLEMENT WILL NOT RESULT IN PIPE JOINT ANGULAR ROTATION THAT EXCEEDS THE PIPE MANUFACTURER'S RECOMMENDATIONS.

4027-601

DATE 12-APR-10
TDC MATZEN
TDR CLEGG
LCT OLSON



NOTE:

REINFORCING STEEL SHALL NOT COME IN CONTACT WITH WALL PIPE.

PIPE FLEXIBLE EXPANSION JOINT

NTS

NOTE TO DESIGNER:

4027-615

DATE 24-FEB-05
TDC CLEGG
TDR SHOTTS
LCT OLSON