

PROJECT MANUAL FOR
THE
**VILLAGE OF FRANKFORT
WTP IMPROVEMENTS**

OCTOBER 2024

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END OF SECTION

Change Order

No. _____

Date of Issuance: _____ Effective Date: _____

Project:	Owner:	Owner's Contract No.:
Contract:	Date of Contract:	
Contractor:	Engineer's Project No.:	

The Contract Documents are modified as follows upon execution of this Change Order:

Description: _____

Attachments: (List documents supporting change): _____

CHANGE IN CONTRACT PRICE:	CHANGE IN CONTRACT TIMES:
Original Contract Price: \$ _____	Original Contract Times: <input type="checkbox"/> Working days <input type="checkbox"/> Calendar days Substantial completion (days or date): _____ Ready for final payment (days or date): _____
[Increase] [Decrease] from previously approved Change Orders No. _____ to No. _____: \$ _____	[Increase] [Decrease] from previously approved Change Orders No. _____ to No. _____: Substantial completion (days): _____ Ready for final payment (days): _____
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial completion (days or date): _____ Ready for final payment (days or date): _____
[Increase] [Decrease] of this Change Order: \$ _____	[Increase] [Decrease] of this Change Order: Substantial completion (days or date): _____ Ready for final payment (days or date): _____
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial completion (days or date): _____ Ready for final payment (days or date): _____

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____ Engineer (Authorized Signature)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Date: _____	Date: _____	Date: _____
Approved by Funding Agency (if applicable): _____		Date: _____

Change Order Instructions

A. GENERAL INFORMATION

This document was developed to provide a uniform format for handling contract changes that affect Contract Price or Contract Times. Changes that have been initiated by a Work Change Directive must be incorporated into a subsequent Change Order if they affect Price or Times.

Changes that affect Contract Price or Contract Times should be promptly covered by a Change Order. The practice of accumulating Change Orders to reduce the administrative burden may lead to unnecessary disputes.

If Milestones have been listed in the Agreement, any effect of a Change Order thereon should be addressed.

For supplemental instructions and minor changes not involving a change in the Contract Price or Contract Times, a Field Order should be used.

B. COMPLETING THE CHANGE ORDER FORM

Engineer normally initiates the form, including a description of the changes involved and attachments based upon documents and proposals submitted by Contractor, or requests from Owner, or both.

Once Engineer has completed and signed the form, all copies should be sent to Owner or Contractor for approval, depending on whether the Change Order is a true order to the Contractor or the formalization of a negotiated agreement for a previously performed change. After approval by one contracting party, all copies should be sent to the other party for approval. Engineer should make distribution of executed copies after approval by both parties.

If a change only applies to price or to times, cross out the part of the tabulation that does not apply.

SECTION 001113 - INVITATION TO BID

ADVERTISEMENT FOR BIDS/PUBLIC NOTICE TO BIDDERS

Sealed bids will be received at the office of the Village of Frankfort, 20 North Main Street, Frankfort, Ohio 45628 until 11:00 a.m. on October 31, 2024, and will be opened and read immediately thereafter for the

**VILLAGE OF FRANKFORT
WTP IMPROVEMENTS**

OPINION OF PROBABLE CONSTRUCTION COST: \$550,000.00

COMPLETION DATE: SEPTEMBER 1, 2025

The bid specifications, drawings, plan holders list, addenda, and other bid information (**but not the bid forms**) may be viewed and/or downloaded for free via the internet at <https://bids.ctconsultants.com> . The bidder shall be responsible to check for Addenda and obtain same from the web site.

Bids must be in accordance with drawings and specifications and on forms available from CT Consultants, Inc. at a non-refundable cost of One Hundred Dollars (\$100.00) for hard copies and \$45.00 for electronic files. Documents may be ordered by registering and paying online at <https://bids.ctconsultants.com>. Please contact planroom@ctconsultants.com or call (440) 530-2351 if you encounter any problems viewing, registering or paying for the documents.

Publish: *The Chillicothe Gazette*
October 17, 2024
October 24, 2024

SECTION 002113 - INSTRUCTIONS TO BIDDERS

A. These Instructions to Bidders establish requirements for Bidding and Award of Contract.

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ARTICLE 1 DEFINED TERMS

1.01 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:

A. Issuing Office--The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

ARTICLE 2 COPIES OF BIDDING DOCUMENTS

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

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

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

ARTICLE 3 QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualifications to perform the Work, within five days of Owner's request, Bidder shall submit written evidence such as financial data, previous experience, present commitments, and such other data as may be called for below.

3.02 Bidder must be prepared to submit evidence of Bidder's qualifications to do business in the state where the Project is located prior to award.

3.03 Bidder shall submit Section 004513 "Bidders Qualifications" and all information requested therein with the Bid.

ARTICLE 4 EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

4.01 Subsurface and Physical Conditions

A. The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Bidding Documents.

2. Those drawings of physical conditions in or relating to existing surface and subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Bidding Documents.

B. Copies of reports and drawings referenced in Paragraph 4.01.A 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 as provided in Paragraph 4.02 of the General Conditions has been identified and established in Paragraph 4.02 of the Supplementary Conditions. 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.

4.02 Underground Facilities

A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

4.03 Hazardous Environmental Condition

A. The Supplementary Conditions identify those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that Engineer has used in preparing the Bidding Documents.

B. Copies of reports and drawings referenced in Paragraph 4.03.A 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 as provided in Paragraph 4.06 of the General Conditions has been identified and established in Paragraph 4.06 of the Supplementary Conditions. 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.

4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work appear in Paragraph 4.06 of the General Conditions.

4.05 On request, Owner will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.

4.06 Reference is made to Article 7 of the Supplementary Conditions for the identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. On

request, Owner will provide to each Bidder for examination access to or copies of Contract Documents (other than portions thereof related to price) for such other work.

4.07 It is the responsibility of each Bidder before submitting a Bid to:

A. examine and carefully study the Bidding Documents, the other related data identified in the Bidding Documents, and any Addenda;

B. visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

C. 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;

D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in Paragraph 4.02 of the General Conditions, and (2) reports and drawings of Hazardous Environmental Conditions at the Site which have been identified in the Supplementary Conditions as provided in Paragraph 4.06 of the General Conditions;

E. obtain and carefully study (or accept consequences of not doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the 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, and safety precautions and programs incident thereto;

F. 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 and in accordance with the other terms and conditions of the Bidding Documents;

G. 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;

H. correlate the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;

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

J. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 PRE-BID CONFERENCE

5.01 A prebid conference will not be held for the Project.

ARTICLE 6 SITE AND OTHER AREAS

6.01 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.

ARTICLE 7 INTERPRETATIONS AND ADDENDA

7.01 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 Engineer as having received the Bidding Documents. Questions received less than ten 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.

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

ARTICLE 8 BID SECURITY

8.01 A Bid must be accompanied by a Bid Guarantee, payable to Owner, in the form of either:

- 1) A Bid Guaranty in the amount of 100% of the Bid, or
- 2) A Certified Check, or Cashier's Check, or a Letter of Credit, pursuant to Chapter 1305 of the Ohio Revised Code, in the amount of 10% of the Bid.

The Bid Guaranty shall provide for the requirements of Section 153.54 of the Ohio Revised Code, and provide that, upon the recommending of award of the Contract, the Bidder will enter into a Contract in accordance with the Bid, Drawings and Specifications.

8.02 The Bid Guaranty or Bid Bond provided in accordance with Paragraph 8.01 shall be returned to all unsuccessful Bidders immediately after the Contract is executed. The bid security of the

successful Bidder shall be returned upon filing of the requisite performance and payment bonds related to the Work.

8.03 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award. If the successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 10 days after the Notice of Award, the Owner may annul the Notice of Award and the Bid security of the Bidder will be forfeited.

8.04 Bid guaranties shall be returned to all unsuccessful Bidders immediately after the Contract is executed.

ARTICLE 9 CONTRACT TIMES

9.01 The number of days within which, or the dates by which, milestones, if any, are to be achieved and the Work is to be substantially completed and ready for final payment are set forth in the Agreement (or incorporated therein by reference to the attached Bid Form).

ARTICLE 10 LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages, if any, are set forth in the Agreement.

ARTICLE 11 SUBSTITUTE AND “OR-EQUAL” ITEMS

11.01 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.

ARTICLE 12 SUBCONTRACTORS, SUPPLIERS, AND OTHERS

12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity if requested by Owner. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute without an increase in the Bid.

12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so

listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.06 of the General Conditions.

12.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

12.04 In contracts where the Contract Price is on the basis of cost-of-the-work plus a fee, the apparent successful Bidder, prior to the Notice of Award, shall identify in writing to Owner those portions of the work that such Bidder proposes to subcontract and after the Notice of Award may only subcontract other portions of the work with Owner's written consent.

ARTICLE 13 PREPARATION OF BID

13.01 The Bid Form is included with the Bidding Documents.

13.02 All blanks on the Bid Form shall be completed by printing in ink or by typewriter and the Bid 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 section, Bid item, alternative, adjustment unit price item, and unit price item listed therein. Bidder shall not leave blanks or place a zero amount for any of the items.

13.03 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 below the signature.

13.04 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 below the signature.

13.05 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 below the signature.

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

13.07 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 below the signature.

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

13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.

13.10 The address and telephone number for communications regarding the Bid shall be shown.

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

ARTICLE 14 BASIS OF BID; COMPARISON OF BIDS

14.01 Unit Price

A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid schedule.

B. The total of all estimated prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accordance with Paragraph 11.03 of the General Conditions.

C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

14.02 The Bid price shall include such amounts as the Bidder deems proper for overhead and profit on account of cash allowances, if any, named in the Contract Documents as provided in Paragraph 11.02 of the General Conditions.

ARTICLE 15 SUBMITTAL OF BID

15.01 Bids will be received for all divisions of the Specifications and all other provisions of the Bidding Documents.

15.02 Bidder is furnished one copy of the Bidding Documents with one separate unbound copy of the Bid Forms and the Bid Bond. The unbound copy of the Bid Forms is to be completed and submitted with the Bid security along with any data required by the Bidding Documents to be attached to and made a condition of the Bid. Additional copies may be obtained from the Issuing Office.

15.03 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Advertisement or Invitation to Bid and shall be enclosed in an opaque sealed envelope plainly marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be 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 envelope plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to place indicated in the Advertisement or Invitation to Bid. No relief will be provided for a mailed Bid not being received by the prescribed time. No Bid will be considered which is received after the time set for receiving Bids.

ARTICLE 16 MODIFICATION AND WITHDRAWAL OF BID

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

ARTICLE 17 OPENING OF BIDS

17.01 Bids will be opened at the time and place indicated in the Advertisement or Invitation to Bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 18 BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 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.

ARTICLE 19 EVALUATION OF BIDS AND AWARD OF CONTRACT

19.01 Owner reserves without limitation the right to reject any or all Bids, to waive any and all informalities not involving price, time or changes in the work and to negotiate Contract terms with the Successful Bidder; and the right to accept or reject all incomplete nonconforming, nonresponsive, unbalanced, obscure, or conditional Bids, or Bids which contain additions not called for, erasures, alterations, or irregularities of any kind, or which do not comply with the Instructions to Bidders. Owner reserves the right to 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, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by Owner. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to be non-responsible.

19.02 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.

19.03 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.

19.04 In evaluating Bidders, Owner will 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 as provided in the Supplementary Conditions. Operating costs, maintenance considerations, performance guarantees of materials and equipment may also be considered by the Owner.

19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time. Bidder shall furnish to Owner all such information and data

for this purpose as Owner may request. Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy Owner that such Bidder is properly qualified to carry out the obligations of the Contract Documents and to complete the work contemplated therein.

19.06 Owner shall be satisfied that Bidder (1) maintains a permanent place of business, (2) has adequate plant and equipment to do the work properly and expeditiously, (3) has a suitable financial status to meet obligations incident to the work, (4) has appropriate technical experience, and (5) can submit a satisfactory performance record.

19.07 If the Contract is to be awarded, it will be awarded to the responsive and responsible Bidder with the lowest Bid whose evaluation by Owner indicates to Owner that the award will be in the best interests of the Project. Bid from the successful Bidder for the computed total base bid selected by Owner may not necessarily be lower in price than the bid or bids for other alternative combination.

19.08 The award and execution of a Contract shall be made within 60 days after the date on which the bids were opened, unless the time for awarding and executing the Contract is extended by mutual consent of Owner or its representatives and the Bidder whose Bid Owner accepts and with respect to whom Owner subsequently awards and executes a Contract.

ARTICLE 20 CONTRACT SECURITY AND INSURANCE

20.01 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by the required performance and payment bonds and insurances.

ARTICLE 21 SIGNING OF AGREEMENT

21.01 When Owner gives a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within ten days thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

ARTICLE 22 SALES AND USE TAXES

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

22.02 The Bid shall include all taxes in effect at the time the Bid is submitted. Bidders what are uncertain as to what items are subject to tax, or who require further explanation or clarification, are requested to contact the State of Ohio Department of Taxation.

22.03 Refer to Paragraph SC-6.10 of the Supplementary Conditions for additional information.

ARTICLE 23 RETAINAGE

23.01 Provisions concerning retainage are set forth in the Agreement.

ARTICLE 24 WAGE RATE DETERMINATION

24.01 A federal wage rate determination will be inserted as a part of the Bidding Documents and/or will be on file at the office of the Owner. Bidder shall inspect the wage rate determination and shall incorporate its requirements into its Bid. See the General Requirements for additional requirements.

ARTICLE 25 LAWS, ORDINANCES, AND REGULATIONS

25.01 Bidder must familiarize itself with all laws, ordinances, and regulations by federal, state, city, or other governmental agency, which by reason of being neglected or violated may affect the Work contemplated and must secure and pay the fee required for any permits which may be necessary unless such fees are otherwise indicated to be paid in the Bidding Documents.

ARTICLE 26 FINDINGS FOR RECOVERY

26.01 By submitting its bid, each Bidder certifies for reliance of the Owner that it has no unresolved finding for recovery against it issued by the Auditor of the State of Ohio on or after January 1, 2001, except as permitted by Section 9.24 (F) of the Ohio Revised Code.

ARTICLE 27 OPINION OF PROBABLE COST

27.01 The opinion of probable cost related to the project reflected within the Specifications is \$550,000 as of October 14, 2024.

END OF SECTION

BID FORMS

The bid forms are not available online. The bid forms are available only by purchasing a set of plans and specifications at the location indicated in the Advertisement for Bids/Public Notice to Bidders.

SECTION 005100 - NOTICE OF AWARD

DATE: _____, 20_____

TO: _____
(Bidder)

ADDRESS: _____

PROJECT: _____

You are hereby notified that your Bid dated _____, 20___ for the above Contract has been considered. You are the apparent successful bidder and have been awarded a contract for the above named project.

The Contract Price of your contract is \$_____.

Three (3) copies of each of the proposed Contract Documents (except drawings) accompany this Notice of Award. Three (3) sets of the Drawings will be delivered separately or otherwise made available to you immediately.

You must comply with the following conditions precedent within **10 DAYS** of the date of this Notice of Award:

1. You must deliver to the Owner three (3) fully executed counterparts of the Agreement, including all the Contract Documents.
2. You must deliver with the executed Agreement, the Payment and Performance Bonds and the Insurance Certificate as specified in the Instructions to Bidders, The General Conditions (Article 5), and the Supplementary Conditions.

Failure to comply with these conditions within the time specified will entitle the Owner to consider your Bid abandoned, and to annul this Notice of Award, and to declare your Bid Security forfeited.

Within **10 DAYS** after you comply with the foregoing conditions, the Owner will return to you one fully signed counterpart of the Agreement with the Contract Documents attached.

OWNER: _____

By: _____

Title: _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by

(Bidder)

this _____ day of _____, 20_____

By _____

Title _____

Copy to Engineer.

END OF SECTION

SECTION 005200 - AGREEMENT

THIS AGREEMENT is by and between _____

(hereinafter all Owner) and _____

(hereinafter called Contractor).

Owner and Contractor, in consideration of the mutual covenants set forth herein, agree as follows:

ARTICLE 1 WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

The project generally consists of the rehabilitation of treatment equipment and related appurtenances at the existing water treatment plant.

ARTICLE 2 THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

Village of Frankfort
Water Treatment Plant Improvements

ARTICLE 3 ENGINEER

3.01 The Project has been designed by CT Consultants, Inc. (Engineer), who is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 CONTRACT TIMES

4.01 Time of the Essence

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 Days to Achieve Substantial Completion and Final Payment

A. Contract

1. The Work will be substantially completed on or before September 1, 2025, and completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions on or before October 1, 2025.

4.03 Liquidated Damages

241269

005200-1

A. Contractor and Owner recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner the following daily charge:

<u>Original Contract Amount</u>		<u>Daily Charge /</u>
<u>From More Than</u>	<u>To and Including</u>	<u>Calendar Day</u>
\$ 0	\$ 100,000	\$ 500
100,000	500,000	800
500,000	1,000,000	1,000
1,000,000	3,000,000	1,200
3,000,000	5,000,000	1,500
5,000,000		2,000

For each day that expires after the Dates specified in Paragraph 4.02, liquidated damages as indicated above per calendar day shall be paid by the Contractor to the Owner until the Date requirements are met.

ARTICLE 5 CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds as follows:

A. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

B. All specific cash allowances are included in the Contract Price and have been computed in accordance with Paragraph 11.02 of the General Conditions.

ARTICLE 6 PAYMENT PROCEDURES

6.01 Submittal and Processing of Payments

A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 Progress Payments; Retainage

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment as established at the preconstruction conference during performance of the Work as provided in Paragraphs 6.02.A.1 and 6.02.A.2 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements:

1. Prior to Substantial Completion, Owner will retain an amount equal to 8% of each progress payment application until 50% of the Work has been completed. At 50% completion, further progress payment applications shall be paid in full to the Contractor and no additional amounts will be retained unless the Engineer certifies to the Owner that the job is not proceeding satisfactorily. Amounts previously retained shall not be paid to the Contractor until substantial completion of the Work. At 50% completion of the Work, or any time thereafter when the character and progress of the Work is not satisfactory to Owner on the recommendation of Engineer, additional amounts may be retained, but in no event shall the total retainage be more than 8% of the value of the Work completed.

2. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 98% percent of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 14.02.B.5 of the General Conditions and less 100% percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

6.03 Material Stored on Site

A. Payment for material and equipment delivered and not incorporated shall be at the rate of 92% of the invoice value of such material. The balance of such invoiced value shall be paid when such material is incorporated into and becomes a part of the work completed to date. Such material compensated in this manner shall become the property of the Owner under the Contract while it remains in storage, but if such material is stolen, destroyed, or damaged by casualty before being used, Contractor shall replace it at his own expense.

6.04 Escrow of Retainage

A. Upon completion of 50% of the Contract, as evidenced by the payments of at least 50% of the value of the Contract to Contractor, monies held in retainage shall be placed in an escrow account in accordance with Chapter 153 of the Ohio Revised Code.

6.05 Final Payment

A. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 14.07.

ARTICLE 7 HIERARCHY

7.01 In resolving inconsistencies among two or more sections of the Contract Documents, precedence shall be given in the following order:

- | | |
|---------|--------------------------|
| First: | Written Amendments |
| Second: | Agreement |
| Third: | Change Orders |
| Fourth: | Addenda |
| Fifth: | Supplementary Conditions |
| Sixth: | General Conditions |

Seventh: Specifications
Eighth: Drawings

Figure dimensions (numerical) on Drawings shall take precedence over dimensions measured utilizing a scale.

ARTICLE 8 CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Agreement Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in Paragraph 4.02 of the General Conditions and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which has been identified in the Supplementary Conditions as provided in Paragraph 4.06 of the General Conditions.

E. Contractor has obtained and carefully studied (or assumes responsibility for doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto.

F. Contractor does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

H. Contractor has correlated the information known to Contractor, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.

I. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

J. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 CONTRACT DOCUMENTS

9.01 Contents

A. The Contract Documents consist of the following:

1. This Agreement (page 005200-1 to _____, inclusive).
2. Bid Guaranty and Contract Bond (pages 004300-1 to _____, inclusive).
3. Contract Bond (pages _____ to _____, inclusive).
4. Other bonds
 - a. _____ (page _____ to _____, inclusive).
 - b. _____ (page _____ to _____, inclusive).
 - c. _____ (page _____ to _____, inclusive).
5. General Conditions (pages 007000-1 to _____, inclusive).
6. Supplementary Conditions (pages 008000-1 to _____, inclusive).
7. Specifications as listed in the table of contents of the Project Manual.
8. Drawings _____

inclusive incorporated herein by reference with each sheet bearing the following general title:

9. Addenda (_____).

10. Exhibits to this Agreement (enumerated as follows):

- a. Notice to Proceed (pages 005500-1 to 005500-1, inclusive);

- b. Contractor's Bid (pages 004100-1 to _____, inclusive);
- c. Supplemental Unit Prices are included as part of the Agreement except as noted:

(_____);
- d. Delinquent Personal Property Tax Affidavit;
- e. Evidence of Contract Bond
(letter dated _____ attached);
- f. Documentation submitted by Contractor prior to Notice of Award

(_____);
- g. (_____);

11. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:

- a. Work Change Directives;
- b. Change Order(s).

B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 MISCELLANEOUS

10.01 Terms

A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 Assignment of Contract

A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 Successors and Assigns

A. Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 Severability

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement in triplicate. One counterpart each has been delivered to Owner, Contractor, and Engineer. All portions of the Contract Documents have been signed or identified by Owner and Contractor or identified by Engineer on their behalf.

This Agreement will be effective on _____,
(which is the Effective Date of the Agreement).

OWNER:

CONTRACTOR:

By: _____

By: _____

Title: _____

Title: _____

[CORPORATE SEAL]

[CORPORATE SEAL]

Attest: _____

Attest: _____

Title: _____

Title: _____

Address for giving notices:

Address for giving notices:

Name: _____

Name: _____

Address: _____

Address: _____

City, State, Zip _____

City, State, Zip _____

Phone: _____

Phone: _____

Fax No.: _____

Fax No.: _____

E-mail: _____

E-mail: _____

Designated
Representative: _____

Designated
Representative: _____

License No.: _____
(Where applicable)

Agent for Service of Process:

INSTRUCTIONS FOR EXECUTING AGREEMENT

The full name and business address of CONTRACTOR should be inserted and the Agreement should be signed with CONTRACTOR’S official signature. Please have the name of the signing party printed under all signatures to the Agreement.

If CONTRACTOR is operating as a partnership, each partner should sign the Agreement. If the Agreement is not signed by each partner, there should be attached to the Agreement a duly authenticated power of attorney evidencing the signer’s (signers’) authority to sign such Agreement for and in behalf of the partnership.

If the CONTRACTOR is an individual, the trade name (if CONTRACTOR is operating under a trade name) should be indicated in the Agreement and the Agreement should be signed by such individual. If signed by other than CONTRACTOR, there should be attached to the Agreement a duly authenticated power of attorney evidencing the signer’s authority to sign such Agreement for and in behalf of CONTRACTOR.

If CONTRACTOR is a corporation, the following certificate should be executed:

I, _____, certify that I am the _____ of the corporation named as CONTRACTOR herein above; that _____ who signed the foregoing agreement on behalf of CONTRACTOR was then _____ of said corporation; that said Agreement was duly signed for and in behalf of said Corporation by authority of its governing body, and is within the scope of its corporate powers.

CORPORATE SEAL

CERTIFICATE OF OWNER'S ATTORNEY

I, the undersigned, _____, the duly authorized and acting legal representative of _____, do hereby certify as follows:

I have examined the attached contract(s) and bond(s) and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements are adequate and have/has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions, and provisions thereof.

CERTIFICATE OF OWNER'S FISCAL OFFICER

I, the undersigned, _____, the duly authorized and acting fiscal representative of _____, do hereby certify as follows:

that the amount required to meet the above obligation has been lawfully appropriated for such purpose and is in the treasury or in process of collection to the credit of an appropriate fund free from any previous encumbrances.

END OF SECTION

SECTION 005400 - DELINQUENT PERSONAL PROPERTY STATEMENT

Name of Bidder: _____

Address: _____

Having been awarded a contract by the Village of Frankfort, Ohio, hereby affirms under oath, pursuant to the Ohio Revised Code Section 5719.042 that at the time this bid was submitted, my company (was) (was not) charged with delinquent personal property taxes on the general tax list of personal property for Ross County, Ohio.

If such charge for delinquent personal property tax exists on the general tax list of personal property of Ross County, Ohio the amount of such due and unpaid delinquent taxes, including due and unpaid penalties and interest shall be set forth below.

A copy of this statement shall be transmitted by the Bidder to the county treasurer within thirty days of the date it is submitted. A copy of this statement shall also be incorporated into the contract made between the Village of Frankfort, Ohio and _____ (Name of Bidder) and no payment with respect to any contract shall be made unless such a statement has been so incorporated as a part thereof.

Delinquent Personal Property Tax: \$ _____

Penalties: \$ _____

Interest: \$ _____

Bidder: _____

By: _____

Title: _____

Subscribed in my presence, and sworn to me this _____ day of

_____, 20____.

NOTARY PUBLIC

[SEAL]

Ohio Revised Code Section 5719.042

After the award by a taxing district of any contract let by competitive bid and prior to the time the contract is entered into, the person making a bid shall submit to the district's fiscal officer a statement affirmed under oath that the person with whom the contract is to be made was not charged at the time the bid was submitted with any delinquent personal property taxes on the general tax list of personal property of any county in which the taxing district has territory or that such person was charged with delinquent personal property taxes on any such tax list, in which case the statement shall also set forth the amount of such due and unpaid delinquent taxes and any due and unpaid penalties and interest thereon.

If the statement indicates that the taxpayer was charged with any such taxes, all of the following apply:

- (A) The fiscal officer shall transmit a copy of the statement to the county treasurer within thirty days of the date it is submitted.
- (B) A copy of that statement shall be incorporated into the contract.
- (C) No payment shall be made with respect to any contract to which this section applies unless that statement has been incorporated as required under division (B) of this section.

Amended by 131st General Assembly File No. TBD, HB 166, §1, eff. 9/8/2016.

Effective Date: 09-21-1982.

END OF SECTION

SECTION 005500 - NOTICE TO PROCEED

TO: _____

ADDRESS: _____

PROJECT: _____

CONTRACT NO: _____

CONTRACT FOR: _____

You are hereby notified that the Contract Time under the above Contract will commence to run on: _____, 20___. By that date, you are to start performing your obligations under the Contract Documents. In accordance with the provisions in the Contract Agreement., Section 3.1 the Date of Substantial Completion is: ___ calendar days after the date of commencement of the Work specified above, or not later than _____, 20__.

Section 4.03 of the Agreement provides for an assessment of liquidated damages for each and every calendar day after the above established contract completion date that the Work remains incomplete.

Before you start any Work at the site, Paragraph 3.03.A.1 of the General Conditions provides that you must study the Contract Documents and verify figures and field dimension, and must report any observed errors or discrepancies and/or any concerns at this time.

Also, before you may start any Work at the site, you must:

1. Submit to the Engineer the Proposed Schedule called for in Section 013216.

OWNER:

By: _____ Title: _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by

_____, this _____ day of _____, 20__.

By: _____ Title: _____
(Contractor's Representative)

Copy to Engineer

END OF SECTION

SECTION 006100 - CONTRACT BOND (O.R.C. § 153.57)

KNOW ALL PERSONS BY THESE PRESENTS, that we, the undersigned _____
_____ ("Contractor"), as principal, and _____
_____, as Surety, are hereby held and firmly
bound unto the _____ ("Owner") as obligee, in
the penal sum of _____ Dollars (\$_____
_____), for the payment of which well and truly to be made, we hereby jointly and
severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that whereas, the above-
named principal did on the _____ day of _____, 20__ , enter into a contract
with the Owner for _____ related to _____
_____ ("Project"), which said contract is made a part of this
bond the same as though set forth herein:

Now, if the said Contractor shall well and faithfully do and perform the things agreed by
the Contractor to be done and performed according to the terms of said contract; and shall pay all
lawful claims of subcontractors, materialmen, and laborers, for labor performed and materials
furnished in the carrying forward, performing, or completing of said contract; we agreeing and
assenting that this undertaking shall be for the benefit of any materialman or laborer having a just
claim, as well as for the obligee herein; then this obligation shall be void; otherwise the same shall
remain in full force and effect; it being expressly understood and agreed that the liability of the
surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation
as herein stated.

The said surety hereby stipulates and agrees that no modifications, omissions, or additions
in or to the terms of the said contract or in or to the plans or specifications therefore shall in any
wise affect the obligations of said surety on its bond, and does hereby waive notice of any such
modifications, omissions or additions to the terms of the contract or to the work or to the
specifications.

Signed and sealed this _____ day of _____, 20__.

(PRINCIPAL)

(SURETY)

By: _____

By: _____

Printed Name & Title: _____

Printed Name & Title: _____

Surety's Address: _____

Surety's Telephone Number: _____

Surety's Fax Number: _____

NAME OF SURETY'S AGENT

Surety's Agent's Address: _____

Surety's Agent's Telephone Number: _____

Surety's Agent's Fax Number: _____

Contractor's Application For Payment No. _____

Application Period:	Application Date:
To (Owner):	Via (Engineer)
Project:	Engineer's Project No.:
Owner's Contract No.:	Contractor's Project No.:

APPLICATION FOR PAYMENT

Change Order Summary

Approved Change Orders	Additions	Deductions
TOTALS		
NET CHANGE BY		
CHANGE ORDERS		

1. ORIGINAL CONTRACT PRICE	\$
2. Net change by Change Orders	\$
3. CURRENT CONTRACT PRICE (Line 1 ± 2)	\$
4. TOTAL COMPLETED AND STORED TO DATE (Column F on Progress Estimate)	\$
5. RETAINAGE:	
a. _____ % x \$ _____ Work Completed	\$
b. _____ % x \$ _____ Stored Material	\$
c. Total Retainage (Line 5a + Line 5b)	\$
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5c)	\$
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application)	\$
8. AMOUNT DUE THIS APPLICATION	\$
9. BALANCE TO FINISH, PLUS RETAINAGE (Column G on Progress Estimate + Line 5 above)	\$

CONTRACTOR'S CERTIFICATION

The undersigned Contractor certifies that: (1) all previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work covered by prior Applications for Payment; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any such Liens, security interest or encumbrances); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

By: _____	Date: _____
-----------	-------------

Payment of: \$ _____	(Line 8 or other - attach explanation of other amount)
is recommended by: _____	(Engineer) (Date)
Payment of: \$ _____	(Line 8 or other - attach explanation of other amount)
is approved by: _____	(Owner) (Date)
Approved by: _____	Funding Agency (if applicable) (Date)

Progress Estimate

Contractor's Application

For (contract):		Application Number:								
Application Period:		Application Date:								
Specification Section No.	Description	A		B	Work Completed		E	F		G
		Item	C		D	Total Completed and Stored to Date (C + D + E)		% Complete (E/B)	Balance to Finish (B - F)	
			From Previous Application (C + D)	Scheduled Value	This Period	Materials Presently Stored (not in C or D)				
Totals										

Progress Estimate

Contractor's Application

For (contract):		Application Number:											
Application Period:		Application Date:											
A		B	C	D	E	F	G						
Bid Item No.	Description	Bid Quantity	Unit Price	Bid Value	Estimated Quantity Installed	Value	Materials Presently Stored (not in C)	Total Completed and Stored to Date (D + E)	% (F) B	Balance to Finish (B - F)			
	Item												
Totals													

Stored Material Summary

Contractor's Application

A Invoice No.		B Shop Drawing Transmittal No.		C Materials Description		D		E		F		G Materials Remaining in Storage (\$) (D + E - F)
						Stored Previously Date (Month/Year)	Amount (\$)	Stored this Month Amount (\$)	Subtotal	Incorporated in Work Date (Month/Year)	Amount (\$)	
For (contract): Application Number:												
Application Period: Application Date:												
Totals												

SECTION 006519 - CERTIFICATE OF FINAL COMPLETION

PROJECT TITLE: _____

LOCATION: _____

OWNER: _____

DATE OF CONTRACT COMPLETION: _____

The undersigned CONTRACTOR hereby certifies that all work included in the above-captioned contract has been completed in accordance with the requirements of the CONTRACT DOCUMENTS including approved modifications thereto, and requests that the work be accepted.

I understand that neither the determination by the ENGINEER that the work is completed, nor the acceptance thereof by the Owner, shall operate as a bar to claim against the Contractor under the terms of the guarantee provisions of the contract document

CONTRACTOR

SIGNATURE

TITLE

DATE

The undersigned ENGINEER has inspected the work included in the above-captioned contract, finds it to have been completed in accordance with the requirements of the CONTRACT DOCUMENTS including approved modifications thereto, and accordingly recommends that the work be accepted.

ENGINEER

SIGNATURE

TITLE

DATE

Upon the above representation of the CONTRACTOR and the above recommendation of the ENGINEER, the undersigned hereby accepts the work included in the above-captioned contract.

OWNER

SIGNATURE

TITLE

DATE

END OF SECTION

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the Controlling Law.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

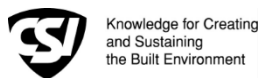
AMERICAN COUNCIL OF ENGINEERING COMPANIES

AMERICAN SOCIETY OF CIVIL ENGINEERS

This document has been approved and endorsed by



The Associated General Contractors of America



Construction Specifications Institute

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National Society of Professional Engineers
1420 King Street, Alexandria, VA 22314

American Council of Engineering Companies
1015 15th Street, N.W., Washington, DC 20005

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).

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GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*--Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*-- Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*--The individual or entity named as such in the Agreement.

20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *Schedule of Values*--A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

41. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

42. *Site*--Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

44. *Subcontractor*--An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

45. *Substantial Completion*--The time at which the Work (or a specified part thereof) has progressed to the

point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *Supplier*--A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.

49. *Underground Facilities*--All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

B. *Intent of Certain Terms or Adjectives*

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:

- a. does not conform to the Contract Documents, or
- b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or
- c. has been damaged prior to Engineer’s - recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put

into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the

Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of, their Related Entities, any duty or authority to supervise or direct the performance of

the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or

2. reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaption by Engineer.

B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which

the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party..

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and

2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or

contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. Notice: If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. Engineer's Review: After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the

necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. Possible Price and Times Adjustments

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect

to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

- a. reviewing and checking all such information and data,
- b. locating all Underground Facilities shown or indicated in the Contract Documents,
- c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and
- d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. Not Shown or Indicated

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in

Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by

Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor

is responsible. Nothing in this Paragraph 4.06. G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide

another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

5.04 *Contractor's Liability Insurance*

A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of

them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate

account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order .

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in

the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. "Or-Equal" Items: If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole,

3) it has a proven record of performance and availability of responsive service; and

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times, and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. Substitute Items

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;

b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an

approved Shop Drawing for an “or equal.” Engineer will advise Contractor in writing of any negative determination.

D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor’s expense a special performance guarantee or other surety with respect to any substitute.

E. *Engineer’s Cost Reimbursement:* Engineer will record Engineer’s costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. *Contractor’s Expense:* Contractor shall provide all data in support of any proposed substitute or “or-equal” at Contractor’s expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner’s acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued . No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor’s own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor

2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer,, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and

Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and

disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;
2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when

prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or , or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples*: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor's responsibilities for means, methods, techniques,

sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. *Engineer's Review*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected

copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 - OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with

Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 *Insurance*

A. Owner's responsibilities, if any, in respect of purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check

the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract

Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 - CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 Claims

A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim, shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,
2. approve the Claim, or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 Cost of the Work

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner,

and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. Costs Excluded: The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective

Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. Cash Allowances

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. Contingency Allowance

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 Change of Contract Price

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net

change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and
3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all

costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the

amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
2. correct such defective Work; or
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications .

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. Applications for Payments

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site of the executed Work as an experienced and qualified design professional and on

Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

- a. the Work has progressed to the point indicated;
- b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and
- c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

- a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
- b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

- a. to supervise, direct, or control the Work, or
- b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
- c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
- d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
- e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Change Orders;
- c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
- d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

- a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
- b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
- c. there are other items entitling Owner to a set-off against the amount recommended; or
- d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of

the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.03 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, , Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between

Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. Application for Payment

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

- a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;
- b. consent of the surety, if any, to final payment;
- c. a list of all Claims against Owner that Contractor believes are unsettled; and
- d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and , will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special

guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor,

materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for

mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or

2. agrees with the other party to submit the Claim to another dispute resolution process, or

3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are

not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will

survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SECTION 008000 - SUPPLEMENTARY CONDITIONS

These Supplementary Conditions Amend or Supplement the Standard General Conditions of the Construction Contract and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary General Conditions have the meanings stated below which are applicable to both the singular and plural thereof.

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

SC-1.01 Defined Terms

- SC-1.01.A Insert in the first sentence after the phrase “printed with initial capital letters” the following phrase:
- “or with capital letters”
- SC-1.01.A.2 The definition presented for “Agreement” shall also apply to an “Owner-Contractor Agreement”.
- SC-1.01.A.12 Add the following sentence at the end of the paragraph:
- “The term Contract Documents shall also include the Invitation to Bid and the Instructions to Bidders.”
- SC-1.01.A.17 The following Drawings are part of the Contract Documents:
- Title: _____
- Revision No.: _____
- Date: _____
- Sheets: _ _____
- as prepared by CT Consultants, Inc.

ARTICLE 2 – PRELIMINARY MATTERS

SC-2.01 Delivery of Bonds and Evidence of Insurance

- SC-2.01.A Insert in the first sentence after the phrase “such bonds” the following phrase:
- “insurance certificates, insurance endorsements, and other documents”
- Insert at the end of the first sentence after the phrase “required to furnish” the following phrase:

“under the Contract Documents”

SC-2.01.B Delete Paragraph 2.01.B of the General Conditions in its entirety and insert the following in its place:

Evidence of Insurance: Before any Work at the Site is started, Contractor shall deliver to the Owner with copies to each additional insured identified in the General Conditions Owner-approved copies of certificates of insurance, copies of endorsements, and other evidence of insurance which either of them or any additional insured may reasonably request, which Contractor is required to purchase and maintain in accordance with Article 5.

SC-2.02 Copies of Documents

SC-2.02.A Delete Paragraph 2.02.A to the General Conditions in its entirety and insert the following in its place:

OWNER shall furnish to CONTRACTOR up to three (3) copies of the Contract Documents. Additional copies will be furnished upon request at the cost of reproduction.

SC-2.05 Before Starting Construction

SC-2.05.A.2 Add to Paragraph 2.05.A.3 of the General Conditions, the following:

The total of the schedule of values prepared for the Work, as required by the General Conditions, shall not exceed the Bid submitted for the Work, unless such amount is adjusted as provided in the Contract Documents.

SC-2.07 Initial Acceptance of Schedules

SC-2.07.A Insert in the last sentence, after the phrase “to Engineer”, the following:

“and Owner”

SC-2.07.A.3 Add to Paragraph 2.07.A.3 of the General Conditions, the following:

Once approved by the Engineer, the Contractor will not change the allocation of the Contract Price to the component parts of the Work without the Engineer’s written approval. The Engineer thereafter may from time to time require the Contractor to adjust such schedule if the Engineer determines it to be in any way unreasonable or inaccurate. The Contractor then shall adjust the schedule of values as required by the Engineer within ten (10) days.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

SC-3.03 Reporting and Resolving Discrepancies

SC-3.03.A.1 Insert in the first sentence of Paragraph 3.03.A.1 of the General Conditions before the phrase “Before undertaking” the following phrase:

“In addition to its obligations under the Instructions to Bidders,”

SC-3.03.A.3 Add the following language at the end of Paragraph 3.03.A.3 of the General Conditions:

“or Contractor failed to perform its obligations under the Instructions to Bidders.”

SC-3.03.A Add the following language at the end of Paragraph 3.03.A of the General Conditions:

4. In addition to its obligations under the Instructions to Bidders, if Contractor proceeds with work that Contractor had actual knowledge or should have known that a conflict, error, ambiguity, or discrepancy existed as indicated above, correction of work constructed without such notification to Engineer shall be at Contractor's expense, (except in an emergency as authorized by Paragraph 6.16.A.).

SC-3.03.B.1 Add the following language at the end of Paragraph 3.03.B.1 of the General Conditions:

2. Within the Contract Documents, requirements of the Agreement shall take precedence over the General Conditions, which shall take precedence over the Specifications, which shall take precedence over the Drawings.

3. Within a particular Contract Document, figure dimensions on Drawings shall take precedence over general Drawings. Specific instructions or specifications shall take precedence over general instructions or specifications.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

SC-4.01 Availability of Lands

SC-4.01.B Delete Paragraph 4.01.B to the General Conditions in its entirety and insert the following in its place:

Upon reasonable request, Owner shall furnish Contractor with a Notice of Commencement prepared for the Project, conforming to the provisions of Ohio Revised Code Section 1311.252.

SC-4.02 Subsurface and Physical Conditions

SC-4.02.A Add the following language at the end of Paragraph 4.02.A of the General Conditions:

3. In the preparation of Drawings and Specifications, ENGINEER has relied upon the reports of physical conditions of the site of the Work as identified in Specification Section 00300 – Information Available to Bidders.

SC-4.03 Differing Subsurface and Physical Conditions

SC-4.03.A.4 Insert in the first sentence of Paragraph 4.03.A of the General Conditions after the phrase “the Contractor” the following phrase:

“as a condition precedent to any increase in the Contract Price and/or an extension of the Contract Times”

Delete the word “promptly” in the second phrase following Paragraph 4.03.A.4 of the General Conditions and insert the following in its place:

“within 48 hours”

SC-4.04 Underground Facilities

SC-4.04.A.2.b Delete Paragraph 4.04.A.2.b of the General Conditions in its entirety and insert the following in its place:

The Contractor shall be responsible for protecting all Underground Facilities in a manner at least as cautious and protective of safety and of underground facilities as those methods identified in Ohio Revised Code Sections 3781.25 and 3781.30.

SC-4.05 Reference Points

SC-4.05 Add the following language at the end of Paragraph 4.05 of the General Conditions:

Contractor is referred to the General Requirements for additional requirements for laying out the work.

SC-4.06 Hazardous Environmental Condition at Site

SC-4.06 Delete Paragraphs 4.06.A and 4.06.B in their entirety and insert the following:

A. No reports on drawings related to Hazardous Environmental Conditions are known to Owner or Engineer.

B. Not Used.

ARTICLE 5 – BONDS AND INSURANCE

SC-5.01 Performance, Payment; and Other Bonds

SC-5.01. A Delete Paragraph 5.01.A of the General Conditions in its entirety and insert the following in its place:

Contractor shall furnish a Contract Bond in the amount of the Contract Price as security for the faithful performance and payment of all of Contractor’s obligations under the Contract Documents. Such bond shall be in the form that meets the requirements of the Ohio Revised Code. If the Contractor submitted a combined Bid Guaranty and Contract Bond with its bid for the Work, that form of Bond shall satisfy the Contractor’s requirement to provide a Contract Bond. Contractor shall also furnish any other bonds as are required

by the Contract Documents.

SC-5.01.B Insert in the first sentence of Paragraph 5.01.B of the General Conditions after the phrase “U.S. Department of the Treasury” the following phrase:

“and meet the other requirements of the Contract Documents”

SC-5.03 Certificates of Insurance

SC-5.03.A Delete Paragraph 5.03.A of the General Conditions in its entirety and insert the following in its place:

Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance, copies of endorsements, and other evidence of insurance requested by Owner or any other additional insured, which Contractor is required to purchase and maintain.

SC-5.03 Add the following language immediately after Paragraph 5.03.B of the General Conditions:

C. Failure of Owner to demand such certificates or other evidence of full compliance with these insurance requirements or failure of Owner to identify a deficiency from evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

D. By requiring such insurance and insurance limits herein, Owner does not represent that coverage and limits will necessarily be adequate to protect Contractor, and such coverage and limits shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

SC-5.04 Contractor's Liability Insurance

SC-5.04.B.1 Delete the phrase “subject to any customary exclusion regarding professional liability” from the first sentence of Paragraph 5.04.B.1

SC-5.04.B.3 Amend in Paragraph 5.04.B.3 of the General Conditions the phrase “completed operations insurance” to read “products and completed operations insurance”.

SC-5.04.B.5 Amend in Paragraph 5.04.B.5 of the General Conditions the phrase “materially changed” to read “materially changed with respect to coverage on the Project”.

SC-5.04.B.7 Amend in Paragraph 5.04.B.7 of the General Conditions the phrase “completed operations insurance” to read “products and completed operations insurance”.

SC-5.04 Add the following new paragraphs immediately after Paragraph 5.04.B.

C. The limits of liability for the insurances required by paragraph 5.04 of the

General Conditions shall provide coverage for not less than the following amounts or greater where required by Law or Regulations. The types of insurance and the limits of liability indicated are the minimum required. Neither the Owner nor the Engineer warrant the adequacy of the types of insurance or the limits of liability required. Any policy exclusions shall be indicated on the insurance certificate. Insurance shall be provided on an occurrence form basis. Contractor shall provide verification of all coverage with or on the insurance certificate.

1. Worker's Compensation and related coverage under Paragraphs 5.04.A.1 and A.2 of the General Conditions:

- a. State of Ohio: Statutory
- b. Employer's Liability:
 - Bodily Injury by Accident:
 - Each Accident \$ 1,000,000
 - Bodily Injury by Disease:
 - Each Employee \$ 1,000,000
 - Policy Limit \$ 1,000,000

2. Contractor's General Liability under Paragraphs 5.04.A.3 through A.6 of the General Conditions which shall be written on a commercial general liability form and which shall include completed operations insurance and product liability coverage and eliminate the exclusion with respect to property under the care, custody and control of the Contractor:

- a. Policy Limits:
 - 1) General Aggregate \$ 2,000,000
 - 2) Products – Completed Operations Aggregate \$ 1,000,000
 - 3) Personal and Advertising Injury \$ 2,000,000
 - 4) Each Occurrence (Bodily Injury and Property Damage) \$ 1,000,000
 - 5) Fire Damage (any one fire) \$ 1,000,000
 - 6) Medical Expense (any one person) \$ 10,000

b. Policy shall include as a minimum the following coverage:

- 1) Broad Form Property Damage Coverage.
- 2) An elimination of the exclusions with respect to property under the care, custody, or control of the Contractor. In lieu of

elimination of the exclusion, the Contractor may provide Builder's Risk or Installation floater coverage for property under the care, custody, or control of the Contractor.

- 3) Explosion, Collapse, and Underground coverage applicable under Property Damage Liability Insurance.
 - 4) Contractual Liability Coverage.
 - 5) Independent Contractor Coverage.
 - 6) Property Damage liability insurance will provide Explosion, Collapse, and Underground coverages where applicable.
3. Comprehensive Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:

a. Bodily Injury:

Each person	\$ 500,000
Each Accident	\$ 1,000,000

b. Property Damage:

Each Accident	\$ 500,000
---------------	------------

4. Umbrella Coverage:

a. Umbrella policy (pay on behalf form) with limits of \$2,000,000 for bodily injury, personal injury and property damage on a combined basis shall be provided with the stated underlying limits of Paragraphs 5.04.C.1, 5.04.C.2, and 5.04.C.3.

b. Policy shall include the Owner, the Engineer and any others required by Paragraph 5.04.B.1 of the General Conditions as additional insureds.

D. Insurance certificates for commercial general, automobile, umbrella, and builder's risk shall specifically indicate by name the additional insureds which are to include the Owner, the Engineer as well as any other persons or entities so identified. Certificates shall be Acord 25-S or equivalent.

E. The following provisions shall also apply to the insurance provided by the Contractor:

1. Contractor's insurance shall be primary and non-contributory.
2. Insurance policies shall be written on an occurrence basis only.
3. The Contractor shall require all Subcontractors to provide Workers' Compensation, CGL, and Automobile Liability Insurance with the same minimum limits specified herein, unless the Owner agrees to a lesser

amount.

4. Owner shall be named as a certificate holder on the policies of insurance maintained by Contractor. The Contractor shall provide each additional insured with a certificate of insurance.

SC-5.06 Property Insurance

SC-5.06.A Delete Paragraph 5.06.A in its entirety and insert the following:

A. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of full replacement cost thereof. Insurance shall be completed value form.

1. This insurance shall:

a. include the interests of Owner, Contractor, Subcontractors, Engineer, and any other individuals or entities identified herein, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured (Insurance certificates shall specifically indicate by name the additional insureds which are to include Owner and Engineer as well as other individuals or entities so identified.);

b. be written on a Builder's Risk "all-risk" form that shall at least include insurance for physical loss and damage to the Work, temporary buildings, falsework, and materials and equipment in transit and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism, and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (including that caused by flood or hydrostatic pressure), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

c. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

d. cover the total value of materials and equipment supplied under the Contract from the time Contractor takes possession of them until they are installed and tested by Contractor and the project is accepted as complete by Owner under an endorsement to this policy or in the form of Installation Floater Insurance of the "all risk" type;

e. allow for partial utilization of the Work by Owner;

f. include testing and startup; and

g. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days

written notice to each other additional insured to whom a certificate of insurance has been issued.

2. Contractor shall be responsible for any deductible or self-insured retention.
3. The policies of insurance required to be purchased and maintained by Contractor in accordance with this Paragraph 5.06.A and shall comply with the requirements of Paragraph 5.06.C of the General Conditions.

SC-5.06.B Delete Paragraph 5.06.B of the General Conditions in its entirety.

SC-5.06.D Delete the first sentence of Paragraph 5.06.D of the General Conditions and insert the following in its place:

The Contractor shall pay all deductible provisions of insurances. The maximum deductible shall be \$5,000.

SC-5.06.E Delete Paragraph 5.06.E of the General Conditions in its entirety.

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

SC-6.02 Labor; Working Hours

SC-6.02.B Insert in the second sentence of Paragraph 6.02.B of the General Conditions before the phrase “or any legal holiday” the following phrase:

“shut down dates as defined in the Agreement,”

SC-6.02 Add the following new paragraph immediately after Paragraph 6.02.B.

C. Costs incurred by the Owner related to inspection of Work performed by the Contractor, at the Contractor’s discretion, outside of regular working hours and not approved, in writing, by the Owner, shall be the responsibility of the Contractor. The Owner may deduct these costs from the periodic and final payment requests submitted by the Contractor.

SC-6.03 Services, Materials, and Equipment

SC-6.03.B Add the following to the end of Paragraph 6.03.B of the General Conditions.

Contractor and Supplier warrant that all materials and equipment are suitable and fit for the intended use of such materials and equipment and are free from defects in material, workmanship or design. The foregoing applies whether the materials or equipment are specified in the Contract Documents.

SC-6.06 Concerning Subcontractors, Suppliers, and Others

SC-6.06.A Add the following to the end of Paragraph 6.06.A of the General Conditions.

If Owner or Engineer after due investigations has reasonable objections to any proposed Subcontractor, Supplier, or other individual or entity, either may

request Contractor submit an acceptable substitute without an increase in Contract Price.

SC-6.06 Add the following new paragraph immediately after Paragraph 6.06.G.

F. The Owner or the Engineer may furnish to any Subcontractor or Supplier to the extent practicable, information about amounts paid to the Contractor on account of Work performed for the Contractor by a particular Subcontractor or Supplier.

SC-6.08 Permits

SC-6.08 Add the following new paragraph immediately after Paragraph 6.08.A.

B. Refer to the General Requirements for additional permit information.

SC-6.10 Taxes

SC-6.10 Add the following new paragraphs immediately after Paragraph 6.10.A.

B. Materials purchased for use or consumption in connection with the proposed Work will be exempt from the State of Ohio Sales Tax, as provided in Section 5739.02 of the Ohio Revised Code, and also from the State of Ohio Use Tax, as provided in Section 5741.01 of the Ohio Revised Code. The Owner will provide the Contractor with a Construction Tax Exempt Certificate upon request, made through the Engineer.

C. Purchases by the Contractor of expendable items, such as form lumber, tools, oil, greases, fuel, or equipment rentals, are subject to the application of Ohio Sales or Use Taxes.

SC-6.12 Record Documents

SC-6.12.A Delete the last sentence of Paragraph 6.12.A of the General Conditions and insert the following in its place:

The Contractor shall deliver these record documents, samples, and shop drawings to the Engineer, no later than the date for Substantial Completion, for the Engineer's review and transmittal to the Owner.

SC-6.14 Safety Representative

SC-6.14 Add the following new paragraph immediately after Paragraph 6.14.A.

B. Contractor shall keep at the Site at all times during the progress of the Work a competent person to comply with OSHA trenching and excavation requirements. The competent person shall be one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions that are unsanitary, hazardous or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

SC-6.20 Indemnification

SC-6.20.A Delete Paragraph 6.20.A in its entirety and insert the following:

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify, defend and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, (whether alleged or proven), demands, costs, losses, and damages, including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs, arising out of or relating to the Work or any breach of Contractor's obligations under the Contract Documents, including but not limited to the breach of any warranty provided in the Contract Documents. The Contractor's obligations under this Paragraph 6.20.A are joint and several.

SC-6.20.C Delete Paragraph 6.20.C of the General Conditions in its entirety, including Paragraph 6.20.C.1 and Paragraph 6.20.C.2.

ARTICLE 7 – OTHER WORK AT THE SITE

SC-7.04 *Claims by Other Contractors*

SC-7.04 Add the following new paragraph immediately after Paragraph 7.03.

7.04 *Claims by Other Contractors*

A. Should Contractor cause damage to the work or property of any separate contractor at the Site, or should any claim arising out of Contractor's performance of the Work at the Site be made by any other contractor against Contractor, Contractor shall promptly attempt to settle with such other contractor by agreement or to otherwise resolve the dispute by arbitration or at law.

B. Should Contractor cause damage to the work or property of any separate contractor at the Site, or should any claim arising out of Contractor's performance of the Work at the Site be made by any other contractor against Owner or Engineer, Contractor shall indemnify Owner and Engineer as required under Paragraph 6.20.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

SC-9.03 *Project Representative*

SC-9.03 Add the following new paragraph immediately after Paragraph 9.03.A.

B. Resident Project Representative personnel on this project may include personnel furnished by Owner, Engineer, or both. The duties and responsibilities of the Resident Project Representative(s) include the following:

1. Review schedules as required in Paragraph 2.05.A of the General Conditions and amendment thereto.

2. Attend conferences and meetings with Contractor.
3. Serve as liaison between Engineer and Contractor and help Engineer serve as liaison between Owner and Contractor.
4. Conduct on-site observation of the work.
5. Observe tests, equipment, and system startups.
6. Report to Engineer when clarifications and interpretations of the Contract Documents are needed. Consider, evaluate, and report to Engineer, Contractor's requests for modification.
7. Maintain orderly records, keep a daily log (when on a part-time basis, keep log for days visiting site), and furnish periodic reports to Engineer of the progress of the Work.
8. Before project completion, prepare final list of items to be completed or corrected and make recommendations to Engineer concerning acceptance of the Work.
9. Review Payment Applications from Contractor.

The Resident Project Representatives shall not:

1. Authorize any deviation from the Contract Documents or substitutions of materials or equipment.
2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
3. Undertake any of the responsibilities of Contractor, Subcontractor, or Contractor's superintendent.
4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences, or procedures of construction.
5. Advise on, issue directions regarding, or assume control over safety precautions and programs in connection with the Work.
6. Accept shop drawing or sample submittals from anyone other than Contractor.
7. Authorize Owner to occupy the Project in whole or in part.
8. Participate in specialized field or laboratory tests or inspections conducted by others except as specifically authorized by Engineer.
9. Offer interpretation of the Contracts Documents without consultation with and direction from the Engineer.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

SC-10.05 Claims

SC-10.05.B Add the following to the end of Paragraph 10.05.B of the General Conditions.

The Contractor acknowledges and agrees that the Owner and/or parties in privity of contract with the Owner may delay, interfere with and/or disrupt the Contractor's Work, and such actions shall not constitute a breach of contract by the Owner, since the Contractor is entitled to additional compensation by properly pursuing a Claim as permitted by these Modified General Conditions. Pending the final resolution of a Claim, the Contractor shall continue performance of the Work.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

SC-11.03 Unit Price Work

SC-11.03.D Delete Paragraph 11.03.D in its entirety and insert the following:

D. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:

1. If the total unit cost of a particular item of Unit Price Work amounts to 15% or more of the Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by the Contractor differs by more than 25% from the estimated quantity of such item indicated in the Agreement; and
2. If there is no corresponding adjustment with respect to any other item of Work; and
3. If the Contractor believes that it has incurred additional expense as a result thereof; or
4. If the Owner believes that the quantity variation entitles it to an adjustment in unit price,

either the Owner or the Contractor may make a Claim for an adjustment in the Contract Price in accordance with Article 10 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

SC-12.03 Delays

SC-12.03.A Add the following language at the end of Paragraph 12.03.A of the General Conditions:

Abnormal weather conditions shall be defined as conditions related to temperature and precipitation not reasonably anticipatable for the region. The

following chart defines the number of days of inclement weather deemed normal for the project area. Conditions beyond the given limits are deemed abnormal.

Month	Days with 0.10 inch Precipitation, or more	Days with 32 Degrees F, or less
January	14	26
February	12	23
March	14	20
April	14	6
May	13	0
June	12	0
July	11	0
August	9	0
September	8	0
October	8	3
November	11	15
December	12	24

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

SC-13.03 *Tests and Inspections*

SC-13.03.A Add the following language at the beginning of Paragraph 13.03.A of the General Conditions:

All Work is subject to testing to indicate compliance with Contract Document requirements. Duplicate copies of test results of all tests required shall be submitted to Engineer. Testing laboratories are subject to the approval of Engineer. Tests and inspection of work may be conducted by Owner or an independent laboratory employed by Owner. Tests may also be performed in the field by Engineer as a basis for acceptance of the Work.

Add the following language at the end of Paragraph 13.03.A of the General Conditions:

Samples required for testing shall be furnished by Contractor at no cost to Owner. In the event that completed Work does not conform to specification

requirements during the initial test, the Work shall be corrected and retested for conformance. The entire cost of retesting completed Work shall be borne by Contractor. This shall include the extra cost for inspection to Owner which will be deducted from the final amount due Contractor.

SC-13.09 Owner May Correct Defective Work

SC-13.09.A Delete Paragraph 13.09.A in its entirety and insert the following:

If Contractor fails within two (2) business days of a written notice from the Owner or Engineer, or such longer time as may be stated in such notice, to correct, or take reasonable steps to commence to correct, defective Work or to remove and replace, or take reasonable steps to remove and replace, rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may correct or remedy any such deficiency. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor all the costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. The Contractor irrevocably designates the Owner as the Contractor's attorney-in-fact to execute the Change Orders provided for in this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

SC-14.02 Progress Payments

SC-14.02.A.1 Insert after the first sentence of Paragraph 14.02.A.1 of the General Conditions the following sentence:

The Application for Payment shall be in the form and submitted in the number of copies (with all related documents), as required by the Contract Documents.

SC-14.02.A.1 Add the following new paragraphs immediately after Paragraph 14.02.A.3.

4. Contractor shall submit on 8-1/2 by 11 paper each lien waiver submitted. The lien waiver shall be submitted in the same number or copies as the Application for Payment. The copies of the lien waiver submitted shall include at least one original.

5. No advanced payment for shop drawing preparation will be made. Shop drawing costs will be paid when equipment and materials are delivered and suitably stored on the site.

6. All stored equipment and materials for which payment is requested

shall have invoices included with the Application for Payment. Equipment shall be identified thoroughly on the invoices, including serial numbers. The invoices shall be submitted in the same number or copies as the Application for Payment.

7. Payment for the stored equipment and material which are on the site shall not exceed the invoiced amount for each item, less the Contract retainage. The overhead and profit for the stored items shall not be invoiced until the item is installed.

8. Payment for off-site storage is normally reserved for sensitive or very large pieces of equipment that in Engineer's opinion would not be practical to have stored on the site. Payment for off-site stored items shall be limited to 75% of the invoiced value of the item, less Contract retainage. Contractor shall reimburse Owner the Cost of inspecting off-site stored items. When off-site storage is approved, Contractor shall provide Insurance Certificates and Document of Ownership to Owner.

SC-14.02.C.1 Delete the word "Ten" in the first sentence of Paragraph 14.02.C.1 of the General Conditions and insert the following in its place:

"Thirty"

SC-14.04 Substantial Completion

SC-14.04 Add the following new paragraphs immediately after Paragraph 14.04.D.

E. The Contractor's warranties under the Contract Documents shall remain in full force and effect and cover any remedial Work, even if performed by others.

F. If more than one inspection by the Engineer for purposes of evaluating corrected Work is required, the inspections will be performed at the Contractor's expense.

SC-14.06 Final Inspection

SC-14.06 Add the following new paragraph immediately after Paragraph 14.06.A.

B. The ENGINEER will conduct one (1) inspection for the final payment application review when requested to by the CONTRACTOR. If the ENGINEER determines that the contract is not complete in accordance with the approved contract documents the CONTRACTOR will be assessed for each additional inspection.

END OF SECTION

SECTION 008800 - PREVAILING WAGE REQUIREMENTS

ARTICLE 1 GENERAL

1.01 The Contractor and all Subcontractors shall pay employees on the project the current applicable prevailing wages established by the State of Ohio Department of Commerce Division of Labor & Worker Safety, Wage and Hour Bureau, including all updates, and shall comply with the provisions of Chapter 4115 of the Ohio Revised Code.

1.02 A copy of the wage determination current at the time of Bid has been included for reference.

END OF SECTION



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Ohio Department of Commerce

Bureau of Wage & Hour Administration

[Consumers](#)

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[License/Permit Holders & Applicants](#)

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Classification = All, County = ROSS, Union = All

County	Classification	Effective	Posted	Union
ROSS	Asbestos Worker	7/24/2024	7/24/2024	Asbestos Local 207
ROSS	Asbestos Worker	7/10/2024	7/10/2024	Asbestos Local 50 Heat & Frost Insulators
ROSS	Boilermaker	10/1/2013	9/25/2013	Boilermaker Local 105
ROSS	Bricklayer	6/5/2024	6/5/2024	Bricklayer Local 23 Heavy Hwy (A)
ROSS	Bricklayer	6/5/2024	6/5/2024	Bricklayer Local 23 Heavy Hwy (B)
ROSS	Bricklayer	6/12/2024	6/12/2024	Bricklayer Local 23 (Chillicothe)
ROSS	Bricklayer	6/5/2024	6/5/2024	Bricklayer Local 23 (Columbus Tile Finisher)
ROSS	Bricklayer	6/5/2024	6/5/2024	Bricklayer Local 23 (Columbus Tile Setter)
ROSS	Carpenter	6/12/2024	6/12/2024	Carpenter Millwright Local 1090 SC South Point District A
ROSS	Carpenter	6/12/2024	6/12/2024	Carpenter & Pile Driver Local 437 SC District C Commercial
ROSS	Carpenter	6/12/2024	6/12/2024	Carpenter & Pile Driver Local 437 SC District C1 Industrial
ROSS	Carpenter	5/8/2024	5/8/2024	Carpenter & Pile Driver SC District HevHwy
ROSS	Cement	6/12/2024	6/12/2024	Cement Mason Local 132 (Columbus)
ROSS	Cement Mason	5/1/2024	5/1/2024	Cement Mason Statewide HevHwy
ROSS	Electrical	1/10/2024	1/10/2024	Electrical Local 575 Inside
ROSS	Electrical	3/5/2014	3/5/2014	Electrical Local 575 Inside Lt Commercial South West
ROSS	Voice Data Video	6/29/2022	6/29/2022	Electrical Local 575 Voice Data Video
ROSS	Lineman	2/7/2024	2/7/2024	Electrical Local 71 High Tension Pipe Type Cable
ROSS	Lineman	2/7/2024	2/7/2024	Electrical Local 71 Outside Utility Power
ROSS	Lineman	2/9/2024	2/9/2024	Electrical Local 71 Outside (Central OH Chapter)
ROSS	Lineman	2/7/2024	2/7/2024	Electrical Local 71 Underground Residential Distribution
ROSS	Voice Data Video	3/6/2024	3/6/2024	Electrical Local 71 Voice Data Video Outside
ROSS	Elevator	1/1/2024	12/27/2023	Elevator Local 37
ROSS	Glazier	3/27/2024	3/27/2024	Glazier Local 372
ROSS	Ironworker	8/28/2024	8/28/2024	Ironworker Local 172
ROSS	Laborer Group 1	5/1/2024	5/1/2024	Labor HevHwy 3
ROSS	Laborer	6/1/2024	5/29/2024	Labor Local 83
ROSS	Operating Engineer	6/5/2024	6/5/2024	Operating Engineers - Building Local 18 - Zone III
ROSS	Operating Engineer	6/5/2024	6/5/2024	Operating Engineers - HevHwy Zone II
ROSS	Drywall Finisher	5/8/2024	5/8/2024	Painter Local 1275
ROSS	Painter	5/8/2024	5/8/2024	Painter Local 1275
ROSS	Painter	5/8/2024	5/8/2024	Painter Local 1275 HevHwy
ROSS	Painter	5/8/2024	5/8/2024	Painter Local 1275 Industrial
ROSS	Painter	6/10/2015	6/10/2015	Painter Local 639
ROSS	Painter	3/22/2023	3/22/2023	Painter Local 639 Zone 2 Sign
ROSS	Plasterer	6/1/2024	5/29/2024	Plasterer Local 132 (Columbus)
ROSS	Plumber Pipefitter	8/21/2024	8/21/2024	Plumber Pipefitter Local 189
ROSS	Roofer	9/13/2023	9/13/2023	Roofer Local 86
ROSS	Sheet Metal Worker	4/24/2024	4/24/2024	Sheet Metal Local 24 Columbus
ROSS	Sprinkler Fitter	4/6/2022	4/6/2022	Sprinkler Fitter Local 669
ROSS	Truck Driver	5/1/2024	5/1/2024	Truck Driver Bldg & HevHwy Class 1 Locals 20,40,92,92b,100,175,284,438,377,637,908,957
ROSS	Truck Driver	5/1/2024	5/1/2024	Truck Driver Bldg & HevHwy Class 2 Locals 20,40,92,92b,100,175,284,438,377,637,908,957
ROSS	Truck Driver	5/1/2024	5/1/2024	Truck Driver Bldg & HevHwy Class 3 Locals 20,40,92,92b,100,175,284,438,377,637,908,957

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Prevailing Wage Rate Skilled Crafts

Name of Union: **Asbestos Local 207**

Change # : LCR01-2024ibLoc207

Craft : Asbestos Worker Effective Date : 07/24/2024 Last Posted : 07/24/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Asbestos Abatement	\$30.00		\$10.45	\$7.00	\$0.65	\$3.25	\$0.00	\$0.00	\$0.00	\$0.00	\$51.35	\$66.35
Trainee												
	Percent											
Trainee	65.15	\$19.55	\$10.45	\$1.60	\$0.65	\$1.00	\$0.00	\$0.00	\$0.00	\$0.00	\$33.25	\$43.02

Special Calculation Note :

Ratio :

3 Journeymen to 1 Trainee

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ASHLAND, ASHTABULA*, ATHENS, AUGLAIZE, BROWN, BUTLER*, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DELAWARE, ERIE*, FAIRFIELD, FAYETTE, FRANKLIN, GEauga, GREENE, GUERNSEY, HAMILTON, HARDIN, HARRISON, HIGHLAND, HOCKING, HOLMES, HURON, KNOX, LAKE, LICKING, LOGAN, LORAIN, MADISON, MAHONING, MARION, MEDINA, MIAMI, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PORTAGE, PREBLE, RICHLAND, ROSS, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VINTON, WARREN*, WAYNE

Special Jurisdictional Note : Ashtabula County: (post offices & townships of Ashtabula, Austinburg, Geneva, Harperfield, Jefferson, Plymouth & Saybrook) (townships of Andover, Cherry Valley, Colbrook, Canneaut, Denmark, Dorset, East Orwell, Hartsgrove, Kingville, Lenox, Monroe, Morgan, New Lyme, North Kingsville, Orwell, Pierpoint, Richmond Rock Creek, Rome, Sheffield, Trumbull, Wayne, Williamsfield & Windsor)

Butler County: (townships of Fairfield, Hanover, Liberty, Milford, Morgan, Oxford, Ripley, Ross, St. Clair, Union & Wayne) (Lemon & Madison)

Erie County: (post offices & townships of Berlin, Berlin Heights, Birmingham, Florence, Huron, Milan, Shinrock & Vermilion)

Warren County: (townships of: Deerfield, Hamilton, Harlan, Salem, Union & Washington) (Clear Creek, Franklin, Mossie, Turtle Creek & Wayne)

Details :

Asbestos & lead paint abatement including, but not limited to the removal or encapsulation of asbestos & lead paint, all work in conjunction with the preparation of the removal of same & all work in conjunction with the clean up after said removal. The removal of all insulation materials, whether they contain asbestos or not, from mechanical systems (pipes, boilers, ducts, flues, breaching, etc.) is recognized as being the exclusive work of the Asbestos Abatement Workers.

On all mechanical systems (pipes, boilers, ducts, flues, breaching, etc.) that are going to be demolished, the removal of all insulating materials whether they contain asbestos or not shall be the exclusive work of the Laborers.

An Abatement Journeyman is anyone who has more than 600 hours in the Asbestos Abatement field.

Prevailing Wage Rate Skilled Crafts

Name of Union: Asbestos Local 50 Heat & Frost Insulators

Change # : LCN02-2024ibAsbLoc50

Craft : Asbestos Worker Effective Date : 07/10/2024 Last Posted : 07/10/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Asbestos Insulation Mechanic	\$39.06		\$9.20	\$8.35	\$0.50	\$0.00	\$3.75	\$0.10	\$0.00	\$0.00	\$60.96	\$80.49
Firestop Technician	\$39.06		\$9.20	\$8.35	\$0.50	\$0.00	\$3.75	\$0.10	\$0.00	\$0.00	\$60.96	\$80.49
Apprentice	Percent											
1st year	60.00	\$23.44	\$9.20	\$4.52	\$0.50	\$0.00	\$0.50	\$0.10	\$0.00	\$0.00	\$38.26	\$49.97
2nd year	70.00	\$27.34	\$9.20	\$4.52	\$0.50	\$0.00	\$0.85	\$0.10	\$0.00	\$0.00	\$42.51	\$56.18
3rd year	80.00	\$31.25	\$9.20	\$6.76	\$0.50	\$0.00	\$1.25	\$0.10	\$0.00	\$0.00	\$49.06	\$64.68
4th year	85.00	\$33.20	\$9.20	\$6.76	\$0.50	\$0.00	\$1.50	\$0.10	\$0.00	\$0.00	\$51.26	\$67.86

Special Calculation Note : *other is Labor Mgt Training Fund

Ratio :

1 Journeymen to 1 Apprentice
4 Journeymen to 1 Apprentice thereafter

Jurisdiction (* denotes special jurisdictional note) :

ATHENS, AUGLAIZE, BUTLER*, CHAMPAIGN, CLARK, CLINTON, CRAWFORD, DARKE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GREENE, GUERNSEY, HARDIN, HOCKING, KNOX, LICKING, LOGAN, MADISON, MARION, MIAMI, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PREBLE, ROSS, SHELBY, UNION, VINTON, WARREN*

Special Jurisdictional Note : Township of Butler County: Townships of Lemon and Madison.

Warren County: Township of Cleer Creek, Franklin, Massie, Turtle Creek and Wayne

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: **Boilermaker Local 105**

Change # : **LCN02-2013fbLoc 105**

Craft : **Boilermaker Effective Date : 10/01/2013 Last Posted : 09/25/2013**

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Boilermaker	\$35.26		\$7.07	\$13.28	\$0.89	\$0.00	\$3.00	\$0.55	\$0.00	\$0.00	\$60.05	\$77.68
Apprentice	Percent											
1st 6 months	70.03	\$24.69	\$7.07	\$11.30	\$0.89	\$0.00	\$2.10	\$0.55	\$0.00	\$0.00	\$46.60	\$58.95
2nd 6 months	75.02	\$26.45	\$7.07	\$11.30	\$0.89	\$0.00	\$2.25	\$0.55	\$0.00	\$0.00	\$48.51	\$61.74
3rd 6 months	80.00	\$28.21	\$7.07	\$11.30	\$0.89	\$0.00	\$2.40	\$0.55	\$0.00	\$0.00	\$50.42	\$64.52
4th 6 months	85.02	\$29.98	\$7.07	\$11.30	\$0.89	\$0.00	\$2.55	\$0.55	\$0.00	\$0.00	\$52.34	\$67.33
5th 6 months	87.52	\$30.86	\$7.07	\$13.28	\$0.89	\$0.00	\$2.63	\$0.55	\$0.00	\$0.00	\$55.28	\$70.71
6th 6 months	90.03	\$31.74	\$7.07	\$13.28	\$0.89	\$0.00	\$2.70	\$0.55	\$0.00	\$0.00	\$56.23	\$72.11
7th 6 months	92.50	\$32.62	\$7.07	\$13.28	\$0.89	\$0.00	\$2.78	\$0.55	\$0.00	\$0.00	\$57.19	\$73.49
8th 6 months	95.00	\$33.50	\$7.07	\$13.28	\$0.89	\$0.00	\$2.85	\$0.55	\$0.00	\$0.00	\$58.14	\$74.89

Special Calculation Note : Other is Supplemental Health and Welfare

Ratio :

5 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ATHENS, BROWN, BUTLER, CHAMPAIGN, CLARK, CLERMONT, CLINTON, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GREENE, GUERNSEY, HAMILTON, HIGHLAND, HOCKING, JACKSON, LAWRENCE, LICKING, MADISON, MEIGS, MIAMI, MONTGOMERY, MORGAN, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, PREBLE, ROSS, SCIOTO, VINTON, WARREN

Special Jurisdictional Note :

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 Heavy Hwy (A)

Change # : LCN01-2024ibLoc23HevHwyA

Craft : Bricklayer Effective Date : 06/05/2024 Last Posted : 06/05/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Cement Mason Bricklayer Sewer Water Works A	\$33.39		\$10.00	\$9.53	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$53.45	\$70.14
Apprentice												
Percent												
1st year	70.00	\$23.37	\$10.00	\$9.53	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.43	\$55.12
2nd year	80.00	\$26.71	\$10.00	\$9.53	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.77	\$60.13
3rd year	90.00	\$30.05	\$10.00	\$9.53	\$0.53	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50.11	\$65.14

Special Calculation Note : NOT FOR BUILDING CONSTRUCTION.

Ratio :

- 3 Journeymen to 1 Apprentice
- 6 Journeymen to 2 Apprentice
- 9 Journeymen to 3 Apprentice
- 12 Journeymen to 4 Apprentice
- 15 Journeymen to 5 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE

Special Jurisdictional Note :

Details :

- (A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site Heavy Construction, Airport Construction Or Railroad Construction Work.
- (B) Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work ,Pollution Control,Sewer Plant, Waste Plant, & Water Treatment Facilities, Construction.

Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 Heavy Hwy (B)

Change # : LCN01-2024ibLoc23HevHwyB

Craft : Bricklayer Effective Date : 06/05/2024 Last Posted : 06/05/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Cement Mason Bricklayer Power Plants Tunnels Amusement Parks B	\$34.39		\$10.00	\$9.52	\$0.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$54.45	\$71.65
Apprentice	Percent											
1st year	70.00	\$24.07	\$10.00	\$9.52	\$0.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.13	\$56.17
2nd year	80.00	\$27.51	\$10.00	\$9.52	\$0.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$47.57	\$61.33
3rd year	90.00	\$30.95	\$10.00	\$9.52	\$0.54	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$51.01	\$66.49

Special Calculation Note : NOT FOR BUILDING CONSTRUCTION.

Ratio :

- 3 Journeymen to 1 Apprentice
- 6 Journeymen to 2 Apprentice
- 9 Journeymen to 2 Apprentice
- 12 Journeymen to 4 Apprentice
- 15 Journeymen to 5 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE

Special Jurisdictional Note :

Details :

- (A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site Heavy Construction, Airport Construction Or Railroad Construction Work.
- (B) Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work ,Pollution Control,Sewer Plant, Waste Plant, & Water Treatment Facilities, Construction.

Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 (Chillicothe)

Change # : LCN01-2024ibLoc23Chillicothe

Craft : Bricklayer Effective Date : 06/12/2024 Last Posted : 06/12/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Bricklayer	\$37.77		\$9.90	\$7.36	\$0.71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$55.74	\$74.62
Stone Mason	\$37.77		\$9.90	\$7.36	\$0.71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$55.74	\$74.62
Pointer Caulker Cleaner	\$37.77		\$9.90	\$7.36	\$0.71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$55.74	\$74.62
Cement Mason	\$37.77		\$9.90	\$7.36	\$0.71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$55.74	\$74.62
Plaster	\$37.77		\$9.90	\$7.36	\$0.71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$55.74	\$74.62
Refractory Worker	\$38.65		\$9.90	\$7.36	\$0.71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$56.62	\$75.94
Layout Man	\$38.27		\$9.90	\$7.36	\$0.71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$56.24	\$75.37
Apprentice Brick,Stone, Cement, Plasterers, Refractory & Pointer caulker Cleaners	Percent											
1st Year	70.00	\$26.44	\$9.90	\$7.36	\$0.71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.41	\$57.63
2nd Year	80.00	\$30.22	\$9.90	\$7.36	\$0.71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.19	\$63.29
3rd Year	90.00	\$33.99	\$9.90	\$7.36	\$0.71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$51.96	\$68.96
4th Year	95.00	\$35.88	\$9.90	\$7.36	\$0.71	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$53.85	\$71.79
Mason Trainee												
1-90 Days	50.00	\$18.89	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$18.89	\$28.33
91-365 Days	50.00	\$18.89	\$9.90	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$28.79	\$38.23
2nd Year	55.00	\$20.77	\$9.90	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$30.67	\$41.06

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

- 1 Journeyman to 1 Apprentice
- 2-6 Journeyman to 2 Apprentice
- 7-11 Journeyman to 2 Apprentice
- 12-16 Journeyman to 3 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

FAYETTE, PIKE, ROSS, VINTON, JACKSON

Mason Trainee Ratio

- 1 Apprentice permits 1 Mason Trainee
- 2 Apprentice permits 1 Mason Trainee
- 3 Apprentice permits 2 Mason Trainee
- 4 Apprentice permits 2 Mason Trainee

Special Jurisdictional Note :

Details :

Mason Trainee work on a job site unless a registered apprentice is on the job and the ratios in table above will be strictly enforced.

BAT registered apprentice must be employed prior to hiring mason trainee (s). A mason trainee MAY NOT work on a jobsite unless a registered apprentice is on the job.

Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 (Columbus Tile Finisher)

Change # : LCN01-2024ibLoc23CbusTileFin

Craft : Bricklayer Effective Date : 06/05/2024 Last Posted : 06/05/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Bricklayer Tile Marble Finisher	\$30.28		\$7.72	\$3.24	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.76	\$56.90
Terrazzo Finisher	\$30.53		\$7.72	\$3.24	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.01	\$57.28
Floor Grinder	\$30.83		\$7.72	\$3.24	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.31	\$57.73
Base Grinder	\$31.03		\$7.72	\$3.24	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.51	\$58.03
Apprentice	Percent											
1st Year	70.00	\$21.20	\$7.72	\$3.24	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$32.68	\$43.27
2nd Year	80.00	\$24.22	\$7.72	\$3.24	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.70	\$47.82
3rd Year	90.00	\$27.25	\$7.72	\$3.24	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$38.73	\$52.36
Apprentice Improver	50.00	\$15.14	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$15.14	\$22.71

Special Calculation Note : Classification title contains "Bricklayer" because contract originates within the Bricklayer Local.

Note that the classification description is clarified after the local union number at the top of the page.

Ratio :

1-2 Journeymen to 1 Apprentice
3-5 Journeymen to 2 Apprentice

Crews larger than 5: 4 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ATHENS, COSHOCTON, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GUERNSEY, HOCKING, JACKSON, KNOX, LICKING, MADISON, MEIGS, MORGAN, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, ROSS, UNION, VINTON, WASHINGTON

Special Jurisdictional Note :

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Bricklayer Local 23 (Columbus Tile Setter)

Change # : LCN01-2024ibLoc23CbusTileSet

Craft : Bricklayer Effective Date : 06/05/2024 Last Posted : 06/05/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Bricklayer Tile Setter	\$31.97		\$8.67	\$7.40	\$0.65	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$49.69	\$65.68
Marble Mason	\$31.97		\$8.67	\$7.40	\$0.65	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$49.69	\$65.68
Terrazzo Worker	\$32.22		\$8.67	\$7.40	\$0.65	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$49.94	\$66.05
Terrazzo Worker, Installation	\$32.22		\$8.67	\$7.40	\$0.65	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$49.94	\$66.05
Apprentice	Percent											
1st Year	70.00	\$22.38	\$8.67	\$7.40	\$0.65	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$40.10	\$51.29
2nd Year	80.00	\$25.58	\$8.67	\$7.40	\$0.65	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$43.30	\$56.08
3rd Year	90.00	\$28.77	\$8.67	\$7.40	\$0.65	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$46.49	\$60.88
4th Year	95.00	\$30.37	\$8.67	\$7.40	\$0.65	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$48.09	\$63.28

Special Calculation Note : Classification title contains "Bricklayer" because contract originates within the Bricklayer Local.

Note that the classification description is clarified after the local union number at the top of the page.

Ratio :

- 1 - 3 Journeyman to 1 Apprentice
- 4 - 8 Journeyman to 2 Apprentice
- 9 - 13 Journeyman to 3 Apprentice
- 14 - 18 Journeyman to 4 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ATHENS, COSHOCTON, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GUERNSEY, HOCKING, JACKSON, KNOX, LICKING, MADISON, MEIGS, MORGAN, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, ROSS, UNION, VINTON, WASHINGTON

Special Jurisdictional Note : Noble County: (Townships of Beaver, Buffalo, Seneca & Wayne)

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Carpenter Millwright Local 1090 SC South Point District A

Change # : LCN01-2024ibLoc1090SCSPDisA

Craft : Carpenter Effective Date : 06/12/2024 Last Posted : 06/12/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Carpenter Millwright	\$37.78		\$8.37	\$13.59	\$0.88	\$0.00	\$4.87	\$0.28	\$0.00	\$0.00	\$65.77	\$84.66
Apprentice Percent												
1st 6 months	60.00	\$22.67	\$8.37	\$13.59	\$0.88	\$0.00	\$4.87	\$0.28	\$0.00	\$0.00	\$50.66	\$61.99
2nd 6 months	65.02	\$24.56	\$8.37	\$13.59	\$0.88	\$0.00	\$4.87	\$0.28	\$0.00	\$0.00	\$52.55	\$64.84
3rd 6 months	70.00	\$26.45	\$8.37	\$13.59	\$0.88	\$0.00	\$4.87	\$0.28	\$0.00	\$0.00	\$54.44	\$67.66
4th 6 months	75.00	\$28.33	\$8.37	\$13.59	\$0.88	\$0.00	\$4.87	\$0.28	\$0.00	\$0.00	\$56.33	\$70.49
5th 6 months	80.00	\$30.22	\$8.37	\$13.59	\$0.88	\$0.00	\$4.87	\$0.28	\$0.00	\$0.00	\$58.21	\$73.33
6th 6 months	85.00	\$32.11	\$8.37	\$13.59	\$0.88	\$0.00	\$4.87	\$0.28	\$0.00	\$0.00	\$60.10	\$76.16
7th 6 months	90.00	\$34.00	\$8.37	\$13.59	\$0.88	\$0.00	\$4.87	\$0.28	\$0.00	\$0.00	\$61.99	\$78.99
8th 6 months	95.00	\$35.89	\$8.37	\$13.59	\$0.88	\$0.00	\$4.87	\$0.28	\$0.00	\$0.00	\$63.88	\$81.83

Special Calculation Note : Other is UBC National Fund.

Ratio :
3 Journeymen to 1 Apprentice

If certain projects warrant a larger percentage of apprentices, it will be agreed to increase the ratio of apprentices to journeymen, but Not to exceed (1) Apprentice to (4) Journeymen.

Jurisdiction (* denotes special jurisdictional note) :
ADAMS, FAYETTE, GALLIA, HIGHLAND, HOCKING, JACKSON, LAWRENCE, MEIGS, PIKE, ROSS, SCIOTO, VINTON

Special Jurisdictional Note :

Details :

The term “Millwright and Machine Erectors” jurisdiction shall mean the unloading, hoisting, rigging, skidding, moving, dismantling, aligning, erecting, assembling, repairing, maintenance and adjusting of all structures, processing areas either under cover, underground or elsewhere, required to process material, handle, manufacture or service, be it powered or receiving power manually, by steam, gas, electricity, gasoline, diesel, nuclear, solar, water, air or chemically, and in industries such as and including, which are identified for the purpose of description, but not limited to, the following: woodworking plants; canning industries; steel mills; coffee roasting plants; paper and pulp; cellophane; stone crushing; gravel and sand washing and handling; refineries; grain storage and handling; asphalt plants; sewage disposal; water plants; laundries; bakeries; mixing plants; can, bottle and bag packing plants; textile mills; paint mills; breweries; milk processing plants; power plants; aluminum processing or manufacturing plants; and amusement and entertainment fields. The installation of mechanical equipment in atomic energy plants; installation of reactors in power plants; installation of control rods and equipment in reactors; and installation of mechanical equipment in rocket missile bases, launchers, launching gantry, floating bases, hydraulic escape doors and any and all component parts thereto, either assembled, semi-assembled or disassembled. The installation of, but not limited to, the following: setting-up of all engines, motors, generators, air compressors, fans, pumps, scales, hoppers, conveyors of all types, sizes and their supports; escalators; man lifts;

moving sidewalks; hosts; dumb waiters; all types of feeding machinery; amusement devices; mechanical pin setters and spotters in bowling alleys; refrigeration equipment; and the installation of all types of equipment necessary and required to process material either in the manufacturing or servicing. The handling and installation of pulleys, gears, sheaves, fly wheels, air and vacuum drives, worm drives and gear drivers directly or indirectly coupled to motors, belts, chains, screws, legs, boots, guards, booth tanks, all bin valves, turn heads and indicators, shafting, bearings, cable sprockets cutting all key seats in new and old work, troughs, chippers, filters, calendars, rolls, winders, rewinders, slitters, cutters, wrapping machines, blowers, forging machines, rams, hydraulic or otherwise, planning, extruder, ball, dust collectors, equipment in meat packing plants, splicing or ropes and cables. The laying-out, fabrication and installation of protection equipment including machinery guards, making and setting of templates for machinery, fabrication of bolts, nuts, pans, dripping of holes for any equipment which the Millwrights install regardless of materials; all welding and burning regardless of type, fabrication of all lines, hose or tubing used in lubricating machinery installed by Millwrights; grinding, cleaning, servicing and any machine work necessary for any part of any equipment installed by the Millwrights; and the break-in and trail run of any equipment or machinery installed by the Millwrights. It is agreed the Millwrights shall use the layout tools and optic equipment necessary to perform their work.

Prevailing Wage Rate Skilled Crafts

Name of Union: Carpenter & Pile Driver Local 437 SC District C Commercial

Change # : LCN01-2024ibLoc437SCDisCComm

Craft : Carpenter Effective Date : 06/12/2024 Last Posted : 06/12/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Carpenter	\$28.77		\$8.38	\$14.36	\$0.88	\$0.00	\$3.17	\$0.28	\$0.00	\$0.00	\$55.84	\$70.23
Apprentice	Percent											
1st 6 Months	60.00	\$17.26	\$8.38	\$8.98	\$0.88	\$0.00	\$0.00	\$0.28	\$0.00	\$0.00	\$35.78	\$44.41
2nd 6 Months	65.00	\$18.70	\$8.38	\$8.98	\$0.88	\$0.00	\$0.00	\$0.28	\$0.00	\$0.00	\$37.22	\$46.57
3rd 6 Months	70.02	\$20.14	\$8.38	\$9.98	\$0.88	\$0.00	\$1.86	\$0.28	\$0.00	\$0.00	\$41.52	\$51.60
4th 6 Months	75.00	\$21.58	\$8.38	\$9.98	\$0.88	\$0.00	\$1.86	\$0.28	\$0.00	\$0.00	\$42.96	\$53.75
5th 6 Months	80.00	\$23.02	\$8.38	\$10.98	\$0.88	\$0.00	\$2.11	\$0.28	\$0.00	\$0.00	\$45.65	\$57.15
6th 6 Months	85.00	\$24.45	\$8.38	\$10.98	\$0.88	\$0.00	\$2.11	\$0.28	\$0.00	\$0.00	\$47.08	\$59.31
7th 6 Months	90.00	\$25.89	\$8.38	\$11.98	\$0.88	\$0.00	\$2.36	\$0.28	\$0.00	\$0.00	\$49.77	\$62.72
8th 6 Months	95.00	\$27.33	\$8.38	\$11.98	\$0.88	\$0.00	\$2.36	\$0.28	\$0.00	\$0.00	\$51.21	\$64.88

Special Calculation Note : Other is UBC National Fund

Ratio :
3 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :
ADAMS, FAYETTE, HIGHLAND, JACKSON, LAWRENCE*, PIKE, ROSS, SCIOTO

Special Jurisdictional Note : Lawrence County: Except east of State Route 775

Details :

Workmen employed on scaffold work, shafts, elevators, open structures or hazardous work, etc. shall be paid a rate of twenty-five cents (\$0.25) per hour above the regular scale of wages at 40 feet and five (\$0.05) per hour for every ten feet thereafter. CARPENTERS duties shall include but not limited to the milling, fashioning, joining, assembling, erecting, fastening, or dismantling of scaffolding and of material of wood, plastic, metal, fiber, cork and composition, and all other substitute materials. The handling, cleaning, erecting, installing and dismantling of machinery, equipment and all materials used by carpenters. The building and setting of all concrete forms and decking, and dismantling the same; the setting of templates for anchor bolts for structural members and for machinery, and the placing, leveling and bracing of these bolts; the making of all forms for bulkheads, figures, post, balusters and ornaments. The erection and installation of cooling towers assembled onsite. The building of all barricades and handling of rough lumber and drywall. The installation of all required blocking and all toilet accessories, including but not limited to grab bars, napkin dispensers and receptacles, mirrors and soap dispensers. The installation of metal studs and the welding of studs and other fastenings to receive material being applied by carpenters. The installation of all material used in drywall construction such as plasterboard, transite and other composition boards. The installation of carpet, artificial turf, wood and Resilient floors shall consist of and include the laying of all special designs of wood, wood block, wood composition, cork, linoleum, asphalt, mastic, plastic and rubber tile, whether nailed or laid in, or with linoleum paste or glue compositions. The installation of garage and overhead doors. The installation of fixtures, cabinets, shelving, racks, louvers, etc. The assembling and setting of all seats in theaters, halls, churches, schools, auditoriums, grandstands and other buildings.

Our claim of jurisdiction, therefore, extends over the following subdivisions of the trade. Carpenters and Joiners; Bridge, Dock and Wharf Carpenters, Divers, Underpinners, Timbermen and Core Drillers; Shipwrights, Boat Builders, Ship Carpenters, Joiners and Caulkers, Cabinet Makers, Bench Hands, Stair Builders; Millmen; Wood and Resilient Floor Layers and Finishers; Carpet Layers; Shinglers; Siders; Insulators; Acoustic and Drywall Applicators; Shorers and House Movers; Loggers; Lumber and Sawmill Workers; Furniture Workers; Reed and Rattan Workers; Shingle Weavers; Casket and Coffin Makers; Box Makers; Railroad Carpenters; and Car Builders, regardless of material used; and all those engaged in the operation of woodworking or other machinery required in the fashioning, milling or manufacturing of products used in the trade, or engaged as helpers to any of the above divisions or subdivisions, and the handling, erecting and installing of material on any of the above divisions or subdivisions; burning welding, rigging and the use of any instrument or tool for layout work incidental to the trade. When the term "Carpenter" and "Joiner" is used, it shall mean all the subdivisions of the trade.

PILEDRIVER:

Where piling is used in the construction and repair of all wharves, docks, piers, trestles, caissons, cofferdams, the erection of all sea walls and breakwaters.

The placing of all walling, bumper guards of wood or metal. The framing, boring, drilling or burning of all holes in the same, all tie and hog rods in connection with Piledrivers work.

The driving, bracing, plumbing, cutting-off and capping of all piling whether wood, steel sheeting, metal pipe piling, composite or concrete.

The heading and splicing of wood piling and the making of woodsheet piling, The welding, cutting or burning of any metal and wood piling and shoring and underpinning in connection with Piledriver work.

The loading and unloading of all piling and other material used in connection with Piledrivers work.

The loading, unloading, erecting, framing, dismantling, moving and handling of all drivers, derrick, cranes and other piledriving equipment used in the work. Drilling in piling or drilled in caissons where a steel liner is used.

All machinery used for handling spuds or anchors on floating equipment used in our work shall be operated by our members.

Where swing lines or derricks are used, members shall be used as watchmen.

All underwater and marine work on all bulkheads, wharves, docks, shipyards, caissons, piers, bridges, pipeline work, viaducts, marine cable and trestles, as well as salvage and reclamation work where divers are employed. All clamming work that is done by floating derricks.

Prevailing Wage Rate Skilled Crafts

Name of Union: Carpenter & Pile Driver Local 437 SC District C1 Industrial

Change # : LCN01-2024ibLoc437SCDisC1Ind

Craft : Carpenter Effective Date : 06/12/2024 Last Posted : 06/12/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Carpenter	\$32.82		\$8.30	\$13.98	\$0.88	\$0.00	\$3.45	\$0.28	\$0.00	\$0.00	\$59.71	\$76.12
Pile Driver	\$33.00		\$8.30	\$13.98	\$0.88	\$0.00	\$3.45	\$0.28	\$0.00	\$0.00	\$59.89	\$76.39
Apprentice paid at % of each class above plus listed fringes	Percent											
1st 6 Months	60.00	\$19.69	\$8.30	\$8.98	\$0.88	\$0.00	\$0.00	\$0.28	\$0.00	\$0.00	\$38.13	\$47.98
2nd 6 Months	65.00	\$21.33	\$8.30	\$8.98	\$0.88	\$0.00	\$0.00	\$0.28	\$0.00	\$0.00	\$39.77	\$50.44
3rd 6 Months	70.00	\$22.97	\$8.30	\$9.98	\$0.88	\$0.00	\$2.10	\$0.28	\$0.00	\$0.00	\$44.51	\$56.00
4th 6 Months	75.00	\$24.62	\$8.30	\$9.98	\$0.88	\$0.00	\$2.10	\$0.28	\$0.00	\$0.00	\$46.16	\$58.46
5th 6 Months	80.00	\$26.26	\$8.30	\$10.98	\$0.88	\$0.00	\$2.35	\$0.28	\$0.00	\$0.00	\$49.05	\$62.17
6th 6 Months	85.00	\$27.90	\$8.30	\$10.98	\$0.88	\$0.00	\$2.35	\$0.28	\$0.00	\$0.00	\$50.69	\$64.64
7th 6 Months	90.00	\$29.54	\$8.30	\$11.98	\$0.88	\$0.00	\$2.60	\$0.28	\$0.00	\$0.00	\$53.58	\$68.35
8th 6 Months	95.00	\$31.18	\$8.30	\$11.98	\$0.88	\$0.00	\$2.60	\$0.28	\$0.00	\$0.00	\$55.22	\$70.81

Special Calculation Note : Other is UBC National Fund

Ratio :
3 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :
ADAMS, FAYETTE, HIGHLAND, JACKSON,
LAWRENCE*, PIKE, ROSS, SCIOTO

Special Jurisdictional Note : Lawrence County: Except east of State Route 775

Details :

Workmen employed on scaffold work, shafts, elevators, open structures or hazardous work, etc. shall be paid a rate of twenty-five cents (\$0.25) per hour above the regular scale of wages at 40 feet and five (\$0.05) per hour for every ten feet thereafter. CARPENTERS duties shall include but not limited to the milling, fashioning, joining, assembling, erecting, fastening, or dismantling of scaffolding and of material of wood, plastic, metal, fiber, cork and composition, and all other substitute materials. The handling, cleaning, erecting, installing and dismantling of machinery, equipment and all materials used by carpenters. The building and setting of all concrete forms and decking, and dismantling the same; the setting of templates for anchor bolts for structural members and for machinery, and the placing, leveling and bracing of these bolts; the making of all forms for bulkheads, figures, post, balusters and ornaments. The erection and installation of cooling towers assembled onsite. The building of all barricades and handling of rough lumber and drywall. The installation of all required blocking and all toilet accessories,

including but not limited to grab bars, napkin dispensers and receptacles, mirrors and soap dispensers. The installation of metal studs and the welding of studs and other fastenings to receive material being applied by carpenters. The installation of all material used in drywall construction such as plasterboard, transite and other composition boards. The installation of carpet, artificial turf, wood and Resilient floors shall consist of and include the laying of all special designs of wood, wood block, wood composition, cork, linoleum, asphalt, mastic, plastic and rubber tile, whether nailed or laid in, or with linoleum paste or glue compositions. The installation of garage and overhead doors. The installation of fixtures, cabinets, shelving, racks, louvers, etc. The assembling and setting of all seats in theaters, halls, churches, schools, auditoriums, grandstands and other buildings. Our claim of jurisdiction, therefore, extends over the following subdivisions of the trade. Carpenters and Joiners; Bridge, Dock and Wharf Carpenters, Divers, Underpinners, Timbermen and Core Drillers; Shipwrights, Boat Builders, Ship Carpenters, Joiners and Caulkers, Cabinet Makers, Bench Hands, Stair Builders; Millmen; Wood and Resilient Floor Layers and Finishers; Carpet Layers; Shinglers; Siders; Insulators; Acoustic and Drywall Applicators; Shorers and House Movers; Loggers; Lumber and Sawmill Workers; Furniture Workers; Reed and Rattan Workers; Shingle Weavers; Casket and Coffin Makers; Box Makers; Railroad Carpenters; and Car Builders, regardless of material used; and all those engaged in the operation of woodworking or other machinery required in the fashioning, milling or manufacturing of products used in the trade, or engaged as helpers to any of the above divisions or subdivisions, and the handling, erecting and installing of material on any of the above divisions or subdivisions; burning welding, rigging and the use of any instrument or tool for layout work incidental to the trade. When the term "Carpenter" and "Joiner" is used, it shall mean all the subdivisions of the trade.

PILEDRIIVER:

Where piling is used in the construction and repair of all wharves, docks, piers, trestles, caissons, cofferdams, the erection of all sea walls and breakwaters.

The placing of all walling, bumper guards of wood or metal. The framing, boring, drilling or burning of all holes in the same, all tie and hog rods in connection with Piledrivers work.

The driving, bracing, plumbing, cutting-off and capping of all piling whether wood, steel sheeting, metal pipe piling, composite or concrete.

The heading and splicing of wood piling and the making of woodsheet piling, The welding, cutting or burning of any metal and wood piling and shoring and underpinning in connection with Piledriver work.

The loading and unloading of all piling and other material used in connection with Piledrivers work.

The loading, unloading, erecting, framing, dismantling, moving and handling of all drivers, derrick, cranes and other piledriving equipment used in the work. Drilling in piling or drilled in caissons where a steel liner is used.

All machinery used for handling spuds or anchors on floating equipment used in our work shall be operated by our members.

Where swing lines or derricks are used, members shall be used as watchmen.

All underwater and marine work on all bulkheads, wharves, docks, shipyards, caissons, piers, bridges, pipeline work, viaducts, marine cable and trestles, as well as salvage and reclamation work where divers are employed. All clamming work that is done by floating derricks.

Prevailing Wage Rate Skilled Crafts

Name of Union: Carpenter & Piledriver SC District HevHwy

Change # : LCN01-2024ibCarpSCHevHwy

Craft : Carpenter Effective Date : 05/08/2024 Last Posted : 05/08/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Journeyman	\$33.00		\$8.20	\$10.78	\$0.60	\$0.00	\$2.85	\$0.16	\$0.00	\$0.00	\$55.59	\$72.09
Apprentice	Percent											
1st 6 months	60.00	\$19.80	\$8.20	\$10.78	\$0.60	\$0.00	\$2.85	\$0.16	\$0.00	\$0.00	\$42.39	\$52.29
2nd 6 months	65.00	\$21.45	\$8.20	\$10.78	\$0.60	\$0.00	\$2.85	\$0.16	\$0.00	\$0.00	\$44.04	\$54.77
3rd 6 months	70.00	\$23.10	\$8.20	\$10.78	\$0.60	\$0.00	\$2.85	\$0.16	\$0.00	\$0.00	\$45.69	\$57.24
4th 6 months	75.00	\$24.75	\$8.20	\$10.78	\$0.60	\$0.00	\$2.85	\$0.16	\$0.00	\$0.00	\$47.34	\$59.72
5th 6 months	80.00	\$26.40	\$8.20	\$10.78	\$0.60	\$0.00	\$2.85	\$0.16	\$0.00	\$0.00	\$48.99	\$62.19
6th 6 months	85.00	\$28.05	\$8.20	\$10.78	\$0.60	\$0.00	\$2.85	\$0.16	\$0.00	\$0.00	\$50.64	\$64.67
7th 6 months	90.00	\$29.70	\$8.20	\$10.78	\$0.60	\$0.00	\$2.85	\$0.16	\$0.00	\$0.00	\$52.29	\$67.14
8th 6 months	95.00	\$31.35	\$8.20	\$10.78	\$0.60	\$0.00	\$2.85	\$0.16	\$0.00	\$0.00	\$53.94	\$69.61

Special Calculation Note : Other is UBC National Fund

Ratio :

1 Journeymen to 1 Apprentice

An employer shall have the right to employ one (1) Apprentice for one (1) Journeyman Carpenter in its employment for the first Apprentice employed, and 1 (1) Apprentice for two (2) Journeyman Carpenter for additional Apprentices employed. Thereafter, every third additional carpenter hired shall be an apprentice, if available, and if practical for the type of work being performed.

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ATHENS, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GUERNSEY, HIGHLAND, HOCKING, JACKSON, LAWRENCE, LICKING, MADISON, MARION, MEIGS, MORGAN, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, ROSS, SCIOTO, UNION, VINTON, WASHINGTON

Special Jurisdictional Note : **Highway Construction, Airport Construction, Heavy Construction but not limited to: (Tunnels, subways, drainage projects, flood control, reservoirs). Railroad Construction, Sewer Waterworks & Utility Construction but not limited to: (storm sewers, waterlines, gaslines). Industrial & Building site, Power Plant, Amusement Park, Athletic stadium site, Sewer and Water Plants. When the contractor furnishes the necessary underwater gear for the diver, the diver shall be paid one and one half (1 & 1/2) times the journeyman rate for the time spent in the water.

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Cement Mason Local 132 (Columbus)

Change # : LCN02-2024ibLoc132Columbus

Craft : Cement Effective Date : 06/12/2024 Last Posted : 06/12/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Cement Mason	\$33.27		\$8.25	\$4.65	\$0.70	\$0.00	\$2.50	\$0.06	\$0.00	\$0.00	\$49.43	\$66.06
Apprentice												
	Percent											
1st Year	70.00	\$23.29	\$8.25	\$4.65	\$0.70	\$0.00	\$2.50	\$0.06	\$0.00	\$0.00	\$39.45	\$51.09
2nd Year	80.00	\$26.62	\$8.25	\$4.65	\$0.70	\$0.00	\$2.50	\$0.06	\$0.00	\$0.00	\$42.78	\$56.08
3rd Year	90.00	\$29.94	\$8.25	\$4.65	\$0.70	\$0.00	\$2.50	\$0.06	\$0.00	\$0.00	\$46.10	\$61.07

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time. *Other is International Training.

Ratio :

3 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ASHLAND, COSHOCTON, CRAWFORD, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GUERNSEY, HOCKING, KNOX, LICKING, MADISON, MARION, MORROW, MUSKINGUM, PERRY, PICKAWAY, RICHLAND, ROSS, UNION, VINTON, WYANDOT

Special Jurisdictional Note :

Details :

Working on swing stage, slip scaffold or window jack scaffold shall receive the following rates:

\$0.50 above the regular rate for heights up to fifty (50) feet above grade level

\$1.00 above the regular rate for heights over fifty (50) feet above grade level

Prevailing Wage Rate Skilled Crafts

Name of Union: Cement Mason Statewide HevHwy

Change # : LCN01-2024ibCementHevHwy

Craft : Cement Mason Effective Date : 05/01/2024 Last Posted : 05/01/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Cement Mason	\$34.74		\$8.80	\$7.65	\$0.75	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$54.26	\$71.63
Apprentice	Percent											
1st Year	70.00	\$24.32	\$8.80	\$7.65	\$0.75	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$43.84	\$56.00
2nd Year	80.00	\$27.79	\$8.80	\$7.65	\$0.75	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$47.31	\$61.21
3rd Year	90.00	\$31.27	\$8.80	\$7.65	\$0.75	\$0.00	\$2.25	\$0.07	\$0.00	\$0.00	\$50.79	\$66.42
4th Year	95.00	\$33.00	\$8.80	\$7.65	\$0.75	\$0.00	\$3.25	\$0.07	\$0.00	\$0.00	\$53.52	\$70.02

Special Calculation Note : Other \$0.07 is for International Training Fund

4th Year Apprentice Rate (95%) is only applicable to the jurisdiction of Local 404, this includes Ashtabula, Cuyahoga, Geauga, Lake, and Lorain counties.

Ratio :

1 Journeymen to 1 Apprentice
2 to 1 thereafter

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ASHTABULA*, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA*, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON*, GALLIA, GEAUGA*, GREENE, GUERNSEY, HAMILTON, HANCOCK*, HARDIN, HARRISON, HENRY*, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE*, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS*, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM*, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD*, WYANDOT

Special Jurisdictional Note : (A) Highway Construction, Sewer, Waterworks And Utility Construction, Industrial & Building Site, Heavy Construction, Airport Construction Or Railroad Construction Work, Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work, Pollution Control, Sewer Plant, Waste & Water Plant, Water Treatment Facilities Construction.

*For Power Plant, Tunnels, Amusement Park, Athletic Stadium Site Work, Pollution Control, Sewer Plant, Waste & Water Plant, Water Treatment Facility Construction work in the following Counties: Ashtabula, Cuyahoga, Fulton, Geauga, Hancock, Henry, Lake, Lucas, Putnam and Wood Counties, those counties will use the Cement Mason Statewide Heavy Highway Exhibit B District 1 Wage Rate.

Details :

This rate replaces the previous Cement Mason Heavy Highway Statewide Rates (Exhibit A and Exhibit B rates), except for Cement Mason Statewide Heavy Highway Exhibit B Dist 1. sks

Prevailing Wage Rate Skilled Crafts

Name of Union: **Electrical Local 575 Inside**

Change # : LCN01-2024ibLoc575in

Craft : Electrical Effective Date : 01/10/2024 Last Posted : 01/10/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Electrician	\$37.00		\$11.15	\$1.11	\$1.05	\$0.00	\$8.96	\$0.00	\$0.00	\$0.00	\$59.27	\$77.77
50 to 100 feet	\$40.70		\$11.15	\$1.22	\$1.05	\$0.00	\$8.96	\$0.00	\$0.00	\$0.00	\$63.08	\$83.43
100 to 200 feet	\$55.50		\$11.15	\$1.67	\$1.05	\$0.00	\$8.96	\$0.00	\$0.00	\$0.00	\$78.33	\$106.08
200 feet & over	\$74.00		\$11.15	\$2.22	\$1.05	\$0.00	\$8.96	\$0.00	\$0.00	\$0.00	\$97.38	\$134.38
Apprentice	Percent											
1st period 0-1000 hrs	45.00	\$16.65	\$11.15	\$0.50	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$29.35	\$37.67
2nd period 1001-2000 hrs	50.00	\$18.50	\$11.15	\$0.56	\$1.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.26	\$40.51
3rd period 2001-3500 hrs	55.00	\$20.35	\$11.15	\$0.61	\$1.05	\$0.00	\$8.96	\$0.00	\$0.00	\$0.00	\$42.12	\$52.30
4th period 3501-5000 hrs	65.00	\$24.05	\$11.15	\$0.72	\$1.05	\$0.00	\$8.96	\$0.00	\$0.00	\$0.00	\$45.93	\$57.96
5th period 5001-6000 hrs	75.00	\$27.75	\$11.15	\$0.83	\$1.05	\$0.00	\$8.96	\$0.00	\$0.00	\$0.00	\$49.74	\$63.61
6th period 6501-8000 hrs	85.00	\$31.45	\$11.15	\$0.94	\$1.05	\$0.00	\$8.96	\$0.00	\$0.00	\$0.00	\$53.55	\$69.27

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

Journeyman Apprentices
1 to 3 to 2
4 to 6 to 4
7 to 9 to 6 etc.

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, FAYETTE, HIGHLAND, HOCKING, JACKSON, PICKAWAY*, PIKE, ROSS, SCIOTO, VINTON*

Special Jurisdictional Note : In Pickaway County the following townships: Deer Creek ,Perry, Pickaway, Salt Creek and Wayne.
In Vinton County the following townships: Clinton, Eagle, Elk, Harrison, Jackson, Richland, and Swan.

Details :

When workmen are required to work fifty feet or higher from the ground or floor level from trusses, stacks, tanks, boatswain chair, scaffolds, platforms, buckets, J.L.G. lifts with platforms (motorized or manual), catwalks, floors & decks where there are openings and the workmen are subject to a direct fall, the workmen's straight time rate shall be as shown above.

No high rates are required for work performed from bucket trucks or high lifts, on permanent decking, floors and catwalks with permanent hand rails, 40' extension ladders originating from ground level or lighting poles and towers where work is performed on permanent catwalks with handrails.

Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 575 Inside Lt Commercial South West

Change # : LCN01-2014fbLoc575in

Craft : Electrical Effective Date : 03/05/2014 Last Posted : 03/05/2014

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Electrician	\$31.70		\$7.20	\$0.95	\$0.40	\$0.00	\$5.31	\$0.00	\$0.00	\$0.10	\$45.66	\$61.51
50 to 100 feet	\$33.76		\$7.05	\$1.01	\$0.40	\$0.00	\$4.61	\$0.00	\$0.00	\$0.00	\$46.83	\$63.71
1000 to 200 feet	\$46.04		\$7.05	\$1.38	\$0.40	\$0.00	\$4.61	\$0.00	\$0.00	\$0.00	\$59.48	\$82.50
200 feet & over	\$61.38		\$7.05	\$1.84	\$0.40	\$0.00	\$4.61	\$0.00	\$0.00	\$0.00	\$75.28	\$105.97
CE-3 12,001- 14,000 Hrs	\$20.11		\$4.62	\$0.60	\$0.64	\$0.00	\$0.60	\$0.00	\$0.00	\$0.10	\$26.67	\$36.73
CE-2 10,001- 12,000 Hrs	\$15.80		\$4.62	\$0.47	\$0.64	\$0.00	\$0.47	\$0.00	\$0.00	\$0.10	\$22.10	\$30.00
CE-1 8,001- 10,000 Hrs	\$14.37		\$4.62	\$0.43	\$0.64	\$0.00	\$0.43	\$0.00	\$0.00	\$0.10	\$20.59	\$27.78
CW-4 6,001- 8,000 Hrs	\$12.93		\$4.62	\$0.39	\$0.64	\$0.00	\$0.39	\$0.00	\$0.00	\$0.10	\$19.07	\$25.54
CW-3 4,001- 6,000 Hrs	\$11.49		\$4.62	\$0.34	\$0.64	\$0.00	\$0.34	\$0.00	\$0.00	\$0.10	\$17.53	\$23.28
CW-2 2,001- 4,000 Hrs	\$10.06		\$4.62	\$0.30	\$0.64	\$0.00	\$0.30	\$0.00	\$0.00	\$0.10	\$16.02	\$21.05
CW-1 0- 2,000 Hrs	\$10.06		\$4.62	\$0.30	\$0.64	\$0.00	\$0.30	\$0.00	\$0.00	\$0.10	\$16.02	\$21.05
Apprentice	Percent											
1st period 0-1000 hrs	40.00	\$12.68	\$7.20	\$0.38	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.10	\$20.76	\$27.10
2nd period 1001- 2000 hrs	45.00	\$14.27	\$7.20	\$0.43	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.10	\$22.39	\$29.53
3rd period 2001- 3500 hrs	55.00	\$17.44	\$7.20	\$0.52	\$0.40	\$0.00	\$5.31	\$0.00	\$0.00	\$0.10	\$30.96	\$39.68
4th period 3501- 5000 hrs	65.00	\$20.60	\$7.20	\$0.62	\$0.40	\$0.00	\$5.31	\$0.00	\$0.00	\$0.10	\$34.24	\$44.54
5th period 5001- 6000 hrs	74.70	\$23.68	\$7.20	\$0.71	\$0.40	\$0.00	\$5.31	\$0.00	\$0.00	\$0.10	\$37.40	\$49.24
6th period 6501 - 8000 hrs	85.00	\$26.94	\$7.20	\$0.81	\$0.40	\$0.00	\$5.31	\$0.00	\$0.00	\$0.10	\$40.77	\$54.24

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

Journeyman Apprentices
1 to 3 to 2
4 to 6 to 4
7 to 9 to 6 etc.

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, FAYETTE, HIGHLAND, HOCKING, PICKAWAY*,
ROSS

Construction Electrician and Construction Wireman Ratio

There shall be a minimum ratio of one inside Journeyman to every (4) employees of different classification per jobsite. An inside Journeyman Wireman is required on the project as the fifth (5th) worker or when apprentices are used.

Special Jurisdictional Note : In Pickaway County the following townships: Deer Creek ,Perry, Pickaway, Salt Creek and Wayne.

The scope of work for the light commercial agreement shall apply to the following facilities not to exceed 200,000 square feet; office buildings, shopping centers, auto sales agencies and garages, churches, funeral homes, nursing homes, hotels, retail and wholesale facilities, small stand-alone manufacturing facilities when free standing and not part of a larger facility (not to exceed 50,000 square fee), solar projects (500 panels or less) unless otherwise covered under the agreement, lighting retrofits (when not associated with remodels involving branch re-circuiting) lighting retrofits shall be defined as the changing of lamps and ballasts in existing light fixtures and shall also include the one for one replacement of existing fixtures, warehouses, gas stations, food service centers, restaurants, entertainment facilities, hospitals, clinics, motels, residential buildings.

Details :

When workmen are required to work fifty feet or higher from the ground or floor level from trusses, stacks, tanks, boatswain chair, scaffolds, platforms, buckets, J.L.G. lifts with platforms (motorized or manual), catwalks, floors & decks where there are openings and the workmen are subject to a direct fall, the workmen's straight time rate shall be as shown above.

No high rates are required for work performed from bucket trucks or high lifts, on permanent decking, floors and catwalks with permanent hand rails, 40' extension ladders originating from ground level or lighting poles and towers where work is performed on permanent catwalks with handrails.

Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 575 Voice Data Video

Change # : LCN01-2022sksLoc575VDV

Craft : Voice Data Video Effective Date : 06/29/2022 Last Posted : 06/29/2022

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Electrical Installer Technician B	\$28.70		\$9.60	\$4.25	\$0.70	\$0.00	\$0.00	\$0.67	\$0.00	\$0.00	\$43.92	\$58.27
Installer Technician A	\$29.95		\$9.60	\$4.28	\$0.70	\$0.00	\$0.00	\$0.70	\$0.00	\$0.00	\$45.23	\$60.21
Cable Puller	\$14.35		\$9.60	\$3.81	\$0.70	\$0.00	\$0.00	\$0.34	\$0.00	\$0.00	\$28.80	\$35.98
Apprentices	Percent											
1st Period 0-1000 hours	55.00	\$15.79	\$9.60	\$3.86	\$0.70	\$0.00	\$0.00	\$0.37	\$0.00	\$0.00	\$30.31	\$38.21
2nd Period 1001-2000 hours	60.00	\$17.22	\$9.60	\$3.90	\$0.70	\$0.00	\$0.00	\$0.40	\$0.00	\$0.00	\$31.82	\$40.43
3rd Period 2001-3000 hours	65.00	\$18.66	\$9.60	\$3.94	\$0.70	\$0.00	\$0.00	\$0.43	\$0.00	\$0.00	\$33.33	\$42.65
4th Period 3001-4000 hours	70.00	\$20.09	\$9.60	\$3.99	\$0.70	\$0.00	\$0.00	\$0.47	\$0.00	\$0.00	\$34.85	\$44.90
5th Period 4001-5000 hours	75.00	\$21.52	\$9.60	\$4.03	\$0.70	\$0.00	\$0.00	\$0.50	\$0.00	\$0.00	\$36.36	\$47.12
6th Period 5001-6000 hours	80.00	\$22.96	\$9.60	\$4.07	\$0.70	\$0.00	\$0.00	\$0.53	\$0.00	\$0.00	\$37.86	\$49.34

Special Calculation Note : Other is for Holiday Pay.

Ratio :
1 Apprentice to 1 Installer Technician

Jurisdiction (* denotes special jurisdictional note) :
ADAMS, FAYETTE, HIGHLAND, HOCKING, JACKSON, PICKAWAY*, PIKE, ROSS, SCIOTO, VINTON*

Special Jurisdictional Note : In Pickaway County the following townships: Deer Creek, Perry, Pickaway, Salt Creek and Wayne. In Vinton County the following townships: Clinton, Eagle, Elk, Harrison, Jackson, Richland and Swan.

Details :
An employee who is required to wear an electronic device after hours will receive an additional 1.00 per hour for all hours worked.

HOLIDAYS: Memorial Day, 4th of July, Labor Day, Thanksgiving Day, Christmas Day, New Years Day.

The following work is EXCLUDED from the Teledata Technician work scope:

- Installation of computer systems in industrial applications such as assembly lines, robotics, computer controller manufacturing systems.

- Installation of conduit &/or raceways shall be installed by Inside Wireman . On sites where there is no Inside Wireman employed, the Teledata Technician may install raceway, or conduit not greater than 10 foot.

- Fire Alarm work is excluded on all new construction sites or wherever the fire alarm system is installed in conduit

- All HVAC control work.

TECHNICIAN (A) is a Technician B who holds a current Technician Certification from BICSI (Building Industry Consulting Service International, Inc.)

CABLE PULLERS are for the installation of cable from one termination point to another.

Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 71 High Tension Pipe Type Cable

Change # : LCN01-2024ibLoc71HTPC

Craft : Lineman Effective Date : 02/07/2024 Last Posted : 02/07/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Electrical Lineman	\$50.66		\$7.25	\$1.52	\$0.51	\$0.00	\$12.16	\$0.75	\$0.00	\$0.00	\$72.85	\$98.18
Certified Lineman Welder	\$50.66		\$7.25	\$1.52	\$0.51	\$0.00	\$12.16	\$0.75	\$0.00	\$0.00	\$72.85	\$98.18
Certified Cable Splicer	\$50.66		\$7.25	\$1.52	\$0.51	\$0.00	\$12.16	\$0.75	\$0.00	\$0.00	\$72.85	\$98.18
Operator A	\$45.39		\$7.25	\$1.36	\$0.45	\$0.00	\$10.89	\$0.75	\$0.00	\$0.00	\$66.09	\$88.79
Operator B	\$40.18		\$7.25	\$1.21	\$0.40	\$0.00	\$9.64	\$0.75	\$0.00	\$0.00	\$59.43	\$79.52
Operator C	\$32.29		\$7.25	\$0.97	\$0.32	\$0.00	\$7.75	\$0.75	\$0.00	\$0.00	\$49.33	\$65.47
Groundman 0-12 months Exp	\$25.33		\$7.25	\$0.76	\$0.25	\$0.00	\$6.08	\$0.75	\$0.00	\$0.00	\$40.42	\$53.08
Groundman 0-12 months Exp w/CDL	\$27.86		\$7.25	\$0.84	\$0.28	\$0.00	\$6.69	\$0.75	\$0.00	\$0.00	\$43.67	\$57.60
Groundman 1 yr or more	\$27.86		\$7.25	\$0.84	\$0.28	\$0.00	\$6.69	\$0.75	\$0.00	\$0.00	\$43.67	\$57.60
Groundman 1 yr or more w/CDL	\$32.92		\$7.25	\$0.99	\$0.33	\$0.00	\$7.90	\$0.75	\$0.00	\$0.00	\$50.14	\$66.60
Equipment Mechanic A	\$40.18		\$7.25	\$1.21	\$0.40	\$0.00	\$9.64	\$0.75	\$0.00	\$0.00	\$59.43	\$79.52
Equipment Mechanic B	\$36.23		\$7.25	\$1.09	\$0.36	\$0.00	\$8.70	\$0.75	\$0.00	\$0.00	\$54.38	\$72.50
Equipment Mechanic C	\$32.29		\$7.25	\$0.97	\$0.32	\$0.00	\$7.75	\$0.75	\$0.00	\$0.00	\$49.33	\$65.47
X-Ray Technician	\$50.66		\$7.25	\$1.52	\$0.51	\$0.00	\$12.16	\$0.75	\$0.00	\$0.00	\$72.85	\$98.18
Apprentice	Percent											
1st 1000 hrs	60.00	\$30.40	\$7.25	\$0.91	\$0.30	\$0.00	\$7.30	\$0.75	\$0.00	\$0.00	\$46.91	\$62.10
2nd 1000 hrs	65.00	\$32.93	\$7.25	\$0.99	\$0.33	\$0.00	\$7.90	\$0.75	\$0.00	\$0.00	\$50.15	\$66.61
3rd 1000 hrs	70.00	\$35.46	\$7.25	\$1.06	\$0.35	\$0.00	\$8.51	\$0.75	\$0.00	\$0.00	\$53.38	\$71.11

4th 1000 hrs	75.00	\$38.00	\$7.25	\$1.14	\$0.38	\$0.00	\$9.12	\$0.75	\$0.00	\$0.00	\$56.64	\$75.63
5th 1000 hrs	80.00	\$40.53	\$7.25	\$1.22	\$0.41	\$0.00	\$9.73	\$0.75	\$0.00	\$0.00	\$59.89	\$80.15
6th 1000 hrs	85.00	\$43.06	\$7.25	\$1.29	\$0.43	\$0.00	\$10.33	\$0.75	\$0.00	\$0.00	\$63.11	\$84.64
7th 1000 hrs	90.00	\$45.59	\$7.25	\$1.37	\$0.46	\$0.00	\$10.94	\$0.75	\$0.00	\$0.00	\$66.36	\$89.16

Special Calculation Note : Other is Health Retirement Account

Operator "A"

John Henry Rock Drill, D-6 (or equivalent) and above, Trackhoe Digger, (320 Track excavator), Cranes (greater then 25 tons and less than 45 tons).

Operator "B"

Cranes (greater than 6 tons and up to 25 tons), Backhoes, Road Tractor, Dozer up to D-5, Pressure Digger- wheeled or tracked, all Tension wire Stringing equipment.

Operator "C"

Trench, Backhoe, Riding type vibratory Compactor, Ground Rod Driver, Boom Truck (6 ton & below), Skid Steer Loaders, Material Handler.

*All Operators of cranes 45 ton or larger shall be paid the journeyman rate of pay. \$0.30 is for Health Retirement Account.

Ratio :

1 Journeyman to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HARRISON, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, RICHLAND, ROSS, SCIOTO, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VINTON, WARREN, WASHINGTON, WAYNE

Special Jurisdictional Note :

Details :

Heli - Arc Welding will be paid \$.30 above Journeyman rate. Additional compensation of 10% over the Journeyman Lineman and Journeyman Technician for performing work on structures outside of buildings such as water towers, smoke stacks, radio and television towers, more than 75' above the ground.

Prevailing Wage Rate Skilled Crafts

Name of Union: **Electrical Local 71 Outside Utility Power**

Change # : LCN01-2024ibLoc7

Craft : Lineman Effective Date : 02/07/2024 Last Posted : 02/07/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Electrical Lineman	\$47.99		\$7.25	\$1.44	\$0.48	\$0.00	\$11.52	\$0.75	\$0.00	\$0.00	\$69.43	\$93.42
Substation Technician	\$47.99		\$7.25	\$1.44	\$0.48	\$0.00	\$11.52	\$0.75	\$0.00	\$0.00	\$69.43	\$93.42
Cable Splicer	\$50.26		\$7.25	\$1.51	\$0.50	\$0.00	\$12.06	\$0.75	\$0.00	\$0.00	\$72.33	\$97.46
Operator A	\$43.01		\$7.25	\$1.29	\$0.43	\$0.00	\$10.32	\$0.75	\$0.00	\$0.00	\$63.05	\$84.56
Operator B	\$38.02		\$7.25	\$1.14	\$0.38	\$0.00	\$9.12	\$0.75	\$0.00	\$0.00	\$56.66	\$75.67
Operator C	\$30.52		\$7.25	\$0.92	\$0.31	\$0.00	\$7.32	\$0.75	\$0.00	\$0.00	\$47.07	\$62.33
Groundman 0-12 months Exp	\$24.00		\$7.25	\$0.72	\$0.24	\$0.00	\$5.76	\$0.75	\$0.00	\$0.00	\$38.72	\$50.72
Groundman 0-12 months Exp w/CDL	\$26.40		\$7.25	\$0.79	\$0.26	\$0.00	\$6.33	\$0.75	\$0.00	\$0.00	\$41.78	\$54.98
Groundman 1 yr or more	\$26.40		\$7.25	\$0.79	\$0.26	\$0.00	\$6.33	\$0.75	\$0.00	\$0.00	\$41.78	\$54.98
Groundman 1 yr or more w/CDL	\$31.19		\$7.25	\$0.94	\$0.31	\$0.00	\$7.49	\$0.75	\$0.00	\$0.00	\$47.93	\$63.53
Equipment Mechanic A	\$38.02		\$7.25	\$1.14	\$0.38	\$0.00	\$9.12	\$0.75	\$0.00	\$0.00	\$56.66	\$75.67
Equipment Mechanic B	\$34.28		\$7.25	\$1.03	\$0.34	\$0.00	\$8.23	\$0.75	\$0.00	\$0.00	\$51.88	\$69.02
Equipment Mechanic C	\$30.52		\$7.25	\$0.92	\$0.31	\$0.00	\$7.32	\$0.75	\$0.00	\$0.00	\$47.07	\$62.33
Line Truck w/uuger	\$33.65		\$7.25	\$1.01	\$0.34	\$0.00	\$8.08	\$0.75	\$0.00	\$0.00	\$51.08	\$67.90
Apprentice	Percent											
1st 1000 hrs	60.00	\$28.79	\$7.25	\$0.86	\$0.29	\$0.00	\$6.91	\$0.75	\$0.00	\$0.00	\$44.85	\$59.25
2nd 1000 hrs	65.00	\$31.19	\$7.25	\$0.94	\$0.31	\$0.00	\$7.49	\$0.75	\$0.00	\$0.00	\$47.93	\$63.53
3rd 1000 hrs	70.00	\$33.59	\$7.25	\$1.01	\$0.34	\$0.00	\$8.06	\$0.75	\$0.00	\$0.00	\$51.00	\$67.80
4th 1000 hrs	75.00	\$35.99	\$7.25	\$1.08	\$0.36	\$0.00	\$8.64	\$0.75	\$0.00	\$0.00	\$54.07	\$72.07

5th 1000 hrs	80.00	\$38.39	\$7.25	\$1.15	\$0.38	\$0.00	\$9.21	\$0.75	\$0.00	\$0.00	\$57.13	\$76.33
6th 1000 hrs	85.00	\$40.79	\$7.25	\$1.22	\$0.41	\$0.00	\$9.79	\$0.75	\$0.00	\$0.00	\$60.21	\$80.61
7th 1000 hrs	90.00	\$43.19	\$7.25	\$1.30	\$0.43	\$0.00	\$10.37	\$0.75	\$0.00	\$0.00	\$63.29	\$84.89

Special Calculation Note : Other is Health Retirement Account

Operator "A"

John Henry Rock Drill, D-6 (or equivalent) and above, Trackhoe Digger, (320 Track excavator), Cranes (greater then 25 tons and less than 45 tons).

Operator "B"

Cranes (greater than 6 tons and up to 25 tons), Backhoes, Road Tractor, Dozer up to D-5, Pressure Digger- wheeled or tracked, all Tension wire Stringing equipment.

Operator "C"

Trench, Backhoe, Riding type vibratory Compactor, Ground Rod Driver, Boom Truck (6 ton & below), Skid Steer Loaders, Material Handler.

Ratio :

(1) Journeyman Lineman to (1) Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HARRISON, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, RICHLAND, ROSS, SCIOTO, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VINTON, WARREN, WASHINGTON, WAYNE

Special Jurisdictional Note : 0.30 is for Health Retirement Account.

Details :

Heli - Arc Welding will be paid \$.30 above Journeyman rate. Additional compensation of 10% over the Journeyman Lineman and Journeyman Technician for performing work on structures outside of buildings such as water towers, smoke stacks, radio and television towers, more than 75' above the ground.

Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 71 Outside (Central OH Chapter)

Change # : OCR01-2024ibLoc71CentralOhio

Craft : Lineman Effective Date : 02/09/2024 Last Posted : 02/09/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Electrical Lineman	\$44.52		\$7.25	\$1.34	\$0.45	\$0.00	\$8.90	\$0.50	\$0.00	\$0.00	\$62.96	\$85.22
Traffic Signal & Lighting Journeyman	\$42.93		\$7.25	\$1.29	\$0.42	\$0.00	\$8.59	\$0.50	\$0.00	\$0.00	\$60.98	\$82.45
Equipment Operator	\$39.11		\$7.25	\$1.17	\$0.39	\$0.00	\$7.82	\$0.50	\$0.00	\$0.00	\$56.24	\$75.79
Groundman 0-12 months (W/O CDL)	\$23.71		\$7.25	\$0.71	\$0.24	\$0.00	\$4.74	\$0.50	\$0.00	\$0.00	\$37.15	\$49.01
Groundman 0-12 Months W/CDL	\$25.71		\$7.25	\$0.77	\$0.26	\$0.00	\$5.18	\$0.50	\$0.00	\$0.00	\$39.67	\$52.53
Groundman greater than 1 Year W/CDL	\$28.11		\$7.25	\$0.84	\$0.28	\$0.00	\$5.62	\$0.50	\$0.00	\$0.00	\$42.60	\$56.66
Traffic Signal Apprentices												
1st 1,000 hours	\$25.76		\$7.25	\$0.77	\$0.26	\$0.00	\$5.15	\$0.50	\$0.00	\$0.00	\$39.69	\$52.57
2nd 1,000 hours	\$27.90		\$7.25	\$0.84	\$0.28	\$0.00	\$5.58	\$0.50	\$0.00	\$0.00	\$42.35	\$56.30
3rd 1,000 hours	\$30.05		\$7.25	\$0.90	\$0.30	\$0.00	\$6.01	\$0.50	\$0.00	\$0.00	\$45.01	\$60.03
4th 1,000 hours	\$32.20		\$7.25	\$0.97	\$0.32	\$0.00	\$6.44	\$0.50	\$0.00	\$0.00	\$47.68	\$63.78
5th 1,000 hours	\$34.34		\$7.25	\$1.03	\$0.34	\$0.00	\$6.87	\$0.50	\$0.00	\$0.00	\$50.33	\$67.50
6th 1,000 hours	\$38.64		\$7.25	\$1.16	\$0.39	\$0.00	\$7.73	\$0.50	\$0.00	\$0.00	\$55.67	\$74.99
Apprentice Lineman	Percent											
1st 1,000 Hours	60.00	\$26.71	\$7.25	\$0.80	\$0.27	\$0.00	\$5.34	\$0.50	\$0.00	\$0.00	\$40.87	\$54.23
2nd 1,000 Hours	65.00	\$28.94	\$7.25	\$0.87	\$0.29	\$0.00	\$5.79	\$0.50	\$0.00	\$0.00	\$43.64	\$58.11
3rd 1,000 Hours	70.00	\$31.16	\$7.25	\$0.93	\$0.31	\$0.00	\$6.23	\$0.50	\$0.00	\$0.00	\$46.38	\$61.97
4th 1,000 Hours	75.00	\$33.39	\$7.25	\$1.00	\$0.33	\$0.00	\$6.68	\$0.50	\$0.00	\$0.00	\$49.15	\$65.84

5th 1,000 Hours	80.00	\$35.62	\$7.25	\$1.07	\$0.36	\$0.00	\$7.12	\$0.50	\$0.00	\$0.00	\$51.92	\$69.72
6th 1,000 Hours	85.00	\$37.84	\$7.25	\$1.14	\$0.38	\$0.00	\$7.57	\$0.50	\$0.00	\$0.00	\$54.68	\$73.60
7th 1,000 Hours	90.00	\$40.07	\$7.25	\$1.20	\$0.40	\$0.00	\$8.01	\$0.50	\$0.00	\$0.00	\$57.43	\$77.46

Special Calculation Note : Other is Health Reimbursement Account

Ratio :

1 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ASHLAND, ATHENS, COSHOCTON, CRAWFORD, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GUERNSEY, HIGHLAND, HOCKING, JACKSON, KNOX, LAWRENCE, LICKING, MADISON, MARION, MEIGS, MONROE, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, RICHLAND, ROSS, SCIOTO, TUSCARAWAS, UNION, VINTON, WASHINGTON

Special Jurisdictional Note :

Details :

A groundman when directed shall assist a Journeyman Lineman, Traffic Signal and Lighting Journeyman or Equipment Operator in the performance of his/her work on the ground, including the use of hand tools. Under no circumstances shall this classification climb poles, towers, or work from an elevated platform or bucket truck. This classification shall not perform work normally assigned to an Apprentice.

No more than three (3) Groundmen shall work alone. Jobs with more that three Groundmen shall be supervised by a Groundcrew Foreman, Journeyman Lineman, Journeyman Traffic Signal Technician or an Equipment Operator.

Scope of Work: installation and maintenance of highway and street lighting, highway and street sign lighting, electronic message boards and traffic control systems, camera systems, traffic signal work, substation and line construction including overhead and underground projects for private and industrial work as in accordance with the IBEW Constitution. This Agreement includes the operation of all tools and equipment necessary for the installation of the above projects.

Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 71 Underground Residential Distribution

Change # : LCN01-2024ibLoc7URD

Craft : Lineman Effective Date : 02/07/2024 Last Posted : 02/07/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
URD Electrician	\$36.41		\$7.25	\$1.09	\$0.36	\$0.00	\$8.74	\$0.75	\$0.00	\$0.00	\$54.60	\$72.80
Equipment Operator A	\$32.57		\$7.25	\$0.98	\$0.33	\$0.00	\$7.82	\$0.75	\$0.00	\$0.00	\$49.70	\$65.98
Equipment Operator B	\$29.91		\$7.25	\$0.90	\$0.30	\$0.00	\$7.18	\$0.75	\$0.00	\$0.00	\$46.29	\$61.25
Directional Drill Locator	\$32.57		\$7.25	\$0.98	\$0.33	\$0.00	\$7.82	\$0.75	\$0.00	\$0.00	\$49.70	\$65.98
Directional Drill Operator	\$29.91		\$7.25	\$0.90	\$0.30	\$0.00	\$7.18	\$0.75	\$0.00	\$0.00	\$46.29	\$61.25
Groundman 0-12 months Exp	\$23.64		\$7.25	\$0.71	\$0.24	\$0.00	\$5.76	\$0.75	\$0.00	\$0.00	\$38.35	\$50.17
Groundman 0-12 months Exp w/CDL	\$26.07		\$7.25	\$0.78	\$0.26	\$0.00	\$6.26	\$0.75	\$0.00	\$0.00	\$41.37	\$54.41
Groundman 1 yr or more	\$26.07		\$7.25	\$0.78	\$0.26	\$0.00	\$6.26	\$0.75	\$0.00	\$0.00	\$41.37	\$54.41
Groundman 1 yr or more w/CDL	\$30.96		\$7.25	\$0.93	\$0.31	\$0.00	\$7.43	\$0.75	\$0.00	\$0.00	\$47.63	\$63.11
Apprentice	Percent											
1st 1000 hrs	80.00	\$29.13	\$7.25	\$0.87	\$0.29	\$0.00	\$6.99	\$0.75	\$0.00	\$0.00	\$45.28	\$59.84
2nd 1000 hrs	85.00	\$30.95	\$7.25	\$0.93	\$0.31	\$0.00	\$7.43	\$0.75	\$0.00	\$0.00	\$47.62	\$63.09
3rd 1000 hrs	90.00	\$32.77	\$7.25	\$0.98	\$0.33	\$0.00	\$7.86	\$0.75	\$0.00	\$0.00	\$49.94	\$66.32
4th 1000 hrs	95.00	\$34.59	\$7.25	\$1.04	\$0.35	\$0.00	\$8.28	\$0.75	\$0.00	\$0.00	\$52.26	\$69.55

Special Calculation Note : Other: Health Reimbursement Account

Ratio :

(1) Journeyman Lineman to (1) Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GEAUGA, GREENE, GUERNSEY, HAMILTON, HARRISON,

HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON,
KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN,
MADISON, MAHONING, MARION, MEDINA, MEIGS,
MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN,
MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY,
PIKE, PORTAGE, PREBLE, RICHLAND, ROSS, SCIOTO,
SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS,
UNION, VINTON, WARREN, WASHINGTON, WAYNE

Special Jurisdictional Note :

Details :

This work applies to projects designated for any outside Underground Residential Distribution construction work for electrical utilities, municipalities and rural electrification projects.

Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 71 Voice Data Video Outside

Change # : LCN02-2024ibLoc71VDV

Craft : Voice Data Video Effective Date : 03/06/2024 Last Posted : 03/06/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Electrical Installer Technician I	\$35.39		\$7.25	\$1.06	\$0.00	\$0.00	\$1.77	\$0.00	\$0.00	\$0.00	\$45.47	\$63.17
Installer Technician II	\$33.37		\$7.25	\$1.00	\$0.00	\$0.00	\$1.67	\$0.00	\$0.00	\$0.00	\$43.29	\$59.97
Installer Repairman	\$33.37		\$7.25	\$1.00	\$0.00	\$0.00	\$1.67	\$0.00	\$0.00	\$0.00	\$43.29	\$59.97
Equipment Operator II	\$24.98		\$7.25	\$0.75	\$0.00	\$0.00	\$1.25	\$0.00	\$0.00	\$0.00	\$34.23	\$46.72
Cable Splicer	\$35.39		\$7.25	\$1.06	\$0.00	\$0.00	\$1.77	\$0.00	\$0.00	\$0.00	\$45.47	\$63.17
Ground Driver W/CDL	\$16.69		\$7.25	\$0.50	\$0.00	\$0.00	\$0.83	\$0.00	\$0.00	\$0.00	\$25.27	\$33.62
Groundman	\$14.57		\$7.25	\$0.44	\$0.00	\$0.00	\$0.73	\$0.00	\$0.00	\$0.00	\$22.99	\$30.28
Trainees	Percent											
Trainee F	50.01	\$17.70	\$7.25	\$0.53	\$0.00	\$0.89	\$0.00	\$0.00	\$0.00	\$0.00	\$26.37	\$35.22
Trainee E	58.00	\$20.53	\$7.25	\$0.62	\$0.00	\$1.03	\$0.00	\$0.00	\$0.00	\$0.00	\$29.43	\$39.69
Trainee D	66.00	\$23.36	\$7.25	\$0.70	\$0.00	\$1.17	\$0.00	\$0.00	\$0.00	\$0.00	\$32.48	\$44.16
Trainee C	74.00	\$26.19	\$7.25	\$0.79	\$0.00	\$1.31	\$0.00	\$0.00	\$0.00	\$0.00	\$35.54	\$48.63
Trainee B	82.00	\$29.02	\$7.25	\$0.87	\$0.00	\$1.45	\$0.00	\$0.00	\$0.00	\$0.00	\$38.59	\$53.10
Trainee A	90.00	\$31.85	\$7.25	\$0.96	\$0.00	\$1.59	\$0.00	\$0.00	\$0.00	\$0.00	\$41.65	\$57.58

Special Calculation Note :

Ratio :

1 Trainee to 1 Journeyman

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GAUGA, GREENE, GUERNSEY, HAMILTON, HARRISON, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, RICHLAND, ROSS, SCIOTO, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VINTON, WARREN, WASHINGTON, WAYNE

Special Jurisdictional Note :**Details :**

Cable Splicer: Inspect and test lines or cables, analyze results, and evaluate transmission characteristics. Cover conductors with insulation or seal splices with moisture-proof covering. Install, splice, test, and repair cables using tools or mechanical equipment. This will include the splicing of fiber.

Installer Technician I: Must know all aspects of telephone and cable work. This is to include aerial, underground, and manhole work. Must know how to climb and run bucket. Must have all the tools required to perform these tasks. Must be able to be responsible for the safety of the crew at all times. Must also have CDL license and have at least 5 years experience.

Installer Repairman: Perform tasks of repairing, installing, and testing phone and CATV services.

Installer Technician II: Have at least three years of telephone and CATV experience. Must have the knowledge of underground, aerial, and manhole work. Must be able to climb and operate bucket. Must have CDL. Must have all tools needed to perform these tasks.

Equipment Operator II: Able to operate a digger derrick or bucket truck. Have at least 3 years of experience and must have a valid CDL license.

Groundman W/CDL: Must have a valid CDL license and be able to perform tasks such as: climbing poles, pulling down guys, making up material, and getting appropriate tools for the job. Must have at least 5 year's experience.

Groundman: Perform tasks such as: climbing poles, pulling down guys, making up material, and getting appropriate tools for the job. Experience 0-5 years.

Prevailing Wage Rate Skilled Crafts

Name of Union: Elevator Local 37

Change # : LCN01-2023ibLoc37

Craft : Elevator Effective Date : 01/01/2024 Last Posted : 12/27/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Elevator Mechanic	\$54.93		\$16.17	\$10.86	\$0.75	\$4.39	\$10.10	\$0.00	\$0.00	\$0.00	\$97.20	\$124.66
Helper	\$38.45		\$16.17	\$10.86	\$0.75	\$3.07	\$10.10	\$0.00	\$0.00	\$0.00	\$79.40	\$98.62
Apprentice	Percent											
Probationary Apprentice	50.01	\$27.47	\$0.00	\$0.00	\$0.00	\$1.64	\$0.00	\$0.00	\$0.00	\$0.00	\$29.11	\$42.85
1st Year	55.00	\$30.21	\$16.17	\$10.86	\$0.75	\$1.81	\$10.10	\$0.00	\$0.00	\$0.00	\$69.90	\$85.01
2nd Year	65.00	\$35.70	\$16.17	\$10.86	\$0.75	\$2.14	\$10.10	\$0.00	\$0.00	\$0.00	\$75.72	\$93.58
3rd Year	70.00	\$38.45	\$16.17	\$10.86	\$0.75	\$2.30	\$10.10	\$0.00	\$0.00	\$0.00	\$78.63	\$97.86
4th Year	80.00	\$43.94	\$16.17	\$10.86	\$0.75	\$2.63	\$10.10	\$0.00	\$0.00	\$0.00	\$84.45	\$106.43
Assistant Mechanic	80.00	\$43.94	\$16.17	\$10.86	\$0.75	\$3.51	\$10.10	\$0.00	\$0.00	\$0.00	\$85.33	\$107.31

Special Calculation Note :

Ratio :

- 1 Journeyman to 1 Apprentice**
- 1 Journeyman to 1 Helper**
- 1 Journeyman to 1 Assistant Mechanic**

Jurisdiction (* denotes special jurisdictional note) :

ATHENS, CHAMPAIGN, CLARK, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GALLIA, GUERNSEY, HOCKING, JACKSON, KNOX, LAWRENCE, LICKING, LOGAN, MADISON, MARION, MEIGS, MORGAN, MORROW, MUSKINGUM, NOBLE, PERRY, PICKAWAY, PIKE, ROSS, UNION, VINTON

Special Jurisdictional Note :

Details :

**Art. 10 Par. 2 Apprentice Work Qualifications:

Par 2- The total number of Helpers and Apprentices employed shall not exceed the number of Mechanics on any one job, except on jobs where two teams or more are working, one extra Helper or Apprentice may be employed for the first two teams and an extra Helper or Apprentice for each additional three teams.

Further, the Company may use as many Helpers and Apprentices as best suits his convenience under the direction of a Mechanic in wrecking old plants and in handling and hoisting material, and on foundation work. When removing old and installing new cable on existing elevator installations, the Company may use two Helpers or Apprentices to one Mechanic.

Prevailing Wage Rate Skilled Crafts

Name of Union: **Glazier Local 372**

Change # : LCN01-2024ibLoc372

Craft : Glazier Effective Date : 03/27/2024 Last Posted : 03/27/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Glazier	\$31.32		\$6.20	\$10.14	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.11	\$63.77
Apprentice	Percent											
1st Year	70.00	\$21.92	\$6.20	\$2.84	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.41	\$42.38
2nd Year	75.00	\$23.49	\$6.20	\$2.84	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$32.98	\$44.73
3rd Year	85.00	\$26.62	\$6.20	\$6.55	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.82	\$53.13
4th Year	95.00	\$29.75	\$6.20	\$6.55	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.95	\$57.83

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :
1 Journeyman to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :
DELAWARE, FAIRFIELD, FAYETTE*, FRANKLIN, HOCKING, JACKSON, KNOX, LICKING, MADISON, MARION, MORROW, MUSKINGUM, PERRY, PICKAWAY, PIKE, ROSS, UNION, VINTON

Special Jurisdictional Note : Fayette County - locations west of State Route 62 ONLY.

Details :
A premium of one dollar (\$1.00) per hour above regular hourly rate of pay shall be paid for each hour worked by every employee from any mechanical lift or scaffold, either suspended or supported including the Hex type scaffolding.

Prevailing Wage Rate Skilled Crafts

Name of Union: Ironworker Local 172

Change # : OCR01-2024ibLoc172

Craft : Ironworker Effective Date : 08/28/2024 Last Posted : 08/28/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Ironworker	\$36.77		\$9.20	\$9.50	\$0.71	\$0.00	\$3.50	\$0.56	\$0.00	\$0.00	\$60.24	\$78.62
Rigger Welder Reinforcing Sheeter Fence Erector Machinery Mover	\$36.77		\$9.20	\$9.50	\$0.71	\$0.00	\$3.50	\$0.56	\$0.00	\$0.00	\$60.24	\$78.62
Apprentice	Percent											
1st Year 0-1500 Hours	70.00	\$25.74	\$9.20	\$9.50	\$0.71	\$0.00	\$3.50	\$0.56	\$0.00	\$0.00	\$49.21	\$62.08
2nd Year 1501-3000 Hours	80.00	\$29.42	\$9.20	\$9.50	\$0.71	\$0.00	\$3.50	\$0.56	\$0.00	\$0.00	\$52.89	\$67.59
3rd Year 3001-4500 Hours	90.02	\$33.10	\$9.20	\$9.50	\$0.71	\$0.00	\$3.50	\$0.56	\$0.00	\$0.00	\$56.57	\$73.12

Special Calculation Note : Other is for Safety & Training Fund (\$0.06) and Building and Maintenance Fund (\$0.50)

Ratio :

Rod Work
3 Journeymen to 1 Apprentice

Structural Work
3 Journeymen to 1 Apprentice

Finishing, Steel Sash, Stairway and Ornamental
1 Journeymen to 1 Apprentice

Sheet Gang
1 Apprentice for every sheeting gang per project

Jurisdiction (* denotes special jurisdictional note) :

CHAMPAIGN*, CLARK, CRAWFORD*, DELAWARE, FAIRFIELD, FAYETTE*, FRANKLIN, HARDIN*, HIGHLAND*, HOCKING, JACKSON*, KNOX, LICKING, LOGAN*, MADISON*, MARION, MORROW, PERRY, PICKAWAY, PIKE, ROSS, UNION, VINTON, WYANDOT*

Special Jurisdictional Note : Champaign County Twps included: Wayne, Rush, Goshen. Crawford County Twps included: Bucyrus, Dallas, Jefferson, Jackson, Whetstone, Polk, Sandusky. Fayette County Twps included: Paint, Marion, Perry, Madison, Wayne, Union. Hardin County Twps included: McDonald, Taylorcreek, Hale, Dudley, Pleasant, Goshen, Blanchard, Lynn, Jackson, Buck, Cessna, Marion, Washington. Highland County Twps included: Madison. Jackson County Twps included: Liberty, Washington, Milton, Jackson, Coal, Wilkesville. Logan County Twps included: Monroe, Zane, Jefferson, Perry, Rush Creek, Bokes Creek. Madison County Twps included: Range, Paint, Fairfield, Sommerford, Jefferson, Pike, Canaan, Pleasant, Oak Run, Union, Deer Creek, Monroe, Darby. Pike County Twps included: Perry, Benton, Mifflin, Sunfish, Newton, Prebble, Pee Pee, Seal, Beaver, Jackson. Wyandot County Twps included: Jackson, Marseilles, Mifflin, Pitt, Antrim. Muskingum County includes: Jackson, Licking, Hope Well, Newton, Clay, Cass, Muskingum falls, Springfield, Madison, Washington, Wayne, Brush Creek.

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Labor HevHwy 3

Change # : LCN01-2024ibLocalHevHwy3

Craft : Laborer Group 1 Effective Date : 05/01/2024 Last Posted : 05/01/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Laborer Group 1	\$35.52		\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$50.12	\$67.88
Group 2	\$35.69		\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$50.29	\$68.13
Group 3	\$36.02		\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$50.62	\$68.63
Group 4	\$36.47		\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$51.07	\$69.30
Watch Person	\$28.25		\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$42.85	\$56.98
Apprentice	Percent											
0-1000 hrs	60.00	\$21.31	\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$35.91	\$46.57
1001-2000 hrs	70.00	\$24.86	\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$39.46	\$51.90
2001-3000 hrs	80.00	\$28.42	\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$43.02	\$57.22
3001-4000 hrs	90.00	\$31.97	\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$46.57	\$62.55
More than 4000 hrs	100.00	\$35.52	\$8.40	\$4.15	\$0.45	\$0.00	\$1.50	\$0.00	\$0.10	\$0.00	\$50.12	\$67.88

Special Calculation Note : Watchmen have no Apprentices. Tunnel Laborer rate with air-pressurized add \$1.00 to the above wage rate.

Ratio :

1 Journeymen to 1 Apprentice
3 Journeymen to 1 Apprentice thereafter

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND, ROSS, SCIOTO, SENECA, SHELBY, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WYANDOT

Special Jurisdictional Note : Hod Carriers and Common Laborers - Heavy, Highway, Sewer, Waterworks, Utility, Airport, Railroad, Industrial and Building Site, Sewer Plant, Waste Water Treatment Facilities Construction

Details :

Group 1

Laborer (Construction); Plant Laborer or Yardman, Right-of-way Laborer, Landscape Laborer, Highway Lighting Worker, Signalization Worker, (Swimming) Pool Construction Laborer, Utility Man, *Bridge Man, Handyman, Joint Setter, Flagperson, Carpenter Helper, Waterproofing Laborer, Slurry Seal, Seal Coating, Surface Treatment or Road Mix Laborer, Riprap Laborer & Grouter, Asphalt Laborer, Dump Man (batch trucks), Guardrail & Fence Installer, Mesh Handler & Placer, Concrete Curing Applicator, Scaffold Erector, Sign Installer, Hazardous Waste (level D), Diver Helper, Zone Person and Traffic Control.

*Bridge Man will perform work as per the October 31, 1949, memorandum on concrete forms, by and between the United Brotherhood of Carpenters and Joiners of America and the Laborers' International Union of North America, which states in; "the moving, cleaning, oiling and carrying to the next point of erection, and the stripping of forms which are not to be re-used, and forms on all flat arch work shall be done by members of the Laborers' International Union of North America."

Group 2

Asphalt Raker, Screwman or Paver, Concrete Puddler, Kettle Man (pipeline), All Machine-Driven Tools (Gas, Electric, Air), Mason Tender, Brick Paver, Mortar Mixer, Skid Steer, Sheeting & Shoring Person, Surface Grinder Person, Screedperson, Water Blast, Hand Held Wand, Power Buggy or Power Wheelbarrow, Paint Striper, Plastic fusing Machine Operator, Rodding Machine Operator, Pug Mill Operator, Operator of All Vacuum Devices Wet or Dry, Handling of all Pumps 4 inches and under (gas, air or electric), Diver, Form Setter, Bottom Person, Welder Helper (pipeline), Concrete Saw Person, Cutting with Burning Torch, Pipe Layer, Hand Spiker (railroad), Underground Person (working in sewer and waterline, cleaning, repairing and reconditioning). Tunnel Laborer (without air), Caisson, Cofferdam (below 25 feet deep), Air Track and Wagon Drill, Sandblaster Nozzle Person, Hazardous Waste (level B), ***Lead Abatement, Hazardous Waste (level C)

***Includes the erecting of structures for the removal, including the encapsulation and containment of Lead abatement process.

Group 3

Blast and Powder Person, Muckers will be defined as shovel men working directly with the miners, Wrencher (mechanical joints & utility pipeline), Yarnier, Top Lander, Hazardous Waste (level A), Concrete Specialist, Curb Setter and Cutter, Grade Checker, Concrete Crew in Tunnels. Utility pipeline Tappers, Waterline, Caulker, Signal Person will receive the rate equal to the rate paid the Laborer classification for which the Laborer is signaling.

Group 4

Miner, Welder, Guniting Nozzle Person

A.) The Watchperson shall be responsible to patrol and maintain a safe traffic zone including but not limited to barrels, cones, signs, arrow boards, message boards etc.

The responsibility of a watchperson is to see that the equipment, job and office trailer etc. are secure.

Prevailing Wage Rate Skilled Crafts

Name of Union: Labor Local 83

Change # : LCN01-2024ibLoc83

Craft : Laborer Effective Date : 06/01/2024 Last Posted : 05/29/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Laborer Group 1	\$40.97		\$8.40	\$4.15	\$0.40	\$0.00	\$1.00	\$0.00	\$0.15	\$0.14	\$55.21	\$75.70
Group 2	\$41.22		\$8.40	\$4.15	\$0.40	\$0.00	\$1.00	\$0.00	\$0.15	\$0.14	\$55.46	\$76.07
Group 3	\$41.37		\$8.40	\$4.15	\$0.40	\$0.00	\$1.00	\$0.00	\$0.15	\$0.14	\$55.61	\$76.30
Apprentice	Percent											
0-1000 hrs	60.00	\$24.58	\$8.40	\$4.15	\$0.40	\$0.00	\$1.00	\$0.00	\$0.15	\$0.14	\$38.82	\$51.11
1001-2000 hrs	70.00	\$28.68	\$8.40	\$4.15	\$0.40	\$0.00	\$1.00	\$0.00	\$0.15	\$0.14	\$42.92	\$57.26
2001-3000 hrs	80.00	\$32.78	\$8.40	\$4.15	\$0.40	\$0.00	\$1.00	\$0.00	\$0.15	\$0.14	\$47.02	\$63.40
3001-4000 hrs	90.00	\$36.87	\$8.40	\$4.15	\$0.40	\$0.00	\$1.00	\$0.00	\$0.15	\$0.14	\$51.11	\$69.55
More than 4000 hrs	100.00	\$40.97	\$8.40	\$4.15	\$0.40	\$0.00	\$1.00	\$0.00	\$0.15	\$0.14	\$55.21	\$75.70

Special Calculation Note : Other is LEAD-CAP

Ratio :

1 Journeymen to 1 Apprentice
4 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ATHENS, GALLIA, HIGHLAND, JACKSON, LAWRENCE, MEIGS, PIKE, ROSS, SCIOTO, VINTON

Special Jurisdictional Note :

Details :

Group 1

Building & Construction Laborers, Signalman, Plaster Tenders, Carpenter Tenders, Mason Tenders, Mortar Mixers, Pipe Layers, Bottom Man, Sheeting & Shoring Men, Watchmen & Waterboy.

Group 2

Air & Machine Driver Tool Operators, Hand Spikers, Chain Saws, Powered Concrete Buggies, Asphalt Rakers & Smoothers, Form Setters (Street & Highway) Burning & Cutting Torches

Group 3

Gunnite Machine Operator, Gunnite Nozzle Man, Powder Men & Blasters, Miners (Tunnel & Caisson) Muckers (Tunnel & Caisson).

All Hazardous & High Work performed in excess of 25 ft. above solid base shall pay .25 per hour above Classification.

In the erection, alteration, repair or demolition of reinforced concrete chimneys, masonry chimneys, silos, and furnaces, the following rates shall apply:

- 25- 100 ft. \$1.00 per hour/over base rate
- 100-150 ft. \$1.25 per hour/over base rate
- 150-200 ft. \$1.50 per hour/over base rate
- 200-250 ft. \$1.75 per hour/over base rate
- Over 250 ft. \$2.00 per hour/over base rate

Prevailing Wage Rate Skilled Crafts

Name of Union: Operating Engineers - Building Local 18 - Zone III

Change # : LCN01-2024ibLoc18zone3

Craft : Operating Engineer Effective Date : 06/05/2024 Last Posted : 06/05/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Operator Group A	\$44.14		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$60.74	\$82.81
Operator Group B	\$44.02		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$60.62	\$82.63
Operator Group C	\$42.98		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$59.58	\$81.07
Operator Group D	\$41.80		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$58.40	\$79.30
Operator Group E	\$36.34		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$52.94	\$71.11
Master Mechanic	\$45.14		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$61.74	\$84.31
Cranes & Mobile Concrete Pumps 150'-180'	\$44.64		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$61.24	\$83.56
Cranes & Mobile Concrete Pumps 180'-249'	\$45.14		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$61.74	\$84.31
Cranes & Mobile Concrete Pumps 249' and over	\$45.39		\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$61.99	\$84.69
Apprentice												
Percent												
1st Year	50.00	\$22.07	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$38.67	\$49.71
2nd Year	60.00	\$26.48	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$43.08	\$56.33
3rd Year	70.00	\$30.90	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$47.50	\$62.95
4th Year	80.00	\$35.31	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$51.91	\$69.57
Field Mechanic Trainee												
1st Year	50.00	\$22.07	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$38.67	\$49.71
2nd Year	60.00	\$26.48	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$43.08	\$56.33
3rd Year	70.00	\$30.90	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$47.50	\$62.95
4th Year	80.00	\$35.31	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$51.91	\$69.57

Special Calculation Note : Other: Education & Safety

Misc: National Training

Ratio :

For every (3) Operating Engineer Journeymen employed by the company there may be employed (1) Registered Apprentice or trainee Engineer through the referral when they are available. An

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COSHOCTON, CRAWFORD,

apprenice, while employed as part of a crew per Article VIII, paragraph 78, will not be subject to the apprenticeship ratios in this collective bargaining agreement

DARKE, DEFIANCE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WYANDOT

Special Jurisdictional Note :

Details :

Note: There will be a 10% increase for the apprentices on top of the percentages listed above provided they are operating mobile equipment. Mechanic Trainees will receive 10% increase if required to have CDL

Group A- Barrier Moving Machines; Boiler Operators or Compressor Operators, when compressor or boiler is mounted on crane (Piggyback Operation); Boom Trucks (all types); Cableways Cherry Pickers; Combination - Concrete Mixers & Towers; All Concrete Pumps with Booms; Cranes (all types); Compact Cranes, track or rubber over 4,000 pounds capacity; Cranes self-erecting, stationary, track or truck (all configurations); Derricks (all types); Draglines; Dredges (dipper, clam or suction) 3-man crew; Elevating Graders or Euclid Loaders; Floating Equipment; Forklift (rough terrain with winch/hoist); Gradalls; Helicopter Operators, hoisting building materials; Helicopter Winch Operators, Hoisting building materials; Hoes (All types); Hoists (with two or more drums in use); Horizontal Directional Drill; Hydraulic Gantry (lift system); Laser Finishing Machines; Laser Screed and like equipment; Lift Slab or Panel Jack Operators; Locomotives (all types); Maintenance Operator/Technician(Mechanic Operator/Technician and/or Welder); Mixers, paving (multiple drum); Mobile Concrete Pumps, with booms; Panelboards, (all types on site); Pile Drivers; Power Shovels; Prentice Loader; Rail Tamper (with automatic lifting and aligning device); Rotary Drills (all), used on caissons for foundations and sub-structure; Side Booms; Slip Form Pavers; Straddle Carriers (Building Construction on site); Trench Machines (over 24" wide); Tug Boats.

Group B - Articulating/end dumps (minus \$4.00/hour from Group B rate); Asphalt Pavers; Bobcat-type and/or skid steer loader with hoe attachment greater than 7000 lbs.; Bulldozers; CMI type Equipment; Concrete Saw, Vermeer-type; Endloaders; Hydro Milling Machine; Kolman-type Loaders (Dirt Loading); Lead Greasemen; Mucking Machines; Pettibone-Rail Equipment; Power Graders; Power Scoops; Power Scrapers; Push Cats; Rotomills (all), grinders and planers of all types.

Group C - A-Frames; Air Compressors, Pressurizing Shafts or Tunnels; All Asphalt Rollers; Bobcat-type and/or Skid Steer Loader with or without attachments; Boilers (15 lbs. pressure and over); All Concrete Pumps (without booms with 5 inch system); Fork Lifts (except masonry); Highway Drills - all types (with integral power); Hoists (with one drum); House Elevators (except those automatic call button controlled), Buck Hoists, Transport Platforms, Construction Elevators; Hydro Vac/Excavator (when a second person is needed, the rate of pay will be "Class E"); Man Lifts; Material hoist/elevators; Mud Jacks; Pressure Grouting; Pump Operators (installing or operating Well Points or other types of Dewatering Systems); Pumps (4 inches and over discharge); Railroad Tie (Inserter/Remover); Rotovator (Lime-Soil Stabilizer); Submersible Pumps (4"and over discharge); Switch & Tie Tampers (without lifting and aligning device); Trench Machines (24" and under); Utility Operators.

Group D - Backfillers and Tampers; Ballast Re-locator; Batch Plant Operators; Bar and Joint Installing Machines; Bull Floats; Burlap and Curing Machines; Clefplanes; Compressors, on building construction; Concrete Mixers, more than one bag capacity; Concrete Mixers, one bag capacity (side loaders); All Concrete Pumps (without boom with 4" or smaller system); Concrete Spreader; Conveyors, used for handling building materials; Crushers; Deckhands; Drum Fireman (in asphalt plants); Farm type tractors pulling attachments; Finishing Machines; Form Trenchers; Generators; Guniting Machines; Hydro-seeders; Pavement Breakers (hydraulic or cable); Post Drivers; Post Hole Diggers; Pressure Pumps (over 1/2" discharge); Road Widening Trenchers; Rollers (except asphalt); Self-propelled sub-graders; Shotcrete Machines; Tire Repairmen; Tractors, pulling sheepsfoot post roller or grader; VAC/ALLS; Vibratory Compactors, with integral power; Welders.

Group E – Allen Screed Paver (concrete); Boilers (less than 15 lbs. pressure); Cranes-Compact, track or rubber (under 4,000 pounds capacity); Directional Drill "Locator"; Fueling and greasing +\$3.00; Inboard/outboard Motor Boat Launches; Light Plant Operators; Masonry Fork Lifts; Oilers/Helpers; Power Driven Heaters (oil fired); Power Scrubbers; Power Sweepers; Pumps (under 4 inch discharge); Signalperson, Submersible Pumps (under 4" discharge).

Master Mechanics - Master Mechanic

Cranes 150' – 180' - Boom & Jib 150 - 180 feet

Cranes 180' – 249' - Boom & Jib 180 - 249 feet

Cranes 250' and over - Boom & Jib 250-feet or over

Prevailing Wage Rate Skilled Crafts

Name of Union: Operating Engineers - HevHwy Zone II

Change # : LCN01-2024ibLoc18hevhwylI

Craft : Operating Engineer Effective Date : 06/05/2024 Last Posted : 06/05/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)		
Classification											
Operator Class A	\$44.14	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$60.74	\$82.81
Operator Class B	\$44.02	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$60.62	\$82.63
Operator Class C	\$42.98	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$59.58	\$81.07
Operator Class D	\$41.80	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$58.40	\$79.30
Operator Class E	\$36.34	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$52.94	\$71.11
Master Mechanic	\$45.14	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$61.74	\$84.31
Crane and Mobile Concrete Pump 150' - 179'	\$44.64	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$61.24	\$83.56
Crane and Mobile Concrete Pump 180' - 249'	\$45.14	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$61.74	\$84.31
Crane and Mobile Concrete Pump 250' and Over	\$45.39	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.00	\$0.10	\$61.99	\$84.69
Apprentice	Percent										
1st Year	50.00	\$22.07	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.10	\$38.67	\$49.71
2nd Year	60.00	\$26.48	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.10	\$43.08	\$56.33
3rd Year	70.00	\$30.90	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.10	\$47.50	\$62.95
4th Year	80.00	\$35.31	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.10	\$51.91	\$69.57
Field Mech Trainee Class 2											
1st year	50.00	\$22.07	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.10	\$38.67	\$49.71
2nd year	60.00	\$26.48	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.10	\$43.08	\$56.33
3rd year	70.00	\$30.90	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.10	\$47.50	\$62.95
4th year	80.00	\$35.31	\$9.26	\$6.25	\$0.90	\$0.00	\$0.00	\$0.09	\$0.10	\$51.91	\$69.57

Special Calculation Note : Other: Education & Safety Fund

Misc: National Training

Ratio :

For every (3) Operating Engineer Journeymen employed by the company, there may be employed (1) Registered Apprentice or Trainee Engineer through the referral when they are available. An Apprentice, while employed as part of a crew per Article VIII,

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN,

paragraph 65 will not be subject to the apprenticeship ratios in this collective bargaining agreement

FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LUCAS, MADISON, MARION, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

**Apprentices will receive a 10% increase on top of the percentages listed above provided they are operating mobile equipment. Mechanic Trainees will receive 10% increase if they are required to have CDL.

Class A - Air Compressors on Steel Erection; Asphalt Plant Engineers (Cleveland District Only); Barrier Moving Machine; Boiler Operators, Compressor Operators, or Generators, when mounted on a rig; Boom Trucks (all types); Cableways; Cherry Pickers; Combination- Concrete Mixers & Towers; Concrete Plants (over 4 yd capacity); Concrete Pumps; Cranes (all types); Compact Cranes track or rubber over 4,000 pounds capacity; Cranes self-erecting stationary, track or truck; Derricks (all types); Draglines; Dredges dipper, clam or suction; Elevating Graders or Euclid Loaders; Floating Equipment (all types); Gradalls; Helicopter Crew (Operator- hoist or winch); Hoes (all types); Hoisting Engines; Hoisting Engines, on shaft or tunnel work; Hydraulic Gantry (lifting system); Industrial-type Tractors; Jet Engine Dryer (D8 or D9) diesel Tractors; Locomotives (standard gauge); Maintenance Operators/Technicians (class A); Mixers, paving (single or double drum); Mucking Machines; Multiple Scrapers; Piledriving Machines (all types); Power Shovels, Prentice Loader; Quad 9 (double pusher); Rail Tamper (with automatic lifting and aligning device); Refrigerating Machines (freezer operation); Rotary Drills, on caisson work; Rough Terrain Fork Lift with winch/hoist; Side Booms; Slip Form Pavers; Survey Crew Party Chiefs; Tower Derricks; Tree Shredders; Trench Machines (over 24" wide); Truck Mounted Concrete Pumps; Tug Boats; Tunnel Machines and /or Mining Machines; Wheel Excavators.

Class B - Asphalt Pavers; Automatic Subgrade Machines, self-propelled (CMI-type); Bobcat-type and /or Skid Steer Loader with hoe attachment greater than 7000 lbs.; Boring Machine Operators (more than 48 inches); Bulldozers; Concrete Saws, Vermeer type; Endloaders; Horizontal Directional Drill (50,000 ft. lbs. thrust and over); Hydro Milling Machine; Kolman-type Loaders (production type-dirt); Lead Greasemen; Lighting and Traffic Signal Installation Equipment includes all groups or classifications; Maintenance Operators/Technicians, Class B; Material Transfer Equipment (shuttle buggy) Asphalt; Pettibone-Rail Equipment; Power Graders; Power Scrapers; Push Cats; Rotomills (all), Grinders and Planners of all types, Groovers (excluding walk-behinds); Trench Machines (24 inch wide and under).

Class C - A-Frames; Air Compressors, on tunnel work (low Pressure); Articulating/straight bed end dumps if assigned (minus \$4.00 per hour); Asphalt Plant Engineers (Portage and Summit Counties only); Bobcat-type and/or skid steer loader with or without attachments; Drones; Highway Drills (all types); HydroVac/Excavator (when a second person is needed, the rate of pay will be "Class E"); Locomotives (narrow gauge); Material Hoist/Elevators; Mixers, concrete (more than one bag capacity); Mixers, one bag capacity (side loader); Power Boilers (over 15 lbs. pressure); Pump Operators (installing or operating well Points); Pumps (4 inch and over discharge); Railroad Tie Inserter/Remover; Rollers, Asphalt; Rotovator (lime-soil Stabilizer); Switch & Tie Tampers (without lifting and aligning device); Utilities Operators, (small equipment); Welding Machines and Generators.

Class D – Backfillers and Tampers; Ballast Re-locator; Bar and Joint Installing Machines; Batch Plant Operators; Boring Machine Operators (48 inch or less); Bull Floats; Burlap and Curing Machines; Concrete Plants (capacity 4 yds. and under); Concrete Saws (multiple); Conveyors (highway); Crushers; Deckhands; Farm type tractors, with attachments (highway); Finishing Machines; Firemen, Floating Equipment (all types); Fork Lifts (highway), except masonry; Form Trenchers; Hydro Hammers; Hydro Seeders; Pavement Breakers (hydraulic or cable); Plant Mixers; Post Drivers; Post Hole Diggers; Power Brush Burners; Power Form Handling Equipment; Road Widening Trenchers; Rollers (brick, grade, macadam); Self-Propelled Power Spreaders; Self-Propelled Sub-Graders; Steam Firemen; Survey Instrument men; Tractors, pulling sheepsfoot rollers or graders; Vibratory Compactors, with integral power.

Class E - Compressors (portable, Sewer, Heavy and Highway); Cranes-Compact, track or rubber under 4,000 pound capacity; Drum Firemen (asphalt plant); Fueling and greasing (Primary Operator with Specialized CDL Endorsement Add \$3.00/hr); Generators; Inboard-Outboard Motor Boat Launches; Masonry Fork Lifts; Oil Heaters (asphalt plant); Oilers/Helpers; Power Driven Heaters (oil fired); Power Scrubbers; Power Sweepers; Pumps (under 4 inch discharge); Signalperson; Survey Rodmen or Chairmen; Tire Repairmen; VAC/ALLS.

Master Mechanic - Master Mechanic

Cranes and Mobile Concrete Pumps 150' -179' - Boom & Jib 150 - 179 feet

Cranes and Mobile Concrete Pumps 180' - 249' - Boom & Jib 180 - 249 feet

Cranes and Mobile Concrete Pumps 250' and over - Boom & Jib 250 feet or over

Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 1275

Change # : LCN01-2024ibLoc1275

Craft : Drywall Finisher Effective Date : 05/08/2024 Last Posted : 05/08/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Painter Drywall Finisher	\$30.85		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.11	\$61.54
Drywall Taper	\$30.85		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.11	\$61.54
Drywall Sanders	\$30.20		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.46	\$60.56
Drywall, Use of Mechanical or Pneumatic Tools	\$31.60		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.86	\$62.66
Apprentice	Percent											
1st 0-1500 hrs	80.00	\$24.68	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$32.40	\$44.74
2nd 1501-3000 hrs	85.00	\$26.22	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$33.94	\$47.05
3rd 3001-4500 hrs	90.00	\$27.76	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.49	\$49.37
4th 4501-6000 hrs	95.00	\$29.31	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$37.03	\$51.68

Special Calculation Note :

Ratio :
1 Journeyman to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :
DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, KNOX, LICKING, MADISON, MUSKINGUM, PERRY, PICKAWAY, ROSS, UNION

Special Jurisdictional Note :

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 1275

Change # : LCN01-2024ibLoc1275

Craft : Painter Effective Date : 05/08/2024 Last Posted : 05/08/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Painter Brush Roll	\$29.20		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.46	\$59.06
Wall Washer	\$29.20		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.46	\$59.06
Spray	\$29.70		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.96	\$59.81
Structural Steel Swing Stage	\$29.50		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.76	\$59.51
Sandblast, Steam Clean, Water Blasting (3500 PSI and Over) and Hazardous	\$29.90		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.16	\$60.11
Vinyl Hanging	\$29.70		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.96	\$59.81
Apprentice Percent												
0-1500 hrs	80.00	\$23.36	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.08	\$42.76
1501-3000 hrs	85.00	\$24.82	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$32.54	\$44.95
3001-4500 hrs	90.00	\$26.28	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$34.00	\$47.14
4501-6000 hrs	95.00	\$27.74	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.46	\$49.33

Special Calculation Note :

Ratio :

1 Journeyman to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, KNOX, LICKING, MADISON, MUSKINGUM, PERRY, PICKAWAY, ROSS, UNION

Special Jurisdictional Note :

Details :

Heavy Highway Class 1 are qualified painters,blasters,riggers.

Class 2 Equipment Tenders /or containment Builders are hired to tend employers equipment also engage in the building & moving of containment systems.

Class 3 support personnel will perform Quality control duties,clean abrasive blast materials, load and unload trucks, handle all materials, man safety boats, & handle traffic control.

All Tanks 50,000 gallon capacity or more will be at the tank stated rate.

Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 1275 HevHwy

Change # : LCN01-2024ibLoc1275

Craft : Painter Effective Date : 05/08/2024 Last Posted : 05/08/2024

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Painter Bridge Class 1	\$39.26	\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$54.52	\$74.15
Painter Bridges Class 2 Rigger, Containment Builder, Spot Blaster	\$36.26	\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$51.52	\$69.65
Painter Bridges Class 3 Equipment Operator/Field Mechanic, Grit Reclamation, Paint Mix, Traffic Control, Boat Person, Driver (0-5 Years Exp.)	\$29.26	\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.52	\$59.15
Painter Bridges Class 3 Equipment Operator/Field Mechanic, Grit Reclamation, Paint Mix, Traffic Control, Boat Person, Driver (plus 5 Years Exp.)	\$32.26	\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$47.52	\$63.65
Painter Bridges Class 4 Concrete Sealing, Concrete Blasting Power Washing	\$28.26	\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.52	\$57.65
Painter Bridges Class 5 Quality Control, Quality Assurance, Traffic Safety Competent Person	\$32.26	\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$47.52	\$63.65

Apprentice	Percent											
1st 0-1500 hrs	80.00	\$31.41	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.13	\$54.83
2nd 1501-3000 hrs	85.00	\$33.37	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.09	\$57.78
3rd 3001-4500 hrs	90.00	\$35.33	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.05	\$60.72
4th 4501-6000 hrs	95.00	\$37.30	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.02	\$63.67

Special Calculation Note :

Ratio :

1 Journeyman to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, KNOX, LICKING, MADISON, MUSKINGUM, PERRY, PICKAWAY, ROSS, UNION

Special Jurisdictional Note :

Details :

Heavy Highway Class 1 are qualified painters,blasters,riggers. Class 2 Equipment Tenders /or containment Builders are hired to tend employers equipment also engage in the building & moving of containment systems. Class 3 support personnel will perform Quality control duties,clean abrasive blast materials, load and unload trucks, handle all materials, man safety boats, & handle traffic control.

Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 1275 Industrial

Change # : LCN01-2023ibLoc1275

Craft : Painter Effective Date : 05/08/2024 Last Posted : 05/08/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Painter Brush Roll	\$30.65		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.91	\$61.24
Power Tool Cleanigr	\$30.65		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.91	\$61.24
Spray Painting	\$31.15		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.41	\$61.99
Sand Blast, Steam Clean & Pressure Washing Above 3500 PSI	\$31.35		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.61	\$62.29
Stacks and towers	\$33.46		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.72	\$65.45
Tanks - All Tanks 50,000 gallon capacity or more	\$33.46		\$6.50	\$8.31	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.72	\$65.45
Apprentice	Percent											
0-1500 hrs	80.00	\$24.52	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$32.24	\$44.50
1501-3000 hrs	85.00	\$26.05	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$33.77	\$46.80
3001-4500 hrs	90.00	\$27.58	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.31	\$49.10
4501-6000 hrs	95.00	\$29.12	\$6.50	\$0.77	\$0.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$36.84	\$51.40

Special Calculation Note :

Ratio :

1 Journeyman to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, KNOX, LICKING, MADISON, MUSKINGUM, PERRY, PICKAWAY, ROSS, UNION

Special Jurisdictional Note :

Details :

Definition of Industrial Classification:

Industrial Facilities to be included in the Industrial Classification shall include; Water Treatment, Waste Water Treatment, Natural Gas and related facilities, refineries, transmission pipe lines, electrical transmission towers and or switching /sub stations and Power Plants.

Exclusions from the industrial classification are Power Plants that generate power to a single customer; such as an emergency power supplier or a Hospital, Information Technology Facility, Sporting/Event or Arena/Stadium type facility. This exclusion would also be given to any commercial office space located within the facilities property. The excluded spaces shall be done under the Commercial Wage rates.

Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 639

Change # : LCNO1-2015fbLoc639

Craft : Painter Effective Date : 06/10/2015 Last Posted : 06/10/2015

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Painter Metal Finisher/Helpers											
Top Helper Class A	\$19.09	\$3.65	\$0.00	\$0.00	\$0.66	\$0.00	\$0.00	\$0.00	\$0.00	\$23.40	\$32.94
Top Helper Class B	\$19.09	\$3.65	\$0.65	\$0.00	\$1.03	\$0.00	\$0.37	\$0.00	\$0.00	\$24.79	\$34.33
Top Helper Class C	\$19.09	\$3.65	\$1.00	\$0.00	\$1.76	\$0.00	\$0.37	\$0.00	\$0.00	\$25.87	\$35.41
Helper Class A	\$14.69	\$3.65	\$0.00	\$0.00	\$0.51	\$0.00	\$0.00	\$0.00	\$0.00	\$18.85	\$26.19
Helper Class B	\$14.69	\$3.65	\$0.65	\$0.00	\$0.79	\$0.00	\$0.28	\$0.00	\$0.00	\$20.06	\$27.40
Helper Class C	\$14.69	\$3.65	\$1.00	\$0.00	\$1.64	\$0.00	\$0.28	\$0.00	\$0.00	\$21.26	\$28.60
New Hire 90 Days	\$11.00	\$3.65	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$14.65	\$20.15

Special Calculation Note : Other is Sick and Personal Time

Ratio :

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, CUYAHOGA, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GEauga, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAKE, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

Top Helper: Shall perform the responsibilities of a Helper and be responsible for the setup, break down, safety and quality of the company's product.

Helper : Shall be responsible for performing tasks in refinishing, compliance with safety procedures, setting up and breaking down job sites, scaffolding and swing stages and preparing surfaces for refinishing including but not limited to, masking and stripping and cleaning, oxidizing, polishing and scratch removal on various surfaces

Class A Workers: Less than 1 Year of Service.

Class B Workers: More than 1 and less than 8 Years of Service.

Class C Workers: More than 8 Years of Service.

Metal Polisher Scope of Work: Polishing, buffing, stripping, coloring, lacquering, spraying, cleaning and maintenance of ornamental and architectural metals, iron, bronze, nickel, aluminum and stainless steel and in mental specialty work, various stone finishes, stone specialty work and any other work pertaining to the finishing of metal, stones, woods, and any window washing/cleaning done in conjunction with this work, using chemicals, solvents, coatings and hand applied lacquer thinner, removing scratches from mirror finished metals, burnishing of bronze, statuary finishes on exterior and interior surfaces and the use of all tools required to perform such work, including but not limited to polishes, spray equipment and scaffolding.

Swing State Rate: All work on scaffold 4 sections or higher, including any boom lifts and swing stage scaffolds including the rigging and derigging of hanging/suspended swing stage systems and rappelling/bolson chair work, ADD \$1.50 per hour.

Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 639 Zone 2 Sign

Change # : LCN01-2023ibLoc639

Craft : Painter Effective Date : 03/22/2023 Last Posted : 03/22/2023

	BHR	Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
		H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification											
Painter Sign Journeyman Tech/Team Leader Class A	\$25.28	\$1.70	\$0.21	\$0.00	\$0.00	\$0.00	\$0.68	\$0.00	\$0.00	\$27.87	\$40.51
Painter Sign Journeyman Tech/Team Leader Class B	\$25.28	\$1.70	\$0.21	\$0.00	\$0.49	\$0.00	\$0.68	\$0.00	\$0.00	\$28.36	\$41.00
Painter Sign Journeyman Tech/Team Leader Class C	\$25.28	\$1.70	\$0.21	\$0.00	\$0.97	\$0.00	\$0.68	\$0.00	\$0.00	\$28.84	\$41.48
Painter Sign Journeyman Tech/Team Leader Class D	\$25.28	\$1.70	\$0.21	\$0.00	\$1.46	\$0.00	\$0.68	\$0.00	\$0.00	\$29.33	\$41.97
Sign Journeyman Class A	\$25.00	\$1.70	\$0.21	\$0.00	\$0.00	\$0.00	\$0.67	\$0.00	\$0.00	\$27.58	\$40.08
Sign Journeyman Class B	\$25.00	\$1.70	\$0.21	\$0.00	\$0.48	\$0.00	\$0.67	\$0.00	\$0.00	\$28.06	\$40.56
Sign Journeyman Class C	\$25.00	\$1.70	\$0.21	\$0.00	\$0.96	\$0.00	\$0.67	\$0.00	\$0.00	\$28.54	\$41.04
Sign Journeyman Class D	\$25.00	\$1.70	\$0.21	\$0.00	\$1.44	\$0.00	\$0.67	\$0.00	\$0.00	\$29.02	\$41.52
Tech Sign Fabrication/ Erector Class A	\$19.67	\$1.70	\$0.21	\$0.00	\$0.00	\$0.00	\$0.53	\$0.00	\$0.00	\$22.11	\$31.95
Tech Sign Fabrication/ Erector Class B	\$19.67	\$1.70	\$0.21	\$0.00	\$0.38	\$0.00	\$0.53	\$0.00	\$0.00	\$22.49	\$32.33
Tech Sign Fabrication/ Erector Class C	\$19.67	\$1.70	\$0.21	\$0.00	\$0.76	\$0.00	\$0.53	\$0.00	\$0.00	\$22.87	\$32.71
Tech Sign Fabrication/ Erector Class D	\$19.67	\$1.70	\$0.21	\$0.00	\$1.13	\$0.00	\$0.53	\$0.00	\$0.00	\$23.24	\$33.08

Special Calculation Note : Other is for paid holidays.

Ratio :

Jurisdiction (* denotes special jurisdictional note) :
ADAMS, ALLEN, AUGLAIZE, BROWN, BUTLER, CARROLL,
CHAMPAIGN, CLARK, CLERMONT, CLINTON,
COLUMBIANA, COSHOCTON, CRAWFORD, DARKE,
DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE,
FRANKLIN, FULTON, GREENE, HAMILTON, HANCOCK,
HARDIN, HENRY, HIGHLAND, HOLMES, HURON,
JACKSON, KNOX, LICKING, LOGAN, LORAIN, LUCAS,
MADISON, MAHONING, MARION, MERCER, MIAMI,
MONTGOMERY, MORROW, MUSKINGUM, OTTAWA,
PAULDING, PERRY, PICKAWAY, PIKE, PREBLE, PUTNAM,
ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK,
TRUMBULL, TUSCARAWAS, UNION, VAN WERT, WARREN,
WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

Class A: less than 1 year.

Class B: 1-3 years.

Class C: 3-10 years.

Class D: More than 10 years.

Prevailing Wage Rate Skilled Crafts

Name of Union: Plasterer Local 132 (Columbus)

Change # : LCN01-2024ibLoc132

Craft : Plasterer Effective Date : 06/01/2024 Last Posted : 05/29/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Plasterer	\$30.54		\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$45.14	\$60.41
Apprentice	Percent											
1st 800 hrs	70.00	\$21.38	\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$35.98	\$46.67
2nd 800 hrs	74.00	\$22.60	\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$37.20	\$48.50
3rd 800 hrs	78.00	\$23.82	\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$38.42	\$50.33
4th 800 hrs	82.00	\$25.04	\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$39.64	\$52.16
5th 800 hrs	86.00	\$26.26	\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$40.86	\$54.00
6th 800 hrs	90.00	\$27.49	\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$42.09	\$55.83
7th 800 hrs	94.00	\$28.71	\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$43.31	\$57.66
8th 800 hrs	98.00	\$29.93	\$7.65	\$4.40	\$0.50	\$0.00	\$2.00	\$0.05	\$0.00	\$0.00	\$44.53	\$59.49

Special Calculation Note : *Other is International Training Fund

Ratio :

3 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ASHLAND, COSHOCTON, CRAWFORD, DELAWARE, FAIRFIELD, FAYETTE, FRANKLIN, GUERNSEY, HOCKING, KNOX, LICKING, MADISON, MARION, MORROW, MUSKINGUM, PERRY, PICKAWAY, RICHLAND, ROSS, UNION, VINTON, WYANDOT

Special Jurisdictional Note :

Details :

PLASTERER IMPROVERS:

Is a person who has skills between an Apprentice and a Journeyman can be signed in as an Improver. An Improver receives 85% of the current wage and pension. All other benefits are same as Journeyman. The Improver has the opportunity to advance to Journeyman level by:

- (1) Working through a trial period of no more than 2,000 hrs.
- (2) Attending all safety and upgrading classes held or required.

Working on swing stage, slip scaffold or window jack scaffold shall receive the following rates:

- \$0.50 above the regular rate for heights up to fifty (50) feet above grade level
- \$1.00 above the regular rate for heights over fifty (50) feet above grade level

Prevailing Wage Rate Skilled Crafts

Name of Union: Plumber Pipefitter Local 189

Change # : LCN01-2024ibLoc189

Craft : Plumber Pipefitter Effective Date : 08/21/2024 Last Posted : 08/21/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Plumber Pipefitter	\$49.00		\$10.39	\$7.49	\$1.45	\$0.00	\$8.26	\$0.00	\$0.00	\$0.00	\$76.59	\$101.09
Heating Piping Refrigeration, Temperature Control, Air Conditioning Welder	\$49.00		\$10.39	\$7.49	\$1.45	\$0.00	\$8.26	\$0.00	\$0.00	\$0.00	\$76.59	\$101.09
1st Year	45.00	\$22.05	\$5.00	\$0.00	\$1.45	\$0.00	\$0.00	\$0.10	\$0.00	\$0.00	\$28.60	\$39.63
2nd Year	50.00	\$24.50	\$10.39	\$5.60	\$1.45	\$0.00	\$0.00	\$0.10	\$0.00	\$0.00	\$42.04	\$54.29
3rd Year	55.00	\$26.95	\$10.39	\$5.60	\$1.45	\$0.00	\$0.00	\$0.10	\$0.00	\$0.00	\$44.49	\$57.97
4th Year	65.00	\$31.85	\$10.39	\$5.60	\$1.45	\$0.00	\$6.26	\$0.10	\$0.00	\$0.00	\$55.65	\$71.57
5th Year	80.00	\$39.20	\$10.39	\$5.60	\$1.45	\$0.00	\$8.26	\$0.10	\$0.00	\$0.00	\$65.00	\$84.60

Special Calculation Note : *Other is International Training

Ratio :

Employees-----Journeyman to Apprentice per Job

- 1) 1-0
- 2) 1-1
- 3) 2-1
- 4) 2-2
- 5) 3-2
- 6) 4-2
- 7) 4-3
- 8) 5-3
- 9) 6-3
- 10) 6-4
- 11) 7-4
- 12) 8-4
- 13) 8-5
- 14) 9-5
- 15) 10-5
- 16) 10-6
- 17) 11-6
- 18) 12-6
- 19) 12-7
- 20) 13-7
- 21) 14-7
- 22) 14-8
- 23) 15-8
- 24) 16-8
- 25) 16-9

Jurisdiction (* denotes special jurisdictional note) :

DELAWARE, FAIRFIELD, FRANKLIN, HOCKING, LICKING, MADISON, MARION, PERRY, PICKAWAY, ROSS, UNION

Heating Piping refrigeration, Temperature Control, Air Conditioning Ratio

(1) Additional Apprentice to (3) Journeymen thereafter
Employees Journeyman to Apprentice
per Job

- 1) Employee 1-0
- 2) Employees 1-1
- 3) Employees 2-1
- 4) Employees 2-2
- 5) Employees 3-2
- 6) Employees 4-2
- 7) Employees 5-2
- 8) Employees 5-3
- 9) Employees 6-3
- 10) Employees 7-3
- 11) Employees 8-3
- 12) Employees 8-4
- 13) Employees 9-4
- 14) Employees 10-4
- 15) Employees 11-4
- 16) Employees 11-5
- 17) Employees 12-5
- 18) Employees 13-5
- 19) Employees 14-5
- 20) Employees 14-6
- 21) Employees 15-6
- 22) Employees 17-5
- 23) Employees 18-5
- 24) Employees 18-6
- 25) Employees 19-6
- 26) Employees 20-6
- 28) Employees 22-6
- 29) Employees 22-7
- 30) Employees 23-7
- 31) Employees 23-7
- 32) Employees 25-7
- 33) Employees 26-7
- 34) Employees 26-8

Special Jurisdictional Note :

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: **Roofer Local 86**

Change # : LCN01-2023ibLoc86

Craft : Roofer Effective Date : 09/13/2023 Last Posted : 09/13/2023

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Roofer	\$33.17		\$8.20	\$7.40	\$0.54	\$0.00	\$0.30	\$0.06	\$0.00	\$0.00	\$49.67	\$66.26
Apprentice	Percent											
1st YEAR	65.00	\$21.56	\$0.00	\$0.00	\$0.54	\$0.00	\$0.25	\$0.06	\$0.00	\$0.00	\$22.41	\$33.19
2nd YEAR	70.00	\$23.22	\$8.20	\$1.85	\$0.54	\$0.00	\$0.25	\$0.06	\$0.00	\$0.00	\$34.12	\$45.73
3rd YEAR	75.00	\$24.88	\$8.20	\$3.33	\$0.54	\$0.00	\$0.25	\$0.06	\$0.00	\$0.00	\$37.26	\$49.70
4th YEAR	85.00	\$28.19	\$8.20	\$4.81	\$0.54	\$0.00	\$0.25	\$0.06	\$0.00	\$0.00	\$42.05	\$56.15

Special Calculation Note : International Training/Education/Research Fund.

Ratio :

1 Journeymen to 1 Apprentices
per job site

Jurisdiction (* denotes special jurisdictional note) :

CHAMPAIGN, DELAWARE, FAIRFIELD, FAYETTE,
FRANKLIN, HARDIN, HOCKING, KNOX, LICKING,
LOGAN, MADISON, MARION, MORROW, PERRY,
PICKAWAY, PIKE, ROSS, UNION, WYANDOT

Special Jurisdictional Note :

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Sheet Metal Local 24 Columbus

Change # : LCN01-2024ibLoc24Col

Craft : Sheet Metal Worker Effective Date : 04/24/2024 Last Posted : 04/24/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Sheet Metal Worker	\$36.10		\$9.88	\$12.28	\$1.19	\$0.00	\$3.82	\$0.00	\$0.00	\$0.00	\$63.27	\$81.32
Apprentice Percent												
1st Year	57.00	\$20.58	\$8.07	\$2.14	\$0.98	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.77	\$42.06
2nd Year	65.00	\$23.47	\$9.26	\$7.98	\$0.98	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.68	\$53.42
3rd Year	75.00	\$27.08	\$9.49	\$9.21	\$1.19	\$0.00	\$2.87	\$0.00	\$0.00	\$0.00	\$49.84	\$63.37
4th Year	85.02	\$30.69	\$9.64	\$10.44	\$1.19	\$0.00	\$3.25	\$0.00	\$0.00	\$0.00	\$55.21	\$70.56

Special Calculation Note : No special calculations for this skilled craft wage rate required at this time.

Ratio :

- 1 Journeyman to 1 Apprentice
- 2-8 Journeymen to 2 Apprentices
- 9-11 Journeymen to 3 Apprentices
- 12-14 Journeymen to 4 Apprentices
- 15-17 Journeymen to 5 Apprentices
- 18-20 Journeymen to 6 Apprentices
- 21-23 Journeyman to 7 Apprentices
- 24-26 Journeyman to 8 Apprentices
- 27-29 Journeymen to 9 Apprentices
- 30-32 Journeymen to 10 Apprentices
- 33-35 Journeymen to 11 Apprentices
- 36-38 Journeymen to 12 Apprentices
- 39-41 Journeymen to 13 Apprentices
- 42-44 Journeymen to 14 Apprentices
- 45-47 Journeymen to 15 Apprentices
- 48-50 Journeymen to 16 Apprentices
- and so on

Jurisdiction (* denotes special jurisdictional note) :

- ADAMS, ATHENS, DELAWARE, FAIRFIELD, FAYETTE,
- FRANKLIN, GALLIA, GUERNSEY, HOCKING, JACKSON,
- KNOX, LAWRENCE, LICKING, MADISON, MARION,
- MEIGS, MORGAN, MORROW, MUSKINGUM, NOBLE,
- PERRY, PICKAWAY, PIKE, ROSS, SCIOTO, UNION, VINTON

Special Jurisdictional Note :

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Sprinkler Fitter Local 669

Change # : LCN01-2022sksLoc669

Craft : Sprinkler Fitter Effective Date : 04/06/2022 Last Posted : 04/06/2022

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Sprinkler Fitter	\$43.75		\$10.99	\$7.10	\$0.52	\$0.00	\$5.12	\$0.00	\$0.00	\$0.00	\$67.48	\$89.35
Apprentice Indentured after April 1, 2013												
	Percent											
CLASS 1	45.00	\$19.69	\$7.85	\$0.00	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$28.06	\$37.90
CLASS 2	50.02	\$21.88	\$7.85	\$0.00	\$0.52	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$30.25	\$41.20
CLASS 3	54.43	\$23.81	\$10.99	\$7.10	\$0.52	\$0.00	\$1.15	\$0.00	\$0.00	\$0.00	\$43.57	\$55.48
CLASS 4	59.43	\$26.00	\$10.99	\$7.10	\$0.52	\$0.00	\$1.15	\$0.00	\$0.00	\$0.00	\$45.76	\$58.76
CLASS 5	64.43	\$28.19	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$48.20	\$62.29
CLASS 6	69.43	\$30.38	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$50.39	\$65.57
CLASS 7	74.43	\$32.56	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$52.57	\$68.85
CLASS 8	79.42	\$34.75	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$54.76	\$72.13
CLASS 9	84.43	\$36.94	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$56.95	\$75.42
CLASS 10	89.44	\$39.13	\$10.99	\$7.10	\$0.52	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$59.14	\$78.70

Special Calculation Note :

Ratio :

1 Journeyman to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

Sprinkler Fitter work shall consist of the installation, dismantling, maintenance, repairs, adjustments, and corrections of all fire protection and fire control systems including the unloading, handling by hand, power equipment and installation of all piping or tubing, appurtenances and equipment pertaining thereto, including both overhead and underground water mains, fire hydrants and hydrant mains, standpipes and hose connections to sprinkler systems used in connection with sprinkler and alarm systems. Also all tanks and pumps connected thereto, also included shall be CO-2 and Carbox Systems, Dry Chemical Systems, Foam Systems and all other fire protection systems.

Prevailing Wage Rate Skilled Crafts

**Name of Union: Truck Driver Bldg & HevHwy Class 1
Locals 20,40,92,92b,100,175,284,438,377,637,908,957**

Change # : LCN01-2024ibBldgHevHwy

Craft : Truck Driver Effective Date : 05/01/2024 Last Posted : 05/01/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Truck Driver CLASS 1 4 wheel service, dump, and batch trucks; drivers on tandems; truck sweepers (not to include power sweepers & scrubbers)	\$31.84		\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$49.84	\$65.76
Apprentice												
Percent												
First 6 months	80.00	\$25.47	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.47	\$56.21
7-12 months	85.00	\$27.06	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.06	\$58.60
13-18 months	90.00	\$28.66	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.66	\$60.98
19-24 months	95.00	\$30.25	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.25	\$63.37
25-30 months	100.00	\$31.84	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$49.84	\$65.76

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :
3 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :
 ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

Prevailing Wage Rate Skilled Crafts

**Name of Union: Truck Driver Bldg & HevHwy Class 2
Locals 20,40,92,92b,100,175,284,438,377,637,908,957**

Change # : LCN01-2024ibBldgHevHwy

Craft : Truck Driver Effective Date : 05/01/2024 Last Posted : 05/01/2024

	BHR		Fringe Benefit Payments					Irrevocable Fund		Total PWR	Overtime Rate	
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)			MISC (*)
Classification												
Truck Driver CLASS 2 Tractor Trailer-Semi Tractor Trucks; Pole Trailers; Ready Mix Trucks; Fuel Trucks; 5 Axle & Over; Belly Dumps; Low boys - Heavy duty Equipment(irrespective of load carried) when used exclusively for transportation; Truck Mechanics (when needed)	\$32.26		\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50.26	\$66.39
Apprentice	Percent											
First 6 months	80.00	\$25.81	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.81	\$56.71
7-12 months	85.00	\$27.42	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$45.42	\$59.13
13-18 months	90.00	\$29.03	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$47.03	\$61.55
19-24 months	95.00	\$30.65	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$48.65	\$63.97
25-30 months	100.00	\$32.26	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$50.26	\$66.39

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

3 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

Prevailing Wage Rate Skilled Crafts

**Name of Union: Truck Driver Bldg & HevHwy Class 3
Locals 20,40,92,92b,100,175,284,438,377,637,908,957**

Change # : LCN01-2024ibBldgHevHwy3

Craft : Truck Driver Effective Date : 05/01/2024 Last Posted : 05/01/2024

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Truck Driver CLASS 3 Articulated Dump Trucks; Ridge-Frame Rock Trucks; Distributor Trucks)	\$33.26		\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$51.26	\$67.89
Apprentice	Percent											
First 6 months	80.00	\$26.61	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$44.61	\$57.91
7-12 months	85.00	\$28.27	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.27	\$60.41
13-18 months	90.00	\$29.93	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$47.93	\$62.90
19-24 months	94.96	\$31.58	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$49.58	\$65.38
25-30 months	100.00	\$33.26	\$8.00	\$9.60	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$51.26	\$67.89

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

3 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ADAMS, ALLEN, ASHLAND, ASHTABULA, ATHENS, AUGLAIZE, BELMONT, BROWN, BUTLER, CARROLL, CHAMPAIGN, CLARK, CLERMONT, CLINTON, COLUMBIANA, COSHOCTON, CRAWFORD, DARKE, DEFIANCE, DELAWARE, ERIE, FAIRFIELD, FAYETTE, FRANKLIN, FULTON, GALLIA, GREENE, GUERNSEY, HAMILTON, HANCOCK, HARDIN, HARRISON, HENRY, HIGHLAND, HOCKING, HOLMES, HURON, JACKSON, JEFFERSON, KNOX, LAWRENCE, LICKING, LOGAN, LORAIN, LUCAS, MADISON, MAHONING, MARION, MEDINA, MEIGS, MERCER, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM, NOBLE, OTTAWA, PAULDING, PERRY, PICKAWAY, PIKE, PORTAGE, PREBLE, PUTNAM, RICHLAND, ROSS, SANDUSKY, SCIOTO, SENECA, SHELBY, STARK, SUMMIT, TRUMBULL, TUSCARAWAS, UNION, VAN WERT, VINTON, WARREN, WASHINGTON, WAYNE, WILLIAMS, WOOD, WYANDOT

Special Jurisdictional Note :

Details :

SECTION 008900 - PERMITS

ARTICLE 1 PERMITS OBTAINED BY THE OWNER

1.01 The following permits were obtained by the Owner related to this Project:

A. None.

1.02 The above permits have been included as attachments to this section or will be provided to the Contractor in advance of issuance of the Notice to Proceed for this Project. Contractor shall comply with all provisions of these permits and shall be responsible for notifications as required by these permits.

ARTICLE 2 PERMITS OBTAINED BY CONTRACTOR

2.01 Contractor shall obtain all other permits required for the Work.

2.02 Any permits required for dewatering operations shall be obtained and paid for by Contractor.

END OF SECTION

SECTION 009113 – ADDENDA

ARTICLE 1 GENERAL

1.01 All Addenda issued by the OWNER/ENGINEER shall be inserted into this section.

1.02 If Addenda are issued, all prospective bidders are hereby notified that the Addenda forms a part of the Bidding and Contract documents and modifies the original bidding and contract documents issued. Acknowledge receipt of this addendum in the space provided in the bid proposal section of the specifications. Failure to do so may subject the bidder to disqualification.

END OF SECTION

Work Change Directive

No. _____

Date of Issuance: _____ Effective Date: _____

Project:	Owner:	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.:

You are directed to proceed promptly with the following change(s):

Item No.	Description

Attachments (list documents supporting change):

Purpose for Work Change Directive:

- Authorization for Work described herein to proceed on the basis of Cost of the Work due to:
 - Nonagreement on pricing of proposed change.
 - Necessity to expedite Work described herein prior to agreeing to changes on Contract Price and Contract Time.

Estimated change in Contract Price and Contract Times:

Contract Price \$ _____ (increase/decrease) Contract Time _____ days (increase/decrease)

If the change involves an increase, the estimated amounts are not to be exceeded without further authorization.

Recommended for Approval by Engineer:	Date
Authorized for Owner by:	Date
Accepted for Contractor by:	Date
Approved by Funding Agency (if applicable):	Date:

SECTION 011100 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 LOCATION OF THE PROJECT

- A. The project is located in the Village of Frankfort, Ross County. The project site is at the Village of Frankfort Water Treatment Plant (WTP), 94 South Main Street, Frankfort, Ohio 45628.

1.3 CONTRACT DOCUMENTS

- A. The Contract Documents include the Project Manual.
- B. The Project Manual consists of one (1) volume of Contract Documents that includes the Legal Notice, Table of Contents, Instructions to Bidders, Forms to be completed with the Bid, Contract Forms, General Conditions, Supplementary Conditions, Specific Project Requirements and technical specifications.
- C. Drawings supporting the performance of this project have been included within the Appendix within the Project Manual.
- D. In general, these Specifications describe the work to be performed by the various trades. It shall be the responsibility of the Contractor and Subcontractors to perform all work incidental to their trade, whether or not specific mention is made of each item, unless such incidentals are included under another Item.
- E. It is advised that the Contractor and all Subcontractor(s) familiarize themselves with the contents of the complete Specifications, particularly for the trades preceding, following, related or adjacent to their work.

1.4 PROJECT DESCRIPTION

- A. The Village of Frankfort WTP is a ground water treatment facility rated to produce 0.4 MGD of potable drinking water. This project will incorporate rehabilitation of the existing filtration unit, the existing softeners and related appurtenances:
 - 1. Mobilization and demobilization related to the project, inclusive of costs associated with bonding and insurance. (Bid Item 1)
 - 2. Complete rehabilitation of existing filtration unit, inclusive of supply of equipment and media, as per plan. (Bid Item 2)
 - 3. Complete rehabilitation of existing softeners, inclusive of supply of equipment and media, as per plan. (Bid Item 3)
 - 4. Furnish and install repairs to brine feed system, as per plan. (Bid Item 4)

5. Furnish and install replacement gate valves intermediate pump suction. (Alternate Bid Item 1)
6. Furnish and install replacement plug valves @ intermediate pump discharge. (Alternate Bid Item 2)

1.5 SCHEDULES AND SEQUENCE OF CONSTRUCTION

- A. Contractor shall provide schedules for performance of the Work in accordance with the provision set forth within the General Conditions. The schedule(s) shall detail all phases of construction to completion with milestones and associated dates. The schedule(s) shall be presented in a format acceptable to the Owner and Engineer.
- B. In preparation of the schedule(s), Contractor shall take into account the following critical component work sequence required by the Owner:
 1. Complete submittals for all project components. Provide submittals to the Engineer for review in a timely, sequenced fashion and avoid last minute, multiple submissions.
 2. Fully mobilize the project site and establish erosion controls and site security as required.
 3. Coordinate with Owner to interrupt treatment operations at the facility a minimum of 14 days in advance of scheduled commencement of work. Owner will coordinate for the supply of potable water to the community in order to support removing the filtration unit, softener units, brine day tank facilities and related pumps and intermediate pumps from service. Other components at the water treatment plant may remain in service through the construction period.
 4. Work related to the rehabilitation of the filtration unit and the softener units shall, to the extent possible, occur concurrently to minimize the time period that the water treatment plant is out of service.
- C. The Contractor will be required to provide his own detailed sequence of construction in writing prior to commencing any work. The Contractor is responsible to maintain the proper operation of the remaining portion of the WTP during construction.

1.6 EXISTING SERVICES, STRUCTURES AND UNDERGROUND FACILITIES

- A. Interruption of existing utility services shall be kept to an absolute minimum and shall be limited to times approved by the Owner.
- B. Work shall not commence until all labor, materials and equipment are available and Work can continue without interruption or delay.
- C. Cooperate with Owner and utility companies in keeping respective services and facilities in operation and repair any damaged utilities to the satisfaction of the utility owner.
- D. Contractor shall not interrupt existing utilities serving facilities occupied and used by the Owner or others, except when permitted in writing by the Owner.
- E. Any accidental interruption of services shall be repaired immediately, including provision of temporary facilities until permanent repairs can be made.

- F. Contractor shall notify the Ohio Utilities Protection Service (OUPS), (1-800-362-2764), the Oil and Gas Producer's Underground Protection Service (OGPUPS), (1-800-925-0988), and any other non-OUPS/non-OGPUPS utility a minimum of 48 hours prior to commencing work on the project to coordinate the marking of utilities in the field. Based on information made available by the various utility companies, the companies shown in the Drawings have facilities in the area.

1.7 PROTECTION OF WORK AND IMPROVEMENTS

- A. Contractor shall protect the property of the Owner, existing improvements, and the Work installed by the Contractor and others from abuse, damage, dust, debris, and other objectionable materials resulting from construction activities.
- B. Contractor shall provide suitable covers, partitions, or other dust and fume containment devices to suit construction operations.
- C. Contractor shall keep property, existing improvements and the Work, including structures, mains, fittings and accessories free from dirt and foreign matter at all times.
- D. Contractor shall provide temporary plugging of openings, holes and pipe ends that are existing or that the Contractor has installed.
- E. Property, improvements and Work damaged by Contractor shall be repaired or replaced by Contractor to the satisfaction of the Owner.

1.8 CONTRACTOR USE OF SITE

- A. The existing plant is an operational plant and, other than designated processes, shall remain in operation at all times. The Work of this Contractor, or its personnel, shall not interfere in any way with daily operations of the facility. Portions of plant may be shut down for connection of piping, electrical work, etc. following coordination with the Owner. Request of partial shutdown of processes other than filtration, softening and brine equipment shall be submitted to Engineer no less than 48 hours prior to requested shutdown period.
- B. The Contractor will need to coordinate with the Village Administrator and the Water Operator ahead of time for any periods of work beyond normal work hours.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION 011100

SECTION 011419 – USE OF SITE

PART 1 - GENERAL

1.1 GENERAL

- A. The Contractor will be allowed the use of as much of the site designated for the improvements as is necessary for his operation.

1.2 USE OF STREETS

- A. During the progress of the work, the Contractor shall make ample provisions for both vehicle and pedestrian traffic on any public street and shall indemnify and save harmless the Owner from any expense whatsoever due to their operations over said streets. The Contractor shall also provide free access to all the fire hydrants, water, and gas valves located along the line of his work. Gutters and waterways must be kept open or other provisions made for the removal of storm water. Street intersections may be blocked only one-half at a time, and the Contractor shall lay and maintain temporary driveways, bridges and crossings, such as in the opinion of the Engineer are necessary to reasonably accommodate the public.
- B. In the event of the Contractor's failure to comply with these provisions, the Owner may cause the same to be done, and may deduct the cost of such work from any monies due the Contractor under this Agreement, but the performance of such work by the Owner at its instance shall serve in no way to release the Contractor from his general or particular liability for the safety of the public or the work.
- C. The Contractor shall repair at no cost to the Owner, all existing roads, parking areas, grassed areas that are damaged due to the execution of his work. The Contractor shall remove daily all mud, soil and debris that may be tracked onto existing streets, drives, or walks by his equipment or that of subcontractors or suppliers.

1.6 PROTECTING EXISTING BUILDINGS, STRUCTURES AND ROADWAYS

- A. The Contractor shall, at his own expense, shore up and protect any buildings, roadways, utilities or other public or private structures which may be encountered or endangered in the prosecution of the work, and that may not be otherwise provided for, and he shall repair and make good any damages caused to any such property by reason of his operations. All existing fences removed due to the prosecution of the work shall be replaced by the Contractor. No extra payment will be made for said work or material, but the cost of this work must be included in the price stipulated for the work to be done under this contract.

1.7 SITE FACILITIES

- A. The Contractor shall furnish and place sufficient quantities of portable toilet facilities at locations convenient for use by the Contractor personnel and Subcontractor personnel.

1.8 RESTORATION

- A. The Contractor shall restore all areas per the plans and specifications and if not specified, at least to the condition existing prior to the start of work.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION 011419

SECTION 012000 - MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES:

- A. Measurement and payment criteria applicable to the Work performed under a lump sum and/or unit price payment methods.
- B. Defect assessment and non-payment for rejected work.

1.2 AUTHORITY

- A. Contractor shall take all measurements and compute quantities. The Owner or Engineer will verify measurements and quantities.
- B. Contractor shall assist by providing necessary equipment, labor, and survey equipment as required when requested by Owner or Engineer.

1.3 UNIT QUANTITIES SPECIFIED

- A. Quantities indicated in the Bid Form are for bidding and contract purposes only. Quantities supplied or placed in the Work and verified by the Owner or Engineer determine payment.
- B. If the actual Work requires more or fewer quantities than those quantities indicated, provide the required quantities at the unit sum/prices contracted.
- C. If a substantial change in quantity of any line item is anticipated, the Contractor shall notify the Owner or Engineer immediately.

1.4 GENERAL REQUIREMENTS

- A. Lump Sum and unit prices shall include providing all costs required for the complete construction of the specified unit of work including cost of materials and delivery; cost of installation; labor including social security, insurance, and other required fringe benefits; workman's compensation insurance; bond premiums; rental of equipment and machinery; taxes; testing; surveys; incidental expenses; and supervision.
- B. The Owner reserves the right to reject the Contractor's measurement of completed work that involves use of established unit prices, and to have this Work measured by an independent surveyor acceptable to the Contractor at the Owner's expense.
- C. Contract Sum adjustments will be by Change Order on basis of net accumulative change for each unit price category.

1. Except as otherwise specified, unit prices shall apply to both deductive and additive variations of quantities.
 2. Lump sum and unit prices in the Agreement shall remain in effect until date of final completion of the entire Work.
- D. Partial payment for material and equipment properly stored and protected will be made in accordance with requirements of the General Conditions.
- E. Payment will be made at the respective contract unit and lump sum price for each item shown in the Agreement, installed and accepted, which price and payment shall constitute full compensation for furnishing all materials and performing all Work in connection therewith and incidental thereto.
1. No separate payment will be made for:
 - a. Record Drawings
 - b. Construction of haul roads as may be required.
 - c. Testing

1.5 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of the Engineer and Owner, it is not practical to remove and replace the Work, the Engineer and Owner will direct one of the following remedies:
1. The defective Work may remain, but the unit/lump sum price will be adjusted to a new price at the discretion of the Engineer and Owner.
 2. The defective Work will be partially repaired to the instructions of the Engineer and Owner, and the price will be adjusted to a new price at the discretion of the Engineer and Owner.
 3. The individual specification sections may modify these options or may identify a specific method for modification or correction.
- C. The authority of the Engineer and Owner to assess the defect and identify payment adjustment is final.

1.6 NON-PAYMENT FOR REJECTED PRODUCTS

- A. Payment will not be made for any of the following:
1. Products wasted or disposed of in a manner that is not acceptable.
 2. Products determined as unacceptable before or after placement.
 3. Products not completely unloaded from the transporting vehicle.
 4. Products placed beyond the lines and levels of the required Work.
 5. Products remaining on hand after completion of the Work.
 6. Loading, hauling and disposing of rejected Products.

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

3.1 PAYMENT APPLICATION

A. Required Forms

1. Utilize Application for Payment Form provided in Contract Documents Section of this Project Manual.

B. Preparation of Applications:

1. Present required information in typewritten form.
2. Execute certification by signature of authorized officer.
3. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored Products.
4. List each authorized Change Order.
5. Prepare Application for Final Payment as specified in Section 017800.

C. Submittal Procedures:

1. Submit a minimum of four (4) originally executed copies of each Application for Payment, Schedule of Values, and supporting documentation including, but not limited to invoices, weight slips, and shipping receipts.
2. Submit an updated construction schedule with each Application for Payment.
3. Payment Period: Submit Application for Payment by the first of each month to the Engineer.
4. Submit with transmittal letter as specified for Submittals in Section 013300.
5. Submit two (2) originally executed waivers for partial payment.
6. Submit two (2) certified payroll reports for payroll period.
7. If requesting payment for stored materials, submit four (4) copies of material invoice and shipping request.
8. Submit any other documentation as requested by the Engineer or Owner.

D. Substantiating Data

1. When Owner or Engineer requests substantiating information, submit data justifying dollar amounts in question.
2. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

END OF SECTION 012000

SECTION 013100 - COORDINATION, FIELD ENGINEERING AND MEETINGS

PART 1 - GENERAL

1.1 SECTION INCLUDES:

- A. Coordination – General.
- B. Coordination with Owner’s Operations.
- C. Field engineering.
- D. Progress meetings.
- E. Pre-installation conferences.

1.2 COORDINATION - GENERAL

- A. Contractor shall coordinate scheduling, submittals, and work of the various sections of the work to assure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later. Refer to Section 001100 – Summary of Work for specific construction sequence.
- B. Contractor shall verify that utility requirement characteristics of operating equipment are compatible with building utilities and coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. Contractor shall coordinate space requirements and installation of mechanical and electrical work which are indicated diagrammatically on drawings and shall follow routing shown for pipes, ducts and conduit as closely as practicable. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance and for repairs.
- D. In finished areas, except as otherwise indicated, Contractor shall conceal pipes, ducts and wiring within the construction and coordinate the locations of fixtures and outlets with finish elements.
- E. Contractor shall coordinate completion and clean-up of work of separate sections in preparation for substantial completion and for portions of work designated for Owner’s occupancy.
- F. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.
- G. Coordinate work with other site contractors involved in the Project as indicated by the Plans and Specifications, or as directed by the Owner.

1.3 COORDINATION WITH OWNER'S OPERATIONS

- A. The Contractor shall schedule construction activities so as to keep existing Owner's roadways, utilities and facilities in operation at all times unless otherwise approved by the Owner.
- B. Temporary roadways if required to divert traffic around this work area shall be furnished, maintained and subsequently removed by the Contractor.
- C. All temporary pumping, piping or miscellaneous equipment required shall be furnished, maintained and subsequently removed by the Contractor.
- D. All proposed construction sequences, and all process shutdowns and equipment tie-ins shall be scheduled well in advance and shall occur only after being approved by the Owner.

1.4 FIELD ENGINEERING

- A. Contractor shall locate and protect property stakes, legal survey monuments, and survey control and reference points. Contractor shall pay for replacement of disturbed property stakes and legal survey monuments by a Professional Surveyor registered in the State of Ohio and acceptable to the Owner.
- B. Contractor shall provide field engineering services as required to establish elevations, lines, and levels, utilizing recognized engineering survey practices.
- C. Contractor shall be responsible for all lines, elevations, and measurements of buildings, structures, piping, utilities, and other work executed by the Contractor under the Contract. Contractor must exercise proper precaution to verify figures before laying out the work, and will be held responsible for any error resulting from their failure to exercise such precaution.

1.5 PROGRESS MEETINGS

- A. Progress meetings will be held throughout progress of the Work at intervals agreed to by the Owner, Engineer and Contractor. Interval will generally be monthly.
- B. Contractor's project manager, job superintendent, major subcontractors and suppliers shall attend as appropriate to agenda topics for each meeting. Contractor's representatives shall have authority to bind Contractor to decisions at the meetings.
- C. At the meetings the Contractor shall submit typed reports detailing the progress of the Work, compliance with submitted progress schedules and future construction plans affecting the schedule of the Work.
- D. The Engineer will prepare and distribute minutes to all attending parties.

1.6 PREINSTALLATION CONFERENCES

- A. When required in individual specification Section, convene a pre-installation conference at work site prior to commencing work of the Section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific Section.
- C. Notify Engineer a minimum of five (5) days in advance of meeting date.
- D. Review conditions of installation, preparation and installation procedures, and coordination with related work.

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

Not Applicable.

END OF SECTION 013100

SECTION 013216 - PROGRESS SCHEDULES

PART 1 - GENERAL

1.1 RELATED SECTIONS

- A. Section 013300 – Submittals.

1.2 FORMAT

- A. Prepare schedules as a horizontal bar chart with separate bar for each major portion of Work or operation, identifying first workday of each week.
- B. Sequence of Listings: In the same sequence as the Bid Schedule contained within this Project Manual or the schedule of values provide for lump sum work.
- C. Scale and Spacing: To provide space for notations and revisions.
- D. Sheet Size: Minimum 8-1/2 X 11 inches. Maximum of 22" x 34". All sheets submitted shall be easily reproducible and not requiring to piece together more than 3 sheets.

1.3 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify work of separate stages, separate floors and other logically grouped activities.
- C. Provide sub-schedules to define critical portions of the entire schedule.
- D. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the last day of each month.
- E. Provide separate schedule of submittal dates for shop drawings, product data, and samples, including Owner furnished products, if applicable, and Products identified under Allowances, if applicable, and dates reviewed submittals will be required from Engineer. Indicate decision dates for selection of finishes.
- F. Indicate delivery dates for Owner furnished products and Products identified under Allowances, if applicable.
- G. Coordinate content with bid schedule or schedule of values as appropriate.

1.4 REVISIONS TO SCHEDULES

- A. Indicate progress of each activity to date of submittal, and projected completion date of each activity.

- B. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
- C. Provide narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect, including the effect of changes on schedules of separate contractors.

1.5 SUBMITTALS

- A. Submit Preliminary Progress Schedule in accordance with the requirements outlined in Paragraph 2.05 of the General Conditions.
- B. Submit revised Progress Schedules with each Application for Payment.

1.6 DISTRIBUTION

- A. Distribute copies of reviewed schedules to Project site file, Subcontractors, suppliers, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

Not Applicable.

END OF SECTION 013216

SECTION 013300 - SUBMITTALS

PART 1 - GENERAL

1.1 SUMMARY

A. Work Included:

1. Whenever possible throughout the Contract Documents, the minimum acceptable quality of workmanship and materials has been defined either by manufacturer's name and catalog number or by reference to recognized industry standards.
2. To facilitate Contractor's understanding of the design intent, procedures have been established for advanced submittal of design data and for its review or rejection by the Engineer.
3. The type of submittal requirements specified in this section include shop drawings, product data, samples and other miscellaneous work related submittals.

B. Related work described elsewhere:

1. Additional requirements for submittals are described in other sections of these specifications. Submittals shall conform to Article 6 of the General Conditions.
2. Section 013216 – Progress Schedules
3. Section 017823 – Operation and Maintenance Data

C. It is emphasized that the Engineer/Architect's review of Contractor's submitted data is for general conformance to the contract drawings and specifications but subject to the detailed requirements of drawings and specifications. Although the Engineer/Architect may review submitted data in detail, such review is an effort to discover errors and omissions in Contractor's drawings. The Engineer/Architect's review shall in no way relieve the Contractor of his obligation to properly coordinate the work and to Engineer/Architect the details of the work in such manner that the purposes and intent of the contract will be achieved. Such review by the Engineer/Architect shall not be construed as placing on him or on the Owner any responsibility for the accuracy and for proper fit, functioning or performance of any phase of the work included in the contract.

D. The Contractor shall submit Shop Drawings for all fabricated work and for all manufactured items required to be furnished in the Contract in accordance with the General Provisions and as specified herein. Shop Drawings shall be submitted in sufficient time to allow at least twenty-one (21) calendar days after receipt of the Shop Drawings from the Contractor for checking and processing by the Engineer/Architect.

E. Contractor shall review and approve all Shop Drawings prior to submission. Contractor's approval shall constitute a representation to Owner and Engineer/Architect that Contractor has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data or assumes full responsibility for doing so, and that Contractor has reviewed or coordinated each Shop Drawing or sample with the requirements of the work and the Contract Documents.

- F. It is the responsibility of each Prime Contractor to furnish to all other Prime Contractors and especially the General Construction Contractor reviewed Shop Drawings for guidance in interfacing the various trades; i.e., sleeves, inserts, anchor bolts, terminations, and space requirements.
- G. No work shall be performed requiring Shop Drawings until same have been reviewed by Engineer/Architect.
- H. Accepted and reviewed Shop Drawings shall not be construed as approval of changes from Contract plan and specification requirements.

1.2 IDENTIFICATION OF SUBMITTALS

- A. Submittal Preparation: Mark each submittal with a permanent label or page for identification. Provide the following information on the label for proper processing and recording of action taken:
 - 1. Location
 - 2. Project Name
 - 3. Contract
 - 4. Name and Address of Engineer/Architect
 - 5. Name and Address of Contractor
 - 6. Name and Address of Subcontractor
 - 7. Name and Address of Supplier
 - 8. Name of Manufacturer
 - 9. Number and Title of appropriate Specification Section
 - 10. Drawing Number and Detail References, as appropriate.
 - 11. Submittal Sequence or Log Reference Number.
 - 12. Provide a space on the label for the Contractor's review and approval markings and a space for the Engineer/Architect's "Action Stamp".

1.3 GROUPING OF SUBMITTALS

- A. Unless otherwise specifically permitted by the Engineer, the Contractor shall make all submittals in groups containing all associated items so that information is available for checking each when it is received.
- B. Partial submittals may be rejected as not complying with the provisions of the Contract Documents.
- C. Review will be performed on a complete submittal as received. The Engineer will not divide a submittal and take separate action on each portion.

1.4 TIMING OF SUBMITTALS

- A. Shop Drawings shall be submitted in proper sequence and with due regard to the time required for checking, transmittal and review so as to cause no delay in the work. The Contractor's failure to transmit appropriate submittals to the Engineer/Architect sufficiently in advance of the work shall not be grounds for time extension.

- B. Review of submittals by Engineer will be made and responded to within 21 calendar days after receipt of same unless additional information is required. In lieu of returning a document when supplemental information is required, a written hold notice may be issued which will suspend the review period until a response is received.
- C. If review of a submittal is dependent upon information to be provided via another submittal which has not been received, the first submittal will be held until the second submittal is received. Written notice will be provided to the Contractor regarding the hold status of the first submittal.

1.5 SHOP DRAWINGS

- A. Shop drawings include specially-prepared technical data for this project including drawings, diagrams, performance curves, data sheets, schedules, templates, patterns, reports, calculations, instructions, measurements and similar information not in standard printed form for general application to a range of similar projects. Shop drawings submitted for all manufactured or fabricated items. See individual technical sections for specialized requirements.
- B. Shop Drawings shall be sufficiently clear and complete to enable the Engineer/Architect and Owner to determine that items proposed to be furnished conform to the specifications and that items delivered to the site are actually those that have been reviewed.
- C. Contractor shall make all shop drawings accurately to scale and sufficiently large to show all pertinent aspects of the item and its method of connection to the work.
- D. Shop drawings shall be checked, approved, and stamped by Contractor in accordance with the General Conditions before transmittal to Engineer for review and approval.
- E. Complete shop drawings and descriptive data shall be submitted on all manufactured or fabricated items prior to 25% completion of the work.
- F. It is anticipated that electronic submissions of shop drawings will be acceptable. The Contractor shall coordinate with the Engineer to establish a consistent submission process to be applied throughout the project. Where size and complexity warrant, the Engineer may request one full size, hard copy, of specific shop drawings may be requested to supplement and support review. An electronic copy of the shop drawing will be returned to the Contractor if approved. If the shop drawing is not approved, an electronic corrected copy and/or summary of comments will be returned to the Contractor for use in resubmittal.
- G. It is the Contractor's responsibility to provide other affected contractors and/or sub-contractors with copies of approved shop drawings.
- H. At the time of each submission, Contractor shall in writing identify any deviations that the Shop Drawings or samples may have from the requirements of the Contract Documents.

- I. Drawings shall be clean, legible and shall show necessary working dimensions, arrangement, material finish, erection data, and like information needed to define what is to be furnished and to establish its suitability for the intended use. Specifications may be required for equipment or materials to establish any characteristics of performance where such are pertinent. Suitable catalog data sheets showing all options and marked with complete model numbers may, in certain instances, be sufficient to define the articles which it is proposed to furnish.

1.6 REVIEW PROCEDURE

- A. Engineer/Architect will review with reasonable promptness all properly submitted Shop Drawings. Such review shall be only for conformance with the design concept of the Project and for compliance with the information given in the plans and specifications and shall not extend to means, methods, sequences, techniques or procedures of construction or to safety precautions or programs incident thereto.
- B. The review of a separate item as such will not constitute the review of the assembly in which the item functions. The Contractor shall submit entire systems as a package.
- C. All Shop Drawings submitted for review shall be stamped with the Engineer/Architect's action and associated comments.
- D. Except for submittals for record, information or similar purposes, where action and return is required or requested, the Engineer/Architect will review each submittal, mark to indicate action taken, and return accordingly. Compliance with specified characteristics is the Contractor's responsibility.

Action Stamp: The Engineer/Architect will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follows, to indicate the action taken:

1. If Shop Drawings are found to be in general compliance, such review will be indicated by marking the first statement.
 2. If only minor notes in reasonable number are needed, the Engineer/Architect will make same on all copies and mark the second statement. Shop Drawings so marked need not be resubmitted.
 3. If the submitted Shop Drawings are incomplete or inadequate, the Engineer/Architect will mark the third statement, request such additional information as required, and explain the reasons for revision. The Contractor shall be responsible for revisions, and/or providing needed information, without undue delay, until such Shop Drawings are acceptable. Shop Drawings marked with No. 3 shall be completed resubmitted.
 4. If the submitted Shop Drawings are not in compliance with the Contract Documents, the Engineer/Architect will mark the fourth statement. The Contractor will be responsible to submit a new offering conforming to specific products specified herein and/or as directed per review citations.
- E. No submittal requiring a Change Order for either value or substitution or both, will be returned until the Change Order is approved or otherwise directed by the Owner.

1.7 COLORS AND PATTERNS

- A. Unless the precise color and pattern is specifically described in the Contract Documents, whenever a choice of color or pattern is available in a specified product Contractor shall submit accurate color charts and pattern charts to Engineer for Owner's review and selection.
- B. Unless all available colors and patterns have identical wearing capabilities and are identically suited for the installation, Contractor shall completely describe the relative capabilities of each.

1.8 SAMPLES AND FIELD MOCK-UPS

- A. Contractor shall provide samples and field mock-ups where noted or specified.
- B. Samples are physical examples which illustrate materials, equipment, or workmanship and establish standards by which the work will be judged.
- C. Samples shall be of sufficient size and quantity to clearly illustrate the functional characteristics of the product and full range of color, texture and pattern.
- D. Samples shall have labels firmly attached, bearing the following information:
 - 1. Name of project.
 - 2. Description of product and finish.
 - 3. Name of Contractor.
 - 4. Trade name and number of product.
 - 5. Standards met by the product.
- E. Approval of samples must be obtained prior to proceeding with any work affected by material requiring sample approval.
- F. Samples, unless otherwise noted, become the property of the Owner.
- G. In situations specifically approved by the Engineer, the retained sample may be used in the construction as one of the installed items.
- H. Field mock-ups:
 - 1. Contractor shall erect field mock-ups at the project site in a location acceptable to the Owner and the Engineer.
 - 2. When accepted by the Engineer, the mock-up will become the basis for comparison of the actual work.
 - 3. Remove mock-up at conclusion of the work if it was not incorporated into the work.

1.9 PRODUCT DATA

- A. Contractor shall provide product data as required to supplement shop drawings.

- B. Product data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by Contractor to illustrate a material, product or system for some portion of the work.
- C. Contractor shall collect required product data into one submittal for each unit of work or system.
- D. Contractor shall include manufacturer's standard printed recommendations for application and use, compliance with standards, performance characteristics, wiring and piping diagrams and controls, component parts, finishes, dimensions, required clearances, and other coordination requirements.
- E. Contractor shall mark each copy of standard printed data to identify pertinent products, models, options, and other data.
- F. Contractor shall supplement manufacturer's standard data to provide information unique to the work.
- G. Contractor shall identify within the data variations from Contract Documents and product or system limitations which may be detrimental to successful performance of the completed Work.

1.10 RESUBMITTAL REQUIREMENTS

- A. Contractor shall revise and resubmit submittals as required.
- B. Shop Drawings and Product Data:
 - 1. Revise initial drawings or data and resubmit as specified for initial submittal.
 - 2. Itemize in a cover letter any changes which have been made other than those requested by the Engineer.
- C. It is considered reasonable that the Contractor shall make a complete and acceptable submittal to the Engineer by the second submission of a submittal item. The Owner reserves the right to withhold monies due the Contractor to cover additional costs of the Engineer's review beyond the second submittal.

1.11 MANUFACTURER'S INSTRUCTIONS

- A. Manufactured articles, materials and equipment shall be stored, commissioned, operated, applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer, unless specified to the contrary.
- B. Whenever specifications call for work to be performed, or materials to be installed in accordance with the manufacturer's printed instructions or directions, Contractor shall furnish copies as required for shop drawings of those instructions or directions to Engineer before installing the material or performing the work.
- C. Contractor shall identify with the submittal any conflicts between manufacturers' instructions and Contract Documents.

1.12 MANUFACTURER'S CERTIFICATES

- A. When specified in individual specification Sections, submit manufacturers' certificate to Engineer for review.
- B. Contractor shall furnish copies as required for shop drawings of those certificates to Engineer before installing the material or performing the work.
- C. Certificates shall indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- D. Certificates may be recent or previous test results on material or Product, but must be acceptable to Engineer.

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

Not Applicable.

END OF SECTION 013300

SECTION 014100 - REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. OSHA Requirements
- B. Roadway Limits

1.2 OSHA REQUIREMENTS

- A. All work, including site safety, equipment, materials, and fabricated items provided under the Contract, shall comply with the provisions of the “Occupational Safety and Health Act” (OSHA), and all other applicable federal, state, county and local laws, ordinances, codes, the requirements set forth herein, and any regulations that may be specified in other parts of these Contract Documents. Where any of these are in conflict, the more stringent requirements shall be followed. Job site safety shall be the sole responsibility of the Contractor.
- B. The Contractor’s failure to thoroughly familiarize himself with the aforementioned safety provisions shall not relieve him from compliance with the obligations and penalties set forth herein.

1.3 ROADWAY LIMITS

- A. Contractor shall comply with posted roadway weigh restrictions including any seasonal weight restrictions established by the governing highway authority.

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

Not Applicable.

END OF SECTION 014100

SECTION 014300 - FIELD ENGINEERING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Survey and field engineering.
- B. Quality control.
- C. Submittals.
- D. Project record documents.

1.2 QUALITY ASSURANCE

- A. Employ a Professional Surveyor registered in the State of Ohio and acceptable to Owner, to perform survey work of this section.
- B. Submit evidence of Surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate.

1.3 SUBMITTALS FOR REVIEW

- A. Submit name, address, and telephone number of Surveyor before starting work.
- B. On request, submit documentation verifying accuracy of survey work.
- C. Submit a certificate signed by the Professional Surveyor, that the elevations and locations of the Work are in conformance with Contract Documents.

1.4 PROJECT RECORD DOCUMENTS

- A. Maintain a complete and accurate log of control and survey work as it progresses. The project record documents shall be available at every progress meeting for verification that the actual work is being properly recorded.
- B. Submit Record Documents under provisions of Section 017800.

1.5 EXAMINATION

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify Engineer of any discrepancies discovered.

1.6 SURVEY REFERENCE POINTS

- A. Contractor to locate and protect survey control and reference points.
- B. Control datum for survey that is indicated on Drawings.
- C. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- D. Promptly report to Engineer the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- E. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Engineer.

1.7 SURVEY REQUIREMENTS

- A. Provide field survey services. Utilize recognized survey practices.
- B. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
 - 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
 - 2. Grid or axis for structures.
 - 3. Building foundation, column locations, and ground floor elevations.
 - 4. All other proposed work as shown on the Drawings.
- C. Periodically verify layouts by same means.

1.8 SURVEYS FOR MEASUREMENT AND PAYMENT

- A. Perform surveys to determine quantities of unit cost, including control surveys to establish measurement reference lines at request of Owner or Engineer. Notify Owner and Engineer prior to starting work.

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

Not Applicable.

END OF SECTION 014300

SECTION 014500 - QUALITY CONTROL

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Quality assurance and control of installation.
- B. References.
- C. Tolerances.
- D. Audio Video Recording of Site.
- E. Manufacturers' field services and reports.
- F. Manufacturer's certificates.
- G. Testing services.

1.2 QUALITY ASSURANCE/CONTROL OF INSTALLATION

- A. Contractor shall monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Contractor shall comply fully with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
- D. Contractor shall comply with specified standards as a minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Work shall be performed by persons qualified to produce workmanship of specified quality.
- F. Contractor shall secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.3 REFERENCES

- A. Conform to reference standard by date of issue current on date of Contract Documents.
- B. Obtain copies of standards when required by Contract Documents.
- C. Should specified reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.

- D. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.4 TOLERANCES

- A. Contractor shall monitor tolerance control of installed products to produce acceptable work and shall not permit tolerances to accumulate.
- B. Contractor shall comply with manufacturer's tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.
- C. Contractor shall adjust products to appropriate dimensions; position before securing products in place.

1.5 AUDIO / VIDEO RECORDING OF SITE

A. Scope of Work

1. Furnish all labor, materials and equipment to furnish color video / audio recording of the project site in accordance with the drawings and as specified herein.
2. Furnish copies of a continuous color video / audio recording of the entire area within fifty (50) feet of the construction area to concerned parties as described below. The recording shall be taken prior to any construction activity.
3. The Engineer reserves the right to reject the audio / video recording because of poor quality, unintelligible audio or uncontrolled pan or zoom. Any recording rejected by the Engineer shall be rerecorded at no cost to the client. Under no circumstances shall construction begin until the Engineer has received and accepted the audio / video recording.
4. The recording shall be performed by a qualified, established audio / video recording firm knowledgeable in construction practices which has a minimum of one year of experience in the implementation of established inspection procedures.
5. The audio / video recording firm shall submit three letters of recommendation from municipalities, and/or engineering firms indicating previous experience and ability to perform the work described in this contract. Data substantiating qualifications must be submitted and accepted prior to performing the survey.
6. Prior to recording, all areas to be recorded shall be investigated visually with notation made of features not readily visible by recording methods. This would include but not limited to culverts (size, type and condition) and manholes that may be partially buried. Record all measurements made during inspection.

B. Media

1. DVD's
 - a. DVD media shall be previously unrecorded standard quality DVD-R's with "Slimline" cases, labeled as described below.
 - b. As an alternative to DVD media, electronic files may be submitted on Flash Drive (USB 3.0 or newer format).
2. Labeling

- a. All recording media and cases shall bear labels with the following information:
 - 1) Media Number
 - 2) Owner's Name
 - 3) Date of Recording
 - 4) Project Name and Number
 - a) In a manner acceptable to the Engineer upon completion of the work and delivery of the media.
3. Ownership
 - a. All discs and written records shall become the property of the Owner. Four copies of the finished audio / video recording shall be distributed to the following:
 - 1) One (1) copy to the Owner
 - 2) Two (2) copies to the Engineer
 - 3) One (1) copy to be retained by the Contractor.

C. Execution

1. Color Video / Audio Survey
 - a. Furnish a continuous color video / audio recording of the entire area within fifty (50) feet of construction in accordance with the drawings and as specified herein.
 - b. Complete coverage shall include all surface features within 50 feet of the work area to be utilized by the Contractor and shall be supported by appropriate audio description made simultaneously with video coverage.
 - 1) General: Such coverage shall include, but not limited to, all existing driveways, sidewalks, curbs, ditches (drainage patterns are of particular concern), roadways (including condition of surface for full width, landscaping, trees, culverts, headwalls, catch basins, retaining walls, equipment, structures, pavements, manholes, vaults, handrails, fences, visible utilities, etc. and all buildings (interior and exterior) located within the aforementioned work zone. Video coverage shall extend to the maximum height of all structures within this zone. Of particular concern are existing faults, fractures, defects, or other imperfections.
 - 2) Streets: Unless otherwise noted, streets and street areas shall be recorded by audio / video tape for full width of the zone of influence of construction, including both sides of the street. The term street shall be understood to mean street, highway, avenue, boulevard, road, alley, lane, driveway, parking lot, etc., and all adjacent areas within the possible zones of the influence of construction.
 - 3) Easements: Easements shall be recorded by audio / video tape for the full width of the permanent and temporary easements and all other adjacent areas lying within the zone of influence of construction. Easements shall be understood to mean all areas not in streets that require tape coverage. Also, included in this coverage should be any areas that are intended to be used for construction access, storage, or waste disposal.
2. All recording shall be done during times of good visibility. No recording shall be done during periods of visible precipitation, or when more than ten percent of the

- ground area is covered with standing water, unless otherwise authorized by the Owner.
3. Each recording shall begin with the Owner's name, Contract name and number, the Contractor's name, date and location information such as street name, direction of travel, viewing side, etc.
 4. Information appearing in the recording must be continuous and can simultaneously be computer generated, transparent digital information. No editing or overlaying of information at a later date will be acceptable.
 5. Digital information to appear in the recording shall be as follows:
 - a. Name of Contractor
 - b. Month, Day, Year, Hour, Minutes and Seconds, electronically displayed accurately and continuously throughout the recording.
 - c. Name of project and Specification Number.
 6. Time must be accurate and continuously generated.
 7. Written documentation must coincide with the information on the tape so as to provide for easy retrieval of locations sought for at a later date.
 8. The video system shall have the capability to transfer individual frames of video electronically into hard copy prints or photographic negatives.
 9. Audio: All audio shall be recorded at the same time as the video recording and shall have the same information as on the viewing screen. Audio for each recording shall begin with the current date, project name and municipality, and be followed by the general locations (i.e. name of the street or property owner), location of cross county line, viewing side, and direction of progress. The engineering stationing (where required) shall be noted on the audio track. Houses and buildings shall be identified audibly by owner name and address where available. Special commentary shall be given for unusual conditions of buildings, sidewalks and curbing, foundations, trees and shrubbery, structures, equipment, pavement, etc.
 10. Prior to commencement of audio / video recording, the Contractor shall notify the Engineer in writing when and where the audio / video recording will begin. The Engineer may provide a designated representative to accompany and oversee coverage of all recording operations. Audio / video recording completed without an engineering representative present will be unacceptable unless specifically authorized by the Engineer.

1.6 MANUFACTURERS' FIELD SERVICES AND REPORTS

- A. When specified in individual specification sections or when requested by Engineer, Contractor shall require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions of surfaces and installation, and quality of workmanship.
- B. Contractor shall submit qualifications of observer to Engineer 30 days in advance of required observations.
- C. Contractor shall report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions.
- D. Contractor shall submit report in duplicate within 30 days of observation to Engineer for information.

1.7 MANUFACTURERS' CERTIFICATES

- A. When required by specified sections, submit three copies of manufacturer's certificates that certify the products meet or exceed specified requirements.

1.8 TESTING SERVICES

- A. When required by specified sections, Contractor shall appoint, employ and pay for specified services of an independent firm to perform testing.
- B. The independent firm will perform tests and other services specified in individual specification sections and as required by the Engineer.
- C. Testing and source quality control may occur on or off the project site. Perform offsite testing as required by the Engineer or the Owner.
- D. Reports will be submitted by the independent firm to the Engineer and Contractor indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
- E. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
 - 1. Notify Engineer and independent firm 24 hours prior to expected time for operations requiring services.
 - 2. Coordinate with independent firm and pay for additional samples and tests required for Contractor's use.
- F. Testing does not relieve Contractor to perform Work to contract requirements.
- G. Re-testing required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions of the Engineer. Payment for re-testing will be charged to the Contractor by deducting testing charges from the Contract Sum/Price.

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

Not Applicable.

END OF SECTION 014500

SECTION 015000 - CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. Work Included:

1. Temporary utilities.
2. Barriers.
3. Tree removal.
4. Contractor office and storage shed(s).
5. Engineer's field office.
6. Protection of installed work.
7. Temporary support facilities.
8. Removal of utilities, facilities, and controls.
9. Dust control.
10. Water, erosion and sediment control.
11. Noise control.
12. Traffic control.
13. Site security.
14. Site cleanup.

B. Contractor shall arrange for and provide temporary facilities as specified herein and as required for proper and expeditious prosecution of the Work.

C. Contractor shall pay all costs, except as otherwise specified, until final acceptance of the Work unless Owner makes arrangements for use of completed portions of the Work after substantial completion in accordance with the provisions of the General Conditions.

D. Contractor shall make all temporary connections to utilities and services in locations acceptable to Owner and local authorities having appropriate jurisdiction.

1. Furnish all necessary labor and materials.
2. Make all installations in a manner subject to the acceptance of such authorities and Owner.
3. Maintain such connections.
4. Remove temporary installation and connection when no longer required.
5. Restore services and sources of supply to proper operating conditions.

1.2 TEMPORARY UTILITIES

A. Temporary Electricity

1. Arrange for and provide for all temporary electrical service required for the project. Provide for all temporary drops required by the work.
2. All work shall comply with all local, state and federal requirements. Include lock-out tag-out procedures and devices as necessary.

B. Temporary Lighting

1. Provide lighting as required of the various trades and the work being performed.

C. Temporary Sanitary Facilities

1. Provide and maintain required facilities and enclosures.
2. Provide sufficient number for number of workmen and women employed. Locate near work areas. Perform regular maintenance as needed to control odors.
3. At end of construction, remove facilities or return existing facilities to same or better condition as originally found.

D. Temporary Water

1. Contractor shall supply its own water during construction. Contractor shall also provide its own piping, valves and appurtenances for its requirements. Connection to the existing water system shall be coordinated with the Owner and shall meet all code requirements including disinfection and backflow prevention.

E. Temporary Fire Protection

1. Contractors who maintain or provide an enclosed shed or trailer shall provide and maintain in operating order in each shed or trailer a minimum of one fire extinguisher. More extinguishers shall be provided as necessary. Fire extinguishers shall be minimum dry chemical, nonfreezing type, UL rating 2A-30BC, with 10-pound capacity for Class A, B and C fires.

1.3 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to allow for Owner's use of site, and to protect existing facilities and adjacent properties from damage from construction activities and demolition.
- B. Provide barricades required by governing authorities for public rights-of-way.
- C. Protect vehicular traffic, stored materials, site, and structures from damage.

1.4 TREE REMOVAL

- A. No tree removal will be permitted outside the designated construction work limits without permission of the Owner or Engineer.
- B. Trees which are not removed will be protected by ensuring that trees to be removed are felled so as not to injure the remaining trees.
- C. Prior to site clearing or tree trimming, the contractor and Owner shall walk the site in an effort to designate the trees to be saved and those to be trimmed back or removed. A barrier will be placed at an appropriate distance from the trunks and root systems of the

trees to remain.

- D. Soil and other materials will not be stored next to or within the drip-line of trees.
- E. The contractor shall repair all injuries to bark, trunks, limbs, and roots of remaining vegetation by properly dressing, cutting, bracing, and painting using only approved tree surgery methods, tools, and materials.
- F. Selective pruning of tree limbs prior to initiation of construction should only be used within the established construction work limits where removal is required for construction activities.

1.5 CONTRACTOR OFFICE AND STORAGE SHED(S)

- A. Contractor shall provide facilities to meet Contractor's needs.
- B. Provide telephone as required for Contractor's needs. At a minimum, Contractor shall maintain telephone service to the project site to facilitate communication with site supervisory personnel.
- C. Maintain a copy of the Contract Documents for the specific use of marking to reflect the construction records. Clearly indicate in red the modifications or alterations to the original documents. Attach supporting documentation as necessary. The Contractor shall continually update these documents.
- D. Provide storage areas and sheds of size to meet storage requirements for products of individual sections, allowing for access and orderly provision for maintenance and for observation of products to meet requirements of Section 016000 – Materials and Equipment.

1.6 ENGINEER'S FIELD OFFICE

- A. None Required.

1.7 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to prevent damage.
- C. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- D. Prohibit traffic from landscaped areas.

1.8 SUPPORT FACILITIES

- A. Contractor shall provide whatever facilities and services which may be needed to properly support primary construction processes and meet compliance requirements and governing regulations.
- B. Contractor shall not use permanent facilities except as otherwise indicated, unless authorized by Owner.

1.9 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, and materials just prior to final completion inspection.
- B. Clean and repair damage caused by installation or use of temporary facilities.
- C. Restore existing facilities used during construction to specified, or to original or better condition.

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

3.1 DUST CONTROL

- A. Contractor shall execute the Work by methods to minimize raising dust from construction operations.
- B. Contractor shall provide positive means to prevent airborne dust from dispersing into atmosphere.

3.2 WATER, EROSION AND SEDIMENT CONTROL

- A. Contractor shall grade site to drain and shall maintain excavations free of water. Provide, operate and maintain pumping equipment.
- B. Contractor shall protect site from puddling or running water.
- C. Contractor shall provide erosion control measures as necessary to control discharge of sediment laden water to surface waters and wetlands.
- D. Except as provided in the Contract Documents, overland discharge of water from dewatering operations shall not be allowed. Depending on water quality, such water shall either be piped directly to the surface water or shall be directed to sedimentation basins or other such structures or features prior to discharge to surface waters so as not to cause

damage to existing ground and improvements, erosion, or deposition in the discharge area.

- E. Contractor shall use jute or synthetic netting, silt fences, straw bales, dikes, channels and other applicable measures to prevent erosion of soils disturbed by its construction operation.
- F. Restoration of the site shall proceed concurrently with the construction operation. See Drawings and Specifications for erosion control measures in addition to that which may be required above.

3.3 NOISE CONTROL

- A. Provide methods, means and facilities to minimize noise produced by construction operations.

3.4 TRAFFIC CONTROL

- A. Contractor shall be responsible for providing all signs, barricades, flagmen and other traffic control devices in the construction zone.
- B. All traffic control measures shall meet the requirements of the Ohio Manual of Uniform Traffic Control Devices.
- C. Do not close or obstruct roadways without approval of the Owner.
- D. Maintain two-way traffic on streets at all times unless the Owner and the governing agency authorize one-way traffic for given areas and during specific operations.
- E. Conduct construction operations with minimum interference to roadways.

3.5 SITE SECURITY

- A. Contractor shall have the sole responsibility of safeguarding the Site perimeter to prevent unauthorized entry to the Site throughout the duration of the Project. Contractor shall at all times provide such permanent and temporary fencing or barricades or other measures as may be necessary to restrict unauthorized entry to its construction area including construction in public right-of-way or easements. Site security measures shall include safeguards against attractive nuisance hazards as a result of construction activity.
- B. Contractor shall at all times be responsible for the security of the Work including materials and equipment. Owner will not take any responsibility for missing or damaged equipment, tools, or personal belongings. Contractor shall have the sole responsibility of safeguarding the Work and the Site throughout the duration of the Project.

3.6 SITE CLEANUP

- A. Contractor shall cleanup the Site and remove all rubbish on a weekly basis unless a more

frequent interval is warranted by the volume or type of rubbish present.

- B. Contractor shall cleanup public streets and highways and remove any dirt, mud, or other materials due to project traffic on a daily basis and shall comply with all local and state ordinances and permit regulations.

END OF SECTION 015000

SECTION 016000 - MATERIAL AND EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Work Included: Contractor shall be responsible for the delivery, handling, storage and protection of all material and equipment required to complete the Work as specified herein.
- B. Related Sections and Divisions: Specific requirements for the handling and storage of material and equipment are described in other sections of these Specifications.

1.2 RELATED SECTIONS

- A. Bid Documents - Instructions to Bidders: Product options and substitution procedures.
- B. Section 013300 - Submittals

1.3 PRODUCTS

- A. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.
- B. Provide interchangeable components of the same manufacturer, for similar components.
- C. When any construction deviations from the Drawings and/or Specifications necessary to accommodate equipment supplied by Contractor result in additional costs to the Contractor or other contractors, such additional costs shall be borne by the Contractor. Contractor shall also pay any additional costs necessary for revisions of Drawings and/or Specifications by the Engineer.
- D. Each major component of equipment shall bear a nameplate giving the name and address of the manufacturer and the catalog number or designation.

1.4 TRANSPORTATION AND HANDLING

- A. Materials, products and equipment shall be properly containerized, packaged, boxed and protected to prevent damage during transportation and handling.
- B. Contractor shall not overload any portion of the structure in the transporting or storage of materials.
- C. Contractor shall not damage other construction by careless transportation, handling, spillage, staining or impact of materials.

- D. Contractor shall provide equipment and personnel to handle products, including those provided by Owner, by methods to prevent soiling and damage.
- E. Contractor shall provide additional protection during handling to prevent marring and otherwise damaging products, packaging and surrounding surfaces.
- F. Contractor shall handle products by methods to avoid bending or overstressing. Lift large and heavy components only at designated lift points.

1.5 DELIVERY AND RECEIVING

- A. Contractor shall arrange deliveries of products in accordance with the Progress Schedule, allowing time for observation prior to installation.
- B. Contractor shall coordinate deliveries to avoid conflict with the Work and conditions of the Site; limitations on storage space; and availability of personnel and handling equipment.
- C. Contractor shall deliver products in undamaged, dry condition, in original unopened containers or packaging with identifying labels intact and legible.
- D. Contractor shall clearly mark partial deliveries of component parts of equipment to identify equipment and contents to permit easy accumulation of parts and to facilitate assembly.
- E. Immediately upon delivery, Contractor shall inspect shipment to assure:
 - 1. Product complies with requirements of Contract Documents and reviewed submittals.
 - 2. Quantities are correct.
 - 3. Accessories and installation hardware are correct.
 - 4. Containers and packages are intact and labels legible.
 - 5. Products are protected and undamaged.

1.6 STORAGE AND PROTECTION

- A. Contractor shall store products, immediately on delivery, in accordance with manufacturer's instructions, with seals and labels intact and legible.
- B. Equipment Manufacturer shall coordinate with Contractor to clarify storage requirements for equipment to be delivered to the site. Coordination shall be completed in advance of the projected delivery date to assure adequate facilities will be available for protection of the equipment.
- C. In enclosed storage, Contractor shall:
 - 1. Provide suitable temporary weather tight storage facilities as may be required for materials that will be damaged by storage in the open.

2. Maintain temperature and humidity within ranges stated in the manufacturer's instructions.
3. Provide ventilation for sensitive products as required by manufacturer's instructions.
4. Store unpacked and loose products on shelves, in bins or in neat groups of like items.
5. Store solid materials such as insulation, tile, mechanical and electrical equipment, fittings, and fixtures under shelter, in original packages, away from dampness and other hazards.
6. Store liquid materials away from fire or intense heat and protect from freezing.

D. At exterior storage, Contractor shall:

1. Store unit materials such as concrete block, brick, steel, pipe, conduit, door frames and lumber off ground, out of reach of dirt, water, mud and splashing.
2. Store tools or equipment that carry dirt outside.
3. Store large equipment so as to not damage the Work or present a fire hazard.
4. Cover products subject to discoloration or detention from exposure to the elements, with impervious sheet material and provide ventilation to avoid condensation.
5. Completely cover and protect equipment or material that is prime coated or finish painted with secured plastic or cloth tarps. Store out of reach of dirt, water, mud and splashing.
6. Store loose granular materials on clean, solid surfaces such as pavement, or on rigid sheet materials, to prevent mixing with foreign matter.
7. Provide surface drainage to prevent erosion and ponding of water.
8. Prevent mixing of refuse or chemically injurious materials or liquids.
9. Cover aggregates such as sand and gravel in cold wet weather.
10. Remove all traces of piled bulk materials at completion of work and return site to original or indicated condition.

1.7 MAINTENANCE OF STORAGE

- A. Contractor shall periodically inspect stored products on a scheduled basis.
- B. Contractor shall verify that storage facilities comply with manufacturer's product storage requirements, and verify that the manufacturer's required environmental conditions are maintained continually.
- C. Contractor shall verify that surfaces of products exposed to the elements are not adversely affected and that any weathering of finishes is acceptable under requirements of the Contract Documents.
- D. Contractor shall perform scheduled maintenance of equipment in storage as recommended by the manufacturer. A record of the maintenance shall be kept and turned over to the Engineer when the equipment is installed.

1.8 INSTALLATION REQUIREMENTS

- A. Manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned as directed by the respective manufacturers, unless otherwise noted.
- B. After installation, Contractor shall protect all materials and equipment against weather, dust, moisture, and mechanical damage.
- C. Contractor shall be responsible for all damages that occur in connection with the care and protection of materials and equipment until completion and final acceptance of the Work by the Owner. Damaged material and equipment shall be immediately removed from the Site.

1.9 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Products of manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

1.10 SUBSTITUTIONS AFTER NOTICE TO PROCEED

- A. Engineer will consider requests for Substitutions only within 45 days after date of Notice to Proceed.
- B. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.
- C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D. A request constitutes a representation that the Contractor:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the Substitution as for the specified product.
 - 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension which may subsequently become apparent.
 - 5. Will reimburse Owner for review or redesign services associated with re-approval by authorities.
 - 6. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

1.11 SUBSTITUTION SUBMITTAL PROCEDURE

- A. Submit in accordance with Section 013300 - Submittals.
- B. The Engineer will notify Contractor, in writing, of decision to accept or reject request.

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

Not Applicable.

END OF SECTION 016000

SECTION 017800 - CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Adjusting.
- D. Operation and maintenance data.
- E. Warranties.
- F. Spare parts and maintenance materials.

1.2 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Owner's inspection.
- B. Provide submittals to Owner that are required by governing or other authorities.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.3 FINAL CLEANING

- A. It is the Contractor's responsibility to completely clean up the construction site at the completion of the Work.

1.4 ADJUSTING

- A. Contractor shall adjust operating products and equipment to ensure smooth and unhindered operation.

1.5 OPERATION AND MAINTENANCE DATA

- A. Provide per Section 017823.

1.6 WARRANTIES

- A. Contractor shall provide warranties beyond one-year warranty as required by technical sections and as follows:

1. Provide duplicate notarized copies of equipment warranty.
 2. Execute and assemble transferable warranty documents from Subcontractors, suppliers, and manufacturers.
- B. Include in the Operation and Maintenance Manual.
- C. Submit prior to request for Substantial Completion.
- D. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

1.7 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Contractor shall provide spare parts and maintenance materials as outlined in the specification sections related to the equipment supplied.
- B. Include in the Operation and Maintenance Manual.
- C. Submit prior to final Application for Payment.

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

Not Applicable.

END OF SECTION 017800

SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Format and content of manuals.
- B. Schedule of submittals.

1.2 RELATED SECTIONS

- A. Section 013300 - Submittals: Submittals procedures; Shop drawings, product data, and samples.
- B. Section 016000 - Material and Equipment: Systems demonstration.
- C. Section 017800 - Contract Closeout: Contract Closeout Procedures; Project Record Documents.
- D. Individual Specifications Sections: Specific requirements for operation and maintenance data.

1.3 QUALITY ASSURANCE

- A. Prepare instructions and data by personnel experienced in maintenance and operation of described products.

1.4 FORMAT

- A. Prepare data in the form of an instructional manual.
- B. Binders: Commercial quality, 8-1/2 x 11 inch three-ring binders with hardback, cleanable, plastic covers. When multiple binders are used, correlate data into related consistent groupings.
- C. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; list title of Project; identify subject matter of contents.
- D. Arrange content by systems under section numbers and sequence of Table of Contents of this Project Manual.
- E. Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- F. Text: Manufacturer's printed data, or typewritten data on 24-pound paper.

- G. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

1.5 CONTENTS, EACH VOLUME

- A. Table of Contents: Provide title of Project; names, addresses, and telephone numbers of Architect/Engineer, subconsultants, and Contractor with name of responsible parties; schedule of products and systems, indexed to content of the volume.
- B. For Each Product or System: List names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- C. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- D. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
- E. Type Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.
- F. Warranties and Bonds: Bind in copy of each.

1.6 MANUAL FOR MATERIALS AND FINISHES

- A. Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations. Provide information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- D. Additional Requirements: As specified in individual product specification Sections.

1.7 SUBMITTALS

- A. Submit one copy of preliminary draft or proposed format and outline of content before start of Work. Engineer will review draft and return copy with comments.
- B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.

- C. Submit one copy of completed volumes in final form 15 days prior to final inspection. Copy will be returned after final inspection, with Engineer comments. Revise content of documents as required prior to final submittal.
- D. After approval of draft by Engineer, Contractor shall submit three copies to Owner.

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

Not Applicable.

END OF SECTION 017823

SECTION 017839 – PROJECT RECORDS, DRAWINGS

PART 1 - GENERAL

1.1 RECORD DRAWINGS

- A. The Contractor shall furnish an authentic set of marked-up drawings showing the installation insofar as the installation shall have differed from the Engineer's drawings. The drawings shall be delivered to the Engineer for completing revisions to the original drawings immediately after final acceptance by the Owner.
- B. The Contractor shall furnish dimensioned drawings indicating locations of all underground mechanical and electrical facilities.

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

Not Applicable.

END OF SECTION 017839

SECTION 099100 - PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes surface preparation and field painting of exposed exterior and interior items and surfaces.
 - 1. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.
- B. This section of the specifications contains the detailed criteria for the selection of materials, surface preparation, and the furnishings of all coatings, labor, equipment and appliances for shop and field coating of steel water storage facilities. The following specification standards shall govern with modifications as specified herein: ANSI/AWWA D102 "AWWA Standard for Painting Steel Water Storage Tanks" and be certified by The National Sanitation Foundation, NSF Standard 61.
- C. The work to be performed under this specification consists in general of removal of existing coating systems, surface preparation, cleaning and painting the interior and exterior surfaces of the welded steel treatment equipment being repaired/replaced as a part of this project.

1.3 DEFINITIONS

- A. General: Standard coating terms defined in ASTM D 16 apply to this Section.
 - 1. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.
 - 2. Low Luster (Eggshell) refers to low-sheen finish with a gloss range between 20 and 35 when measured at a 60-degree meter.
 - 3. Semigloss refers to medium-sheen finish with a gloss range between 35 and 70 when measured at a 60-degree meter.
 - 4. Full gloss refers to high-sheen finish with a gloss range more than 70 when measured at a 60-degree meter.

1.4 MATERIAL SELECTION, COLORS AND LABELS

- A. The Contractor shall furnish information to the Engineer by way of shop drawing submittal for the materials proposed for use. The information shall include complete product specification sheets, manufacturer's instructions, and color selection guides.

- B. The Engineer will prepare a color schedule based on the Owner's selections (except where colors are already specified herein) and return the same to the Contractor along with the reviewed shop drawings.
- C. All materials shall be delivered to the site in manufacturer's sealed containers. The manufacturer shall label each container. Labels shall give the manufacturer's name, brand, type of paint, color of paint, and instructions for reducing. Thinning shall be done only in accordance with directions of the manufacturer and exclusively with the types of reducer recommended.

1.5 EXISTING PAINT SYSTEM

- A. The existing interior paint systems on the filtration unit and the softeners are to be completely removed in accordance with these specifications. The existing exterior paint system on the filtration unit is to be pressure washed and overcoated as a part of this project.
- B. The exterior coating system on the softener units is to remain.
- C. The existing coating systems on the fascia piping of both the filtration unit and the softener units is to remain.
- D. Abrasive blast and paint residues determined to be hazardous in nature shall be contained, collected, and removed from the site per applicable federal, state, and local regulations. OSHA regulation 29 CFR 1926.62, "Lead in Construction" shall apply and hereby made a part of these specifications.

1.6 SUBMITTALS

- A. In accordance with Section 013323.
- B. Product Data: For each paint system indicated. Include primers.
 - 1. Material List: An inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
 - 2. Manufacturer's Information: Manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material.

1.7 QUALITY ASSURANCE

- A. Applicator Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- B. Source Limitations: Obtain primers for each coating system from the same manufacturer as the finish coats.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:
 - 1. Product name or title of material.
 - 2. Product description (generic classification or binder type).
 - 3. Manufacturer's stock number and date of manufacture.
 - 4. Contents by volume, for pigment and vehicle constituents.
 - 5. Thinning instructions.
 - 6. Application instructions.
 - 7. Color name and number.

- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain storage containers in a clean condition, free of foreign materials and residue.
 - 1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily.

1.9 PROJECT CONDITIONS

- A. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 deg F.

- B. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

1.10 EXTRA MATERIALS

- A. Provide extra paint applied to surfaces. Deliver extra materials to Owner.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products outlined herein are manufactured by Tnemec Company, Inc., represented by Ohio Coating Consultants, LLC 800-890-7580 and are specified as a standard of quality.

- B. Equivalent materials of other manufacturers may be substituted only by approval of the Owner and the Engineer. Requests for substitution shall include manufacturer's literature for each product giving the name, generic type, descriptive information, and solids by volume, recommended dry film thickness and a list of five projects where each product has been used and rendered satisfactory service. No request for substitution shall be considered that would decrease film thickness or offer a change in the generic type of coating specified. Manufacturer's certified test reports showing that the substitute product(s) equal or exceed the performance of the specified products shall be submitted.

- C. Bidders desiring to use coatings, other than those specified, shall submit those with their proposal based on the specified materials, together with the information required above,

and indicate the sum which will be added to or deducted from the base bid should alternate materials be accepted.

- D. Products for each specified function and system shall be of a single manufacturer.

2.2 SCHEDULE OF COATING SYSTEMS

- A. The following schedule contains system specifications for repainting the interior and exterior of the treatment equipment. It is the intent of these specifications that materials supplied by alternate manufacturers be equal to materials of these manufacturers. In addition, The National Sanitation Foundation, NSF Standard 61 and the State Public Health Authority having jurisdiction shall have certified the interior paint system in contact with water for use with potable water.

2.3 INTERIOR PAINT SYSTEM

- A. The interior steel surface preparation shall be in accordance with SSPC-SP10 (Near White Blast) with a 2.0 minimum Mil surface profile.
- B. The interior surfaces shall be painted using the following paint system:
 1. Primer: Series 21-1255 (Beige) at 4-6 mils DFT.
 2. Stripe Coat on Weld Seams: Series 21-WH16 (Off White) DFT as required.
 3. Finish: Series 21-WH16 (Off White) at 4-6 mils DFT.
- C. Final Cure of the interior system is to be determined by the Owner's representative or coatings manufacturer prior to disinfection process.

2.4 EXTERIOR PAINT SYSTEM

- A. The filter exterior steel surface preparation shall be comprised of power washing to remove grease, oils, dirt and debris in preparation for overcoating. The power washing shall be performed by the Contractor.
- B. The exterior surfaces shall be overcoated using the following system.
 1. Finish: Series V701 Hydroflon at 2.0 – 3.0 mils DFT.
- C. Application shall follow manufacturer's recommendations with regard to base preparation and spot repair of any areas exhibiting corrosion.

2.5 CAULKING

- A. All stitch welded and lapped seams of the wetted surfaces are to be caulked with Sika 1A using a suitable backer rod as needed.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

- A. Surfaces shall be clean, dry, and adequately protected from dampness. Surfaces shall be smooth, even, and true to plane. Surfaces shall be free of any material, which will adversely affect adhesion or appearance of the coating. Cleanliness shall be checked by wiping the prepared steel surface with a white cloth dampened with manufacturer's thinner for the particular paint system. If a dark spot appears on the rag from light wiping, the Contractor shall take steps to clean the surface more thoroughly before applying paint.

3.2 INTERIOR SURFACES

- A. Interior wetted or highly moist steel surfaces shall have surface preparation equivalent to the following:
 - 1. Weld all surfaces such as pits and gouged areas as designated by the Engineer. Grind welds smooth. Solvent clean per SSPC-SP1 Solvent Cleaning, all welded surfaces to remove weld flux and other contaminants.
 - 2. Allow all surfaces to dry thoroughly then prepare the surfaces per SSPC-SP10 Near White Metal Blast Cleaning with a blast surface profile of approximately 2.0 to 2.5 mils.

3.3 EXTERIOR SURFACES

- A. Exterior steel surfaces of the filter unit shall be pressure washed to prepare for overcoating.

3.4 APPLICATION

- A. All materials shall be applied in accordance with manufacturer's directions and any thinning required shall be done in a manner and exclusively with the type of reducer recommended.
- B. Applications shall be completed per SSPC-PA1.
- C. Spray application may be used in conformance with applicable sections of AWWA D102.
- D. All materials shall be applied under adequate illumination.
- E. Materials shall be thoroughly mixed and kept at a uniform consistency during application. Structurally observe the pot life limitations.
- F. Where multiple coats of paint are used, each coat of paint shall be a slightly different shade than the preceding coat.
- G. Finished work shall be uniform and of the approved color. It shall completely cover, be smooth and free of runs, sags, wrinkles, shiners, streaks, and brush marks. Make edges of paint adjoining other materials or colors sharp and clean without overlapping.
- H. Total minimum dry film thickness of paint films specified herein will be measured with an Elcometer or similar instrument to determine acceptability. Special attention shall be given to weld seams.

- I. No painting or finishing shall be done under conditions, which are unsuitable for the production of good results. The surfaces to be painted shall be at least 5°F above the dew point. Do not apply exterior paint when temperature is below 50°F or above 90°F. Do not apply exterior paint in damp, rainy weather or in direct sunlight. Do not apply finishes in spaces where dust is being generated.
- J. Guard against dry over spray on all interior surfaces. Mask or shield the lower curvature of the tank and bowl with plastic or tarps held in place by industrial magnets.
- K. Minimum ambient and surface application temperatures as specified by the manufacturer for each product shall apply.

3.5 TOUCH-UP AND REPAIR

- A. At completion, all painted surfaces and coatings shall be inspected. All damaged spots, whether due to defective materials or workmanship or defects of surfaces covered shall be touched up and the finish restored. Additional coats of paint and coatings required to cover all spots or discoloration of every sort shall be applied at no additional cost.
- B. The Contractor shall furnish to the Owner at least one (1) extra gallon of finish paint specified above for exterior paint for touch-up repairs due to vandalism.

3.6 ENGINEER OBSERVATION

- A. The Contractor shall notify the Owner/Engineer upon completion of each of the following sequences of work so that the Engineer can inspect work prior to Contractor proceeding to the next sequence of work.
 - 1. Surface Preparation - Owner/Engineer must be present for inspection of surface preparation prior to Contractor applying primer coatings.
 - 2. Primer – Owner/Engineer must observe Primer coating prior to Contractor proceeding with Intermediate or Finish Coat.
 - 3. Intermediate – Owner/Engineer must observe Intermediate coating prior to Contractor proceeding with Finish Coat.
 - 4. Finish & Touch-Up - Owner/Engineer must observe Finish coating and Touch-Up Coating for final acceptance prior to filling and disinfection.

3.7 CLEANING AND DISINFECTION

- A. Final cleaning and bacteriological disinfection shall be performed in accordance with the requirements of AWWA standards associated with the disinfection of potable water treatment equipment. Contractor shall be responsible for coordination of testing with the Owner and shall be responsible for the costs of sampling and testing. The resulting samples shall be sufficient in number and result to document compliance with the requirements of the Ohio EPA. If necessary, the Contractor shall drain the equipment and repeat the disinfection procedure at no additional cost to the Owner until approval for use is obtained.

- B. The interior coating system shall be allowed to cure a minimum of 7 days at 75°F, or longer, as recommended by the coatings manufacturer according to ambient temperature, before the cleaning and disinfection process is initiated.

3.8 FIRST ANNIVERSARY INSPECTION

- A. The Owner shall establish a time period for inspection of paint systems within the contract guarantee period in accordance with Section 9 of AWWA D102. The Contractor shall comply with said Section 9 at no additional cost to the Owner.

3.9 WORKMANSHIP AND CLEAN-UP

- A. The Contractor shall keep the premises clean at all times and shall remove all rubbish as directed by the Engineer. All debris is to be removed from the grounds.

END OF SECTION 099100

SECTION 220533 - HEAT TRACE

PART 1 - GENERAL

1.1 SCOPE

- A. Provide components to maintain a heat tracing system for freeze protection or temperature maintenance of exterior above grade pipes and containers on systems indicated on the Drawings.
- B. The primary scope for this project shall include the following:
 - 1. Removal of existing jacketing and insulation to prepare for painting of the filtration unit.
 - 2. Removal of existing heat trace cables and related accessories to prepare for painting of the filtration unit.
 - 3. Reinstallation of heat trace cables and related accessories following painting of the filtration unit. Installation accessories, such as aluminum tape, etc., shall be provided new.
 - 4. Installation of new insulation as outlined herein.
 - 5. Installation of new aluminum jacketing components as outlined herein.
 - 6. Verification that the completed heat trace system is functional following reinstallation.

1.2 SUBMITTALS

- A. Submit system layout, wiring diagram and material information for approval in accordance with Section 013300.
- B. Provide operation and maintenance data in accordance with Section 017823.

PART 2 - PRODUCTS

2.1 GENERAL

- A. All components listed herein may not be required for the implementation of this project. Information has been provided for reference.

2.2 HEATING CABLE

- A. Self-regulating type. Heating cables shall be capable of maintaining process temperatures up to 150°F (65°C) and of withstanding intermittent exposure to temperatures up to 185°F (85°C).
 - 1. Non-hazardous locations: Pentair Raychem Type 8BTV1, or equal.
- B. Service Voltage: 120 VAC

2.3 HEAT TRACE ACCESSORIES

- A. Power Connection Kits: Provide equipment as recommended by heating cable manufacturer for interface of heating cable with power supply.
- B. Lighted End Seals: Provide lighted end seals at heat trace cable termination.
 - 1. Non-hazardous locations: Pentair Raychem Model E-100-L-A, or equal.
- C. Electric-Traced Label: Provide warning labels to indicate the presence of electrical heat-tracing under the insulation. Provide adequate labels to allow for a maximum spacing of 15 feet.
- D. Aluminum Tape: Provide tape as recommended by heating cable manufacturer to affix heating cable to pipe.

2.4 INSULATION

- A. 1/2" - 2" Pipe: AP/Armaflex or equal, pre-formed, 1" thick, closed-cell elastomeric thermal insulation. Thermal conductivity 0.245 Btu • in./h • ft² • °F.
- B. 2-1/2" and Larger Pipe: AP Armaflex/AP Armaflex FS Sheet and Roll, or equal, 2" thick, closed-cell elastomeric thermal insulation. Thermal conductivity 0.27 Btu • in./h • ft² • °F.
- C. Adhesive: Armstrong 520 or equal.
- D. Finish: Armstrong WB or equal water based latex enamel. White.

2.5 THERMOSTAT

- A. Controller:
 - 1. Non-hazardous locations: Ambient sensing, Raychem AMC-1A, or equal.
- B. Enclosure:
 - 1. Non-hazardous locations: NEMA-4X.
- C. Setpoint: 40°F.
- D. Voltage: 120 VAC

2.6 JACKETS

- A. General: ASTM C 921, Type 1, except as otherwise indicated.
- B. Aluminum Jacket: ASTM B 209, 3003 Alloy, H-14 temper, roll stock ready for shop or field cutting and forming to required sizes.
 - 1. Finish and Thickness: Smooth finish, 0.010 inch thick.
 - 2. Moisture Barrier: 1-mil, heat-bonded polyethylene and kraft paper.
 - 3. Elbows: Preformed 45-degree and 90-degree, short- and long-radius elbows, same material, finish, and thickness as jacket.
 - 4. Provide stainless steel bands to secure jacketing and to support maintenance of the equipment.

PART 3 - EXECUTION

3.1 REMOVAL OF THE EXISTING SYSTEM

- A. Remove existing heat trace components. Cables, controllers and other components to be reinstalled shall be removed for storage or otherwise protected from damage from painting operations. Existing insulation materials and jacketing materials shall be removed and properly disposed of.

3.2 INSTALLATION

- A. Reinstall the heat trace system in accordance with manufacturer's recommendations.
- B. Apply insulation in accordance with insulation and heat trace manufacturer's instructions. Cover all insulation butt joints with 3M #471 or equal tape or adhesive.
- C. Apply finish enamel to all exposed insulation surfaces in accordance with manufacturer's recommendations unless installation of aluminum jacketing is specified on the Drawings.
- D. Provide tape, caulking, conduit fittings and other necessary components to complete installation of heat trace equipment in accordance with manufacturer's recommendations.

3.3 OPERATIONAL TEST

- A. Verify that the completed heat trace system is functional following reinstallation.

END OF SECTION 220533

SECTION 400523 – PROCESS VALVES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Extent of each type of size of valve required is indicated within the project scope.
- B. All valves used for a particular service are to be of the same manufacturer, make and style for each valve type.
- C. Each valve unit shall be of the proper size and type to suit the intended service with appropriate body style, operator, joint accessories, coatings, guides, supports, pertinent accessories to be complete, in placed, tested and ready for service in conformance with project conditions.
- D. Valves specifically related to treatment equipment, specifically the filtration unit and the softener units shall be in accordance with the recommendation of the treatment equipment manufacturer and may not be addressed within this specification.

1.3 SUBMITTALS

- A. General: Submit the following in accordance with conditions of Contract and Division 1 Specification Sections.
- B. Product Data: Provide manufacturer's illustrated catalog data depicting general construction, materials list, coatings and necessary appurtenances in sufficient detail to verify product compliance.
- C. Shop Drawings: Provide manufacturer's drawings showing; principal dimensions, operator detail and arrangements, project schedule tag reference or location of intended usage as required to suit project conditions.

1.4 QUALITY ASSURANCE

- A. Supply valves and appurtenances that are standard product in regular production by manufacturer whose products have proven reliable in similar service for at least three (3) years.
- B. All valves used for a particular service are to be of the same manufacturer, make and style for each valve type.

- C. Each valve shall be subjected to operation and hydrostatic tests at the manufacturer's plant as specified within applicable AWWA Standards.
- D. All shaft couplings and mounting plates shall be coordinated by, approved by, and warranted by the valve manufacturer.
- E. All coated surfaces shall receive manufacturer's production and holiday testing as specified in applicable AWWA Standards.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Preparation for Transport: Prepare valves for shipping as follows:
 - 1. Ensure valves are dry and internally protected against rust and corrosion.
 - 2. Protect valve ends against damage and entry of dirt, etc. by use of appropriate end protectors.
 - 3. Set valves in best position for handling. Set gate valves closed to prevent rattling; set ball and plug valves open to minimize exposure of functional surfaces; set butterfly valves closed or slightly open; and block swing check valves in either closed or open position.
- B. Storage: Use the following precautions during storage:
 - 1. Do not remove valve end protectors unless necessary for inspection; then reinstall for storage.
 - 2. Protect valves from weather. Store valves indoors. Maintain valve temperature higher than the ambient dew point temperature. If outdoor storage is necessary, support valves off the ground or pavement in watertight enclosures.
- C. Handling: Use a sling to handle valve whose size requires handling by crane or lift. Rig valves to avoid damage to exposed or internal valve parts. Do not use handwheels and stems as lifting or rigging points.

1.6 WARRANTY

- A. All equipment furnished shall be warranted in accordance with the General Conditions.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Manufacturer's Name and Working Pressure: Cast information in raised letters on valve body.
- B. Valves bodies shall be of either grey or ductile cast iron.
- C. Valves shall have non-rising stems, open by turning left or counter-clockwise and be provided with either a 2-inch square nut for buried valves or handwheel for exposed

valves unless otherwise noted. The direction of opening shall be indicated by an arrow cast on the body and/or the actuator.

- D. All body bolts and nuts shall be bronze or stainless steel for buried, submerged or nonprotected applications and cadmium plated for exposed or interior applications that will receive protective finish coatings.

2.2 GATE VALVES

- A. The valves, described in this section shall be resilient seated gate valves manufactured to meet or exceed AWWA C509. Valves shall be of compression type seal design, providing bubble tight shut-off with bi-directional seating ability for pressures up to 200 psi.
- B. The valve shall have a smooth, unobstructed waterway free from any sedimentation pockets. Valve shall provide a 100% port of nominal pipe size when fully open. Tapping valve port shall be sized to permit a full pipe port tap.
- C. Body style shall be mechanical joint type for buried service, flange joint type for exposed service and when required, to include special end connections for tapping requirements or otherwise if indicated on the contract drawings.
- D. Stuffing boxes shall be O-ring seal type with two (2) rings located in steam above thrust collar.
- E. Thrust bearings shall be of the low friction torque reduction type, located both above and below the steam collar.
- F. Valves shall be as manufactured by; American Flow Control, Clow, M & H, Mueller, U.S. Pipe or an approved equal.

2.3 BUTTERFLY VALVES - WATER

- A. Butterfly valves shall comply with the latest revision of AWWA Specification C504, Class 150B. Valve discs shall be ductile iron, one (1) piece cast design for constant drip tight closure with flow in either direction for pressure up to 150 psi.
- B. Body style shall be full bodied, mechanical joint for buried service and flange joint type for exposed service unless otherwise indicated on the contract drawings.
- C. Wafer or lug body styles, when called for, shall have body applied seats that totally encapsulate the inside surface of the valve and also serve as the flange gaskets.
- D. All valve seat mating surfaces shall be against a 304 stainless steel or nickel-chromium disc edge surface for body applied seats.
- E. Full body style valve seats shall be of Buna-N (Nitrile) rubber applied to either the body or the disc:
 - 1. Body applied seats shall be retained by a bonding process meeting ASTM-D-429, Test Method "B" or may be mechanically retained.

- F. Shafts shall be 316 or 304 stainless steel construction. Shaft bearings shall be self-lubricated sleeve type. Shaft seals may be of V-type packing or standard O-ring seals allowing replacement without removing the valve shaft.
- G. Valves shall be as manufactured by M & N Mueller, Pratt, DeZurik, or an approved equal.

2.4 BUTTERFLY VALVES - AIR

- A. Valves utilized shall be specifically designed for air service and 25 psi air pressure.
- B. Butterfly valves shall meet the intent of the latest AWWA Specification C504, Class 25. These valves shall be a fully lugged wafer type or a flanged type design as indicated on the contract drawings; with cast iron body, ASTM A126, Class B.
- C. Disc to be ductile iron, ASTM A536, Grade 65-45-12 with electrolysis nickel plating or solid welded on nickel disc edge
- D. Elastomer seats shall be in the body. Seat on disc edge is not acceptable in air systems. Seats shall be of EPDM, and be field replaceable without special tools. Elastomer thickness, not inclusive of backing rings or stiffeners, shall be a minimum of 3/8-inch for valves 6 inches and smaller; and 1/2-inch for valves 8 inches and larger.
- E. Shafts shall be of 304 or 316 stainless steel construction. Shaft seals shall be adjustable chevron packing or O-ring.
- F. Discharge butterfly valves shall have locking lever operators.
- G. The valves shall be the product of DeZurik, or an approved equal.

2.5 PLUG VALVES

- A. Valves shall be the nonlubricated, eccentric type with resilient, soft faced Buna-N rubber plugs providing bi-directional dead-tight shut-off to the full valve rating. Valve pressure ratings shall be 175 psi through 12 inches and 150 psi for valves over 12 inches.
- B. Bodies of valves shall be furnished with a welded overlay seat of not less than 90% pure nickel. Seat area shall be completely covered with raised surface weld to ensure that the plug face contacts only nickel. Screwed-in seats shall not be acceptable.
- C. Plugs shall be of ASTM A126 Class B cast iron. The plug shall have a cylindrical seating surface eccentrically offset from the center of the plug shaft. The interference between the plug face and body seat shall be externally adjustable in the field with valve in line under pressure. Round shaped ports are not acceptable.
- D. Valve bearings shall be sleeve type, oil impregnated, permanently lubricated, stainless steel. Nonmetallic bearings shall not be acceptable.
- E. Shaft seals may be of the multiple V-ring or O-ring type conforming with ASTM C504 and shall be externally adjustable and replaceable without removing the valve while under pressure.

- F. Valves shall be full port equivalent to the nominal pipe diameter.
- G. Valves shall be as manufactured by DeZurik, or an approved equal.

2.6 OPERATORS

- A. All valves 3 inches and larger, and all buried, submerged, or chain operated valves shall be gear operated. Gears for valve operation shall be sized for the working pressure and installed in such a manner that the stuffing box will be accessible for packing.
- B. Manual Operation
 - 1. Valves shall be equipped with nut, handwheel, crank, chain, gears, floor stand, and other appurtenances as required for manual operation as specified or scheduled.
 - 2. Operation shall be designed so that the effort required to operate the handwheel, lever, or chain shall not exceed 25 lbs. applied at the extremity of the wheel or lever.
 - 3. Handwheels on valves 4 in. and larger shall not be less than 12 in. in diameter.
 - 4. Chainwheels shall be provided when installed centerline of valve is over 5 ft.-6 in. above the floor. Chains shall be cadmium plated and loop 3 ft.-6 in. from the floor. Orient chainwheel and provide intermediate pulley mounting, if necessary, to permit unobstructed chain operation.
 - 5. Wrench nuts shall be cast iron or bronze, 1-15/16 in. at top, 2 in. square at base and 1-3/4 in. high with a flanged base.
 - a. Provide one (1) tee wrench for each valve type used and of each significant length differential required. All wrenches supplied shall be a length so that the bar handle extends approximately 3 feet above finished grade in addition to the required bury depth length(s).
- C. Electric Operators
 - 1. The operator shall be the helical and worm gear type driven by an electric motor. All power gearing shall be Oil Bath lubricated. The actuator shall be in conformance with AWWA C540. The valve manufacturer shall furnish the value of the maximum operating torque required to operate the valve as defined in the Appendix to AWWA C540. The operator manufacturer shall furnish evidence that the operator is designed to equal or exceed the torque requirements.
 - 2. Unless otherwise noted, the operator shall be geared to operate the valve from the fully open position to the fully closed position or vice-versa in approximately 60 seconds. It shall be possible to change this cycle time by substituting suitable gear trains. The operator shall be equipped with a declutchable handwheel for manual operation. The operator shall be designed to hold the valve in any intermediate position between fully open and fully closed without creeping or fluttering.
 - 3. Suitable reduction gearing shall be provided off the main shaft of the gearing, turning approximately 270 degrees while the valve performs full travel. The reduction gearing shall be equipped with the following position indicating devices for each operator:
Backlit LCD Display
 - a. A mechanical position indicator dial;

- b. The output signal shall be 4-20 ma; a standard potentiometer, 1000 ohms with linearity of +/- 3% for indication in the remote controller;
4. Each operator shall be equipped with adjustable torque switches for overload protection in both opening and closing directions with torque switch bypass for unseating.
5. Each operator shall be equipped with four adjustable train gear limit switches. Each limit switch shall include a switch and counter gear. The setting accuracy shall be less than 1/10 turn of the operator output shaft. Two (2) gear limit switches are for remote indication of end positions.
6. Each motor shall be 480 volts, 60 Hz, three phase, induction type as recommended by the operator manufacturer. Motors shall be designed specifically for actuator service.
7. Three (3) thermostats in series placed in the winding shall provide the motor with thermal protection. They shall interrupt the control circuit as soon as the temperature goes beyond the permissible winding temperature.
8. Each operator shall be equipped with a reversing magnetic starter. The starter shall be capable of receiving contact closures from remote sources to actuate the operator in either direction. Control voltage shall be 120 volts supplied by a transformer included in the control enclosure. Each operator shall include a local OPEN-STOP-CLOSE control, push button station, and a pad lockable LOCAL-OFF-REMOTE selector switch.
9. All electrical components shall be integral with the operator, housed in a watertight NEMA 4X enclosure and completely wired.
10. A circuit-breaker disconnect shall be provided with the operator.
11. Easily identifiable terminal blocks shall be provided for all external power, control, and signal connections.
12. Operators, located outdoors, shall include thermostats and space heaters in the motor and control compartments.
13. The operator shall be as manufactured by Rotork, Limitorque, EIM, Auma or equal.

2.7 PROTECTIVE COATINGS

- A. All iron parts of valve assemblies shall be painted before leaving the shop.
- B. All exterior and internal waterway ferrous surfaces of each valve, except finished or bearing surfaces shall be shop painted with a liquid or powder epoxy coating of approximately 10 mils dry film thickness conforming to AWWA C-550.

2.8 EXTENSION STEMS AND STEM GUIDES

- A. When required by drawings, schedule or project details, provide an extension stem made of cold-rolled steel material and the same size as the stem of the valve it operates. If the extension is more than 8 ft. long, intermediate stem guides shall be installed and supported from the wall by suitable brackets at a maximum spacing of 8 ft.
- B. Extension stems shall be 304 stainless steel.
- C. Brackets and stem guides shall be made of cast iron and fully adjustable. The guide block shall be bronze bushed where it contacts the extension stem. Stem guides shall be as

manufactured by the Eddy Valve Co., Rodney Hunt, or equal. Secure stem guides to walls with stainless steel bolts. In the event of off-set or misalignment, provide off-set extension rod with universal end fittings at valve actuator and stem drop connection.

- D. Extension stem shall have connecting socket for 2-inch square nut and pinsocket to lock on valve operating nut.

2.9 VALVE BOXES

- A. Valve boxes shall be cast iron, 5-1/4" shaft, three-piece screw type, adjustable boxes. The top section to have a drop lid of which to be marked for service which it is used cast thereon. Cover and boxes shall be round pattern.
- B. Provide proper base size and shape to straddle the valve bonnet without touching or being supported by the valve mechanism. Use No. 6 base size for 6-inch and 8-inch gate valves or typical butterfly valve operators, No. 160 oval base size for 12-inch and larger gate valves or other size necessary to suit a particular valve manufacturer's requirements.
- C. Extension sections shall be provided where the depth of trench is such that they are needed to bring the top of the box to finished grade. The valve box shall be installed so that it is perfectly vertical and centered on the valve operating nut.

2.10 FLOOR BOXES AND STANDS

- A. Each valve operator projecting through a floor shall be equipped with a floor box or floor stand and extension stem.
- B. Floor boxes for access to operating nuts of valves, slide gates shall be cast iron cover and body with bronze or brass bushings. Casting length to equal the thickness of the concrete slab in as much as possible. Floor boxes shall be as manufactured by Clow, Trumbull Industries or an approved equivalent.
- C. Floor stands shall be made of cast iron and shall extend to a level where handwheel or other operator is easily operated. Stands shall be fitted with bronze bushings to maintain proper stem alignment, brass or stainless steel nameplates shall be provided to identify related valve manufacturer, valve type and size or in the case of stand being of valve manufacturer, cast in name would suffice. Provide plastic stem covers with open-close scale for all rising stem applications. Stands shall be anchored to the concrete slab with stainless steel bolts.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Valves shall be carefully handled and placed so as not to permit any damage to the interior coatings, disc or seat. Internal type lifting devices shall not be permitted. Do not use handwheels or stems as lifting of rigging points.

- B. All valves shall be carefully installed in their respective positions free from distortion and stress. Connecting joints shall conform to applicable requirements of the specifications.
- C. Stem guides shall be accurately aligned.
- D. If the valve box is tipped or otherwise not centered on the valve operating nut or not installed at the proper elevation, the Contractor shall, at his own expense, make whatever correction is required to remedy the defect promptly, upon notice to do so by the Engineer.

3.2 TESTING

- A. All valves shall be tested in place by the Contractor as far as practicable under conditions for the pipelines in which they are placed, and defects revealed in valves or connections under test shall be corrected at the expense of the Contractor to the satisfaction of the Engineer.
- B. Field certification shall include inspection of the following:
 - 1. Verify equipment is properly aligned per the installation instruction and drawings.
 - 2. Assure controls and instrumentation work in all modes.

3.3 OPERATION AND MAINTENANCE MANUALS

- A. Prior to or with the delivery of equipment, the manufacturer shall provide copies of an operation and maintenance manual including storage, installation, start-up, operating and maintaining instructions, and a complete parts and recommended spare parts list. The O & M Manuals shall be in compliance with the General Requirements of these specifications.

END OF SECTION 400523

SECTION 402400 – PIPES, TUBINGS AND PIPE FITTINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work of this section.

1.2 SUMMARY

- A. Extent of pipe, tube, and fittings required by this section is indicated on drawings

1.3 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacturer of pipes and pipe fittings of types and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Codes and Standards:
 - 1. Welding: Quality welding procedures, welders and operators in accordance with ASME B31.1, or ASME B31.9, as applicable, for shop and project site welding of piping work.
 - a. Certify welding of piping work using Standard Procedure Specifications by, and welders tested under supervision of, the National Certified Pipe Welding Bureau (NCPWB).
 - 2. NSF Labels: Where plastic piping is indicated to transport potable water, provide pipe and fittings bearing approval label by National Sanitation Foundation (NSF).

1.4 SUBMITTALS

- A. Product Data:
 - 1. Product Data: Submit manufacturer's technical product data, installation instructions, and dimensioned drawings for each type of pipe and pipe fitting. Submit piping schedule showing Manufacturer, pipe or tube weight, fitting type, and joint type for each piping system.
 - 2. Submit manufacturer's technical data and application instructions per General Requirements NSF Item Nos. 61 and 97.
- B. Welding Certifications: Submit reports as required for piping work.
- C. Grooved joint products shall be shown on drawings and product submittals shall be specifically identified with the applicable Victaulic style or series number.
- D. Brazing Certifications: Submit reports as required for piping work.

- E. Maintenance Data: Submit maintenance data and parts lists for each type of mechanical fitting. Include this data, product data, and certifications in maintenance manual; in accordance with requirements of Division 1.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Where possible, store pipe and tube inside and protected from weather. Where necessary to store outside, elevate above grade and enclose with durable, waterproof wrapping.
- B. Protect flanges and fittings from moisture and dirt by inside storage and enclosure, or by packing with durable, waterproof wrapping.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Piping Materials: Provide pipe and tube of type, joint type, grade, size and weight (wall thickness or Class) indicated for each service. Where type, grade or class is not indicated, provide proper selection as determined by Installer for installation requirements, and comply with governing regulations and industry standards.
- B. All standard and special ductile iron castings shall conform to the latest applicable AWWA and/or ANSI specifications for pressure fittings with end conditions as specified herein. AWWA C110 (ANSI A21.10) shall be applicable for all ductile iron fittings.
- C. Pipe/Tube Fittings: Provide factory-fabricated fittings of type, materials, grade, class and pressure rating indicated for each service and pipe size. Provide sizes and types matching pipe, tube, valves or equipment connection in each case. Where not otherwise indicated, comply with governing regulations and industry standards for selections, and with pipe manufacturer's recommendations where applicable.

2.2 STEEL PIPE AND FITTINGS

- A. American Water Works Association (AWWA):
 1. AWWA C110, Ductile-Iron and Gray-Iron Fittings, 3 in. through 48 in., for Water and Other Liquids
 2. AWWA C200, Steel Water Pipe for pipe 6" and larger.
 3. AWWA C203, Coal Tar Protective Coatings and Linings for Steel Water Pipe for enamel and tape, hot applied.
 4. AWWA C204, Chlorinated Rubber-Alkyd Paint System for Steel Water Pipe.
 5. AWWA C205, Cement-Mortar Protective Lining and Coating for Steel Pipe.
 6. AWWA C206, Field Welding of Steel Water Pipe.
 7. AWWA C207, Steel Pipe Flanges for Waterworks Service.
 8. AWWA C208, Dimensions for Steel Water Pipe Fittings.
 9. AWWA C209, Cold-Applied Tape Coatings for the Exterior of Special Sections, Connections and Fittings for Steel Water Pipelines.

10. AWWA C602, Cement Mortar Lining of Water Pipelines - 4-Inches and Larger in Place.
11. AWWA C606, Grooved and Shoulder Joints.
12. AWWA C800, Underground Service Line Valves and Fittings.
13. AWWA M11, Steel Pipe - A Guide for Design and Installation.

B. American Society for Testing and Materials (ASTM)

1. Black Steel Pipe or Galvanized Steel Pipe: ASTM A 53, A 106 or A 120; except comply with ASTM A 53 or A 106 where close coiling or bending is required.
2. Electric-Resistance-Welded Steel Pipe: ASTM A 135.
3. Electric-Fusion-Welded Steel Pipe: ASTM A 671, A 672, or A 691.
4. Stainless Steel Pipe: ASTM A 312; Grade TP 304.
5. Stainless Steel Sanitary Tubing: ASTM A 270; Finish No. 80.

C. Steel Flanges/Fittings

1. American National Standards Institute (ANSI)
 - a. Cast-Iron Flanged Fittings: ANSI B16.1, including bolting
 - b. Cast-Iron Threaded Fittings: ANSI B16.4.
 - c. ANSI B16.5, including bolting and gasketing of the following material group, end connection and facing
2. Manufacturer Standardization Society (MSS)
 - a. MSS SP-51, Corrosion-Resistant Cast Flanges/Fittings, including bolting and gasketing.
 - b. MSS SP-43Stainless-Steel Buttwelding Fittings.

D. Forged Branch-Connection Fittings: Except as otherwise indicated, provided type as determined by Installer to comply with installation requirements.

1. Pipe Nipples: Fabricated from same pipe as used for connected pipe; except do not use less than Schedule 80 pipe where length remaining unthreaded is less than 1-1/2", and where pipe size is less than 1-1/2", and do not thread nipples full length (no close-nipples).

2.3 CAST / DUCTILE IRON PRESSURE PIPES AND PIPE FITTINGS

A. Pipe

1. Flanged
 - a. Standard: AWWA C115 (ANSI A21.15)
 - b. Thickness: Comply with Pipe Schedule on Drawings. If not shown, use Class 53, as a minimum.
2. Non-Flanged
 - a. Standard: AWWA C151 (ANSI A21.51).
3. Thickness: Comply with Pipe Schedule on Drawings. If not shown, use Class 53, as a minimum.

B. Joints: As shown on the Drawings. If not designated, use radius cut grooved joints for exposed piping and push-on or mechanical joints for buried piping.

1. Flanged:
 - a. Standard: AWWA C110 (ANSI A21.10).
 - b. Gaskets: 1/8-inch thick red rubber, full face.
 - 1) Air Main Service: 250 degrees F high temperature type.
 - c. Bolts and Nuts:
 - 1) Standard: ANSI B18.2.1 and ANSI B18.2.2, respectively.
 - 2) Material, Exposed: ASTM A 307, Grade B.
 - 3) Material, Buried or Submerged: Type 304 stainless steel.
2. Mechanical Joint:
 - a. Standards: AWWA C111 (ANSI A21.11).
 - b. Gaskets:
 - 1) General: Plain rubber.
 - 2) Air Main Service: 250 degrees F high temperature type.
 - c. Bolts and Nuts: High strength low alloy steel.

C. Fittings

1. Standard: AWWA C110 (ANSI A21.10)
2. Pressure Rating: Class 250, unless otherwise specified.
3. Material: Ductile-iron or cast-iron.
4. Gaskets: Comply with specifications for joints.
5. Bolts and Nuts: Comply with specifications for joints.
6. Restrained Joint Systems: Use fittings with restrained joint system specified above.

D. Pipe Lining and Encasement

1. AWWA C104 (ANSI A21.4), Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water.
2. AWWA C105 (ANSI A21.6), Polyethylene Encasement for Ductile-iron Piping for Water and Other Liquids.

E. Specials:

1. Transition Pieces:
 - a. Furnish suitable transition pieces for connections to existing piping.
 - b. Expose existing piping to determine material, dimensions and other data required for transition pieces and to confirm details shown on Drawings.
2. Taps:
 - a. Provide taps where shown or required for small pipe connections and other purposes.
 - b. Where pipe or fitting wall thickness is inadequate to provide required minimum number of threads, provide a boss or pipe saddle. Provide boss or pipe saddle for all taps over 2-inch size.
3. Pipe Adapters: Provide necessary adapters to join pipe of different types. Comply with specifications for respective joints.
4. Unit Flanges:
 - a. Manufacturers:
 - 1) E-Z Flange by EBAA Iron Sales, Inc.
 - 2) Uni-Flange by The Ford Meter Box Company, Inc.

- 3) Or equal.
- b. Materials:
 - 1) Flange: Ductile-iron Grade 65-45-12.
 - 2) Set Screws: ANSI 4140 Steel.
 - 3) Gasket:
 - a) Rubber.
 - b) Air Main Service: 250 degrees F high temperature type.

- F. Thrust Restraint: Equal to standard thread on flange.
- G. Couplings: The pipe coupling shall be of a gasketed, sleeve-type design with diameter to properly fit the pipe.
 - 1. Manufacturers:
 - a. EBAA Iron Sales, Inc.
 - b. Smith and Blair
 - c. US Pipe
 - d. Or equal.

2.4 PLASTIC PIPE AND FITTINGS

- A. Standards:
 - 1. ASTM F 441, Chlorinated Polyvinyl Chloride Pipe (CPVC).
 - 2. AWWA C901, Polyethylene (PE) Pressure Pipe & Tubing, 1/2 inch through 3 inch for water.
 - 3. AWWA C905, Polyvinyl Chloride Water Pipe (PVC)
 - 4. ASTM D 2104, Polyethylene Pipe (PE).
 - 5. ASTM D 1785, Polyvinyl Chloride Pipe (PVC).
 - 6. ASTM D 2737-21, Standard Specification for Polyethylene (PE) Plastic Tubing
 - 7. ASTM 2740, Standard Specification for Polyvinyl Chloride (PVC) Plastic Tubing.
- B. PE Fittings
 - 1. ASTM D 3261-16, Standard Specification for Butt Heat Fusion for Polyethylene (PE) Plastic Pipe and Tubing.
 - 2. ASTM D 3197 Standard Specification for Insert-Type Polyethylene Fusion Fittings for SDR 11 Polyethylene Pipe.
 - 3. ASTM D 2837, Standard Test Method for Obtaining Hydrostatic Design Basis for the Thermoplastic Pipe Materials or Pressure Design Basis for Thermoplastic Pipe Products.
 - 4. ASTM D 2609, ASTM D 2609-21, Standard specification Insert Fittings for Polyethylene (PE) Plastic Pipe.
- C. PVC Fittings
 - 1. Schedule 40 Socket: ASTM D 2466.
 - 2. Schedule 80 Socket: ASTM D 2467.
 - 3. Schedule 80 Threaded: ASTM D 2464.
 - 4. DWV Socket: ASTM D 2665.

5. Sewer Socket: ASTM D 2729.
6. Solvent Cement: ASTM D 2564.
7. Solvent Cement (to join PVC to ABS): ASTM D 3138.

D. CPVC Fittings

1. Schedule 40 Socket: ASTM F 438.
2. Solvent Cement: ASTM D 2564.

2.5 PLASTIC TUBING

A. Standards

1. ASTM D 2737-21, Standard Specification for Polyethylene (PE) Plastic Tubing.
2. ASTM D 2740, Standard Specification for Polyvinyl Chloride (PVC) Tubing.

B. Fittings:

1. ASTM D 2609-21, Standard specification Insert Fittings for Polyethylene (PE) Plastic Pipe.

2.6 GROOVED PIPING PRODUCTS

- A. General: As Installer's option, mechanical grooved pipe couplings and fittings may be used for water piping systems having operating conditions not exceeding 230 deg F (110 deg C), excluding steam piping and any other service not recommended by manufacturer, in lieu of welded, flanged, or threaded methods, and may also be used as unions, seismic joints, flexible connections, expansion joints, expansion compensators, or vibration reducers.
- B. Coupling Housings: Ductile iron conforming to ASTM A 536.
- C. Coupling Housings Description: Grooved mechanical type, which engages grooved or shouldered pipe ends, encasing an elastomeric gasket which bridges pipe ends to create seal. Cast in two or more parts, secure together during assembly with nuts and bolts. Permit degree of contraction and expansion as specified in manufacturers' latest published literature.
- D. Gaskets: Mechanical grooved coupling design, pressure responsive so that internal pressure serves to increase seal's tightness, constructed of elastomers having properties as designated by ASTM D 2000.
1. Water Services:
 - a. EDPM Grade E, with green color code identification.
 - b. Halogenated Butyl, with brown color code identification.
 2. Other Services: As recommended by Manufacturer.
- E. Bolts and Nuts: Heat-treated carbon steel, ASTM A 449 and A 183, minimum tensile 110,000 psi.

1. Exposed Locations: Tamper resistant nuts.
- F. Branch Stub-Ins:
1. Steel Piping: Couplings shall consist of two housings.
 - a. Rigid: Coupling housings with offsetting, angle-pattern bolt pads shall be used to provide system rigidity and support and hanging in accordance with ANSI B31.1 and B31.9. Installation-Ready, for direct stub installation without field disassembly. Basis of Design: Victaulic Style 107N.
 - b. Flexible: Use in locations where vibration attenuation and stress relief are required. Flexible couplings may be used in lieu of flexible connectors at equipment connections. Three couplings, for each connector, shall be placed in close proximity to the vibration source. Basis of Design: Victaulic Style 177 Installation-Ready, and Style 77.
 - c. AGS series two-segment couplings with lead-in chamfer on housing key and wide-width Flush Seal gasket. Basis of Design: Victaulic Style W07 (rigid) and Style W77 (flexible).
 2. Stainless Steel Piping: Ductile iron (ASTM A 536) or stainless steel (ASTM A 351) housings:
 - a. Rigid: Coupling housings shall engage the bottom of the groove. Victaulic Style 89 and W89 (ductile iron) or Style 489 (stainless steel).
 - b. Flexible: Victaulic Style 77S.
 - c. Schedule 5S and 10S pipe shall be grooved using a Victaulic grooving tool equipped with RX roll sets, specifically designed for stainless steel pipe. 2" and down shall be Vic-Press.
 3. Ductile Iron Piping: Victaulic Style 31.
 - a. For direct connection between AWWA / ductile iron pipe and IPS / steel pipe sizes, Victaulic Style 307 transition couplings.
 4. Copper Tubing: Copper tube dimensioned, installation-ready type, with offsetting angle-pattern bolt pads. Victaulic Style 607H.
- G. Branch Stub-Ins: Upper housing with full locating collar for rigid positioning engaging machine-cut hole in pipe, encasing elastomeric gasket conforming to pipe outside diameter around hole, and lower housing with positioning lugs, secured together during assembly with nuts and bolts.
- H. Fittings: Grooved or shouldered end design to accept grooved mechanical couplings.
1. Ductile Iron: ASTM A 536.
 2. Factory Fabricated Steel: ASTM A 53, Type F for 3/4" to 1-1/2"; Type E or S, Grade B for 2" to 20".
 3. Stainless Steel: ASTM A 403 or factory-fabricated from ASTM A312 stainless steel pipe.
 4. Copper-Tubing: ASME B16.22 wrought copper or ASME B16.18 cast bronze.
- I. Flanges: Conform to Class 125 cast iron and Class 150 steel bolt hole alignment.
1. Ductile Iron: ASTM A 536.
 2. Stainless Steel: ASTM A 351.

- J. Grooves: Conform to the following:
1. Standard Steel: Square cut.
 2. Lightweight Steel: Roll grooved.
 3. Ductile Iron: Radius cut grooved, AWWA C606.
 4. Stainless Steel: Victaulic RX grooved ends.
 5. Copper-Tubing: Copper tube dimensioned. Flaring the adjoining pipe or fitting ends to accommodate alternate sized couplings is not permitted.
- K. Manufacturer: Subject to compliance with requirements, provide grooved piping products of one of the following:
1. Victaulic Co. of America.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Install pipes and pipe fittings in accordance with recognized industry practices which will achieve permanently- leakproof piping systems, capable of performing each indicated service without piping failure. Install each run with minimum joints and couplings, but with adequate and accessible unions for disassembly and maintenance/replacement of valves and equipment. Reduce sizes (where indicated) by use of reducing fittings. Align piping accurately at connections, within 1/16" misalignment tolerance.
1. Comply with ANSI B31 Code for Pressure Piping.
- B. The Contractor shall install all chemical feed piping as recommended by the manufacturer, shown on the drawings, and according to industry standards.
- C. Locate piping runs, except as otherwise indicated, vertically and horizontally (pitched to drain) and avoid diagonal runs wherever possible. Orient horizontal runs parallel with walls and column lines. Locate runs as shown or described by diagrams, details and notations or, if not otherwise indicated, run piping in shortest route which does not obstruct usable space or block access for servicing building and its equipment. Hold piping close to walls, overhead construction, columns and other structural and permanent-enclosure elements of building; limit clearance to 1/2" where furring is shown for enclosure or concealment of piping, but allow for insulation thickness, if any. Where possible, locate insulated piping for 1" clearance outside insulation. Wherever possible in finished and occupied spaces, conceal piping from view, by locating in column enclosures, in hollow wall construction or above suspended ceilings; do not encase horizontal runs in solid partitions, except as indicated.
- D. Electrical Equipment Spaces: Do not run piping through transformer vaults and other electrical or electronic equipment spaces and enclosures unless unavoidable. Install drip pan under piping that must be run through electrical spaces.

3.2 PIPING SYSTEM JOINTS

- A. General: Provide joints of type indicated in each piping system.
- B. Thread pipe in accordance with ANSI B2.1; cut threads full and clean using sharp dies. Ream threaded ends to remove burrs and restore full inside diameter. Apply pipe joint compound, or pipe joint tape (Teflon) where recommended by pipe/fitting manufacturer, on male threads at each joint and tighten joint to leave not more than 3 threads exposed.
- C. Weld pipe joints in accordance with recognized industry practice and as follows:
 - 1. ASME Code for Pressure Piping, B31.
 - 2. Weld pipe joints only when ambient temperature is above 0 deg F (-18 deg C) where possible.
 - 3. Bevel pipe ends at a 37.5 deg angle where possible, smooth rough cuts, and clean to remove slag, metal particles and dirt.
 - 4. Use pipe clamps or tack-weld joints with 1" long welds; 4 welds for pipe sizes to 10", 8 welds for pipe sizes 12" to 20".
 - 5. Build up welds with stringer-bead pass, followed by hot pass, followed by cover or filler pass. Eliminate valleys at center and edges of each weld. Weld by procedures which will ensure elimination of unsound or unfused metal, cracks, oxidation, blow-holes and non-metallic inclusions.
 - 6. Do not weld-out piping system imperfections by tack- welding procedures; refabricate to comply with requirements.
 - 7. At Installer's option, install forged branch-connection fittings wherever branch pipe is indicated; or install regular "T" fitting.
 - 8. At Installer's option, install forged branch-connection fittings wherever branch pipe of size smaller than main pipe is indicated; or install regular "T" fitting.
- D. Weld pipe joints of steel water pipe in accordance with AWWA C206.
- E. Flanged Joints: Match flanges within piping system, and at connections with valves and equipment. Clean flange faces and install gaskets. Tighten bolts to provide uniform compression of gaskets.

END OF SECTION 402400

SECTION 466100.01 – FILTRATION EQUIPMENT REHABILITATION

PART 1 - GENERAL

1.1 SCOPE OF SERVICES

- A. The existing combined aeration/filtration unit in place is to be repaired in accordance with this specification. Items incorporated as a part of the repair include the following:
 - 1. Removal and disposal of existing filter media.
 - 2. Pressure wash and overcoat unit exterior, inclusive of spot repairs to existing coatings.
 - 3. Blast and recoating of the detention tank interior.
 - 4. Blast and recoating of the filter section interior.
 - 5. Supply and installation of new filter media, inclusive of gravel support layers.
 - 6. Removal and replacement of air wash grid.
 - 7. Removal and replacement of specified filter fascia valves.
 - 8. Removal and replacement of filter solenoid valves and related air lines.
 - 9. Replacement of PVC aerator slats.
 - 10. Replacement of media retaining screens on sample taps.
 - 11. Protection of components both interior and exterior of the unit not effected by the painting operations, including but not limited to, level control system, chemical feed lines, sample taps, valves, etc.

- B. A portion of this specification describes the replacement components to be furnished by a single responsible equipment manufacturer and shall interface with the existing unit components designated to remain. The treatment unit integrally incorporates the treatment processes of aeration, detention and filtration in a single cylindrical steel structure.

1.2 RELATED WORK

- A. Section 220533 – Heat Trace
- B. Section 099100 – Painting

1.3 QUALITY ASSURANCE

- A. Reference Standards. AWWA, ANSI, ASME, FDA, and NSF.

1.4 SUBMITTALS / SHOP DRAWINGS / O&M MANUALS

- A. Product Data:
 - 1. Provide submittals in accordance with Section 013300.
 - 2. Submit manufacturer's technical data and application instructions for replacement and maintenance components.
 - 3. Contractor/Manufacturer shall provide to the Owner media gradation reports for anthracite, greensand and torpedo sand for review by OEPA prior to installation. The manufacturer shall not make direct submission of this information to OEPA. Submittal shall be coordinated through the Owner/Engineer.

4. Provide independent laboratory results of sieve analysis for the filter media.

B. Operation and Maintenance Manuals

1. Comply with Section 017823.
2. Provide one (1) printed copy and one (1) digital media copies. Printed copy of O&M Manuals shall be provided after completion of Engineers review and upon acceptance of the start-up.

1.5 EXISTING EQUIPMENT INFORMATION

A. The manufacturer information for the existing filtration unit is as follows:

1. Manufacturer:
Kurita America, Inc. (Tonka Water)
6600 94th Ave North
Minneapolis, MN 55445
Project S.O.# 100853
2. Manufacturer's Representative:
Tim Shaw
The Henry P. Thompson Company
1046 Techne Center Drive
Milford, OH 45150
(513) 807-7256
Email: tshaw@hpthompson.com

PART 2 - PRODUCTS

2.1 MATERIALS/EQUIPMENT - GENERAL

- A. All components of the system herein described shall be fabricated and manufactured from new, unused materials, free from defects and of the highest quality possible.

2.2 DIFFUSER NOZZLES

- A. The existing filter installation incorporates 112 ABS High Impact Diffuser Nozzles on approximate 12" centers into the false bottom underdrain plate. Nozzles are to be replaced as a part of this project.
- B. Replacement diffuser nozzles shall be acquired from the original filtration equipment manufacturer.

2.3 AIR GRID

- A. The existing filter installation incorporates a PVC Airwash Distribution Grid located at the gravel/torpedo sand interface. The airwash grid within each of the filter cells is to be replaced as a part of this project.

- B. PVC Airwash Grid components shall be acquired from the original filtration equipment manufacturer to assure compatibility of the components with the unit design.

2.4 MANWAY GASKETS

- A. The existing filter installation incorporates five (5) sidewall manways to facilitate access to the filtration cells and the detention tank area. The gaskets required to seal these manways are to be replaced as a part of this project.
- B. Manway gaskets shall be acquired from the original filtration equipment manufacturer to assure compatibility of the components with the unit design.

2.5 FILTRATION MEDIA

- A. The Contractor shall acquire the support gravel and filtration media required for this project and shall install it in accordance with the recommendations outlined within the existing filtration unit O&M Manual.
- B. The support graded gravels shall be placed in the filter sections as follows:

<u>Layer</u>	<u>Depth</u>	<u>Size</u>
Bottom	4"	3/4" x 1/2"
Second	4"	1/2" x 1/4"
Third	4"	1/4" x 1/8"
Top	3"	0.8 - 1.2 mm torpedo sand (≤ 1.7 uniformity coefficient)

- C. The bottom layer of the screened support gravel shall be placed by hand to avoid damage to the diffuser assemblies. Each layer shall be placed and leveled before the addition of the next layer is started.
- D. The filter media shall be placed on top of the support gravel and shall consist of the material, size and uniformity coefficient as follows:

<u>Layer</u>	<u>Depth</u>	<u>Size</u>
Greensand Plus	4"	0.3 – 0.35 mm (≤ 1.6 uniformity coefficient)
Anthracite	4"	0.6 – 0.8 mm (≤ 1.6 uniformity coefficient)

- E. Prior to installation of the support gravels and filter media the media supplier shall provide documentation to the Owner, Engineer, and the Contractor reflecting compliance of the media (torpedo sand, greensand plus and anthracite) to the parameters stated herein. The Owner / Engineer will coordinate submittal of the media gradation reports to the Ohio EPA for review and approval.

- F. Installation of support gravels and filter media shall be in accordance with the requirements of the filtration equipment O&M manual/manufacture's recommendations and shall be performed by personnel experienced in this procedure. If media skimming is required by the O&M manual, it shall be the responsibility of the Contractor.

2.6 PAINTING

- A. All sections of the interior of the unit shall be sandblasted, damaged areas of the base steel repaired, and protected from corrosion by proper application of approved coatings for potable water.
- B. All sections of the exterior of the filtration unit shall be power washed by the Contractor. Following completion of the power washing operation, complete spot repairs on existing coating and then overcoat unit exterior.
- C. Refer to Section 099100 for the requirements of surface preparation and the coatings systems to be applied.
- D. The total paint system shall be the product of and be applied in accordance with the recommendations of one manufacturer. Alternate paint systems must be pre-approved by Engineer. Contractor shall provide touch-up paint in accordance with Section 099100.
- E. After the coatings have been applied to the unit and the unit loaded with media and water, a continuous bead of vinyl based caulk shall be placed around the unit exterior at the interface of the unit base plate and the concrete support pad. Alternate sealant materials must be pre-approved by Engineer.

2.7 FASCIA VALVES AND RELATED SOLENOIDS

- A. Designated filter fascia valves shall be replaced as a part of this project.
- B. Filter cell inlet, air wash and backwash waste valves shall be Bray Series 30 resilient seated wafer end butterfly valves equipped with Bray Series 92 direct acting air actuators suitable for an 80-psig air supply. Valves each shall be equipped with a Bray Series S05 declutchable manual override with handwheel.
 - 1. The actuator(s) shall be weatherproof and furnished with a corrosion resistant cover complete with sealing gaskets. Air supply connections shall be 1/4-inch diameter. Three-way, 120 V, 60 Hz, single phase weatherproof solenoids with manual overrides for pneumatic and auxiliary local manual operation shall be provided on each valve for air supply control to the valve actuator. Rate of opening and closing speed control shall be provided for each valve. The valve and pneumatic actuator shall be furnished by one manufacturer.
 - 2. The backwash rate set valve shall be Bray Series 30 resilient seated wafer end butterfly valves and shall be equipped with an air cylinder actuator and pneumatic positioner to set valve to proper backwash rate of flow during backwash and to be full open during service.
- C. Fascia valves to be replaced shall include the following:
 - 1. Four (4) – 3” raw water influent valves

2. Four (4) – 6” backwash effluent valves
 3. Four (4) – 3” Air wash influent valves
 4. One (1) – 4” Simul-Wash rate set valve
 5. One (1) – 8” handwheel operated backwash rate set valve (no pneumatic actuator)
- D. Solenoid valves associated with this filtration unit shall be replaced as a part of this project. The replacement solenoids shall be installed within the existing solenoid panel.
1. New pneumatic solenoid valves shall be supplied as a direct replacement to the existing solenoids.
 2. Solenoids shall be MAC series 120 volt.
- E. Solenoid valves to be replaced shall include the following:
1. Thirteen (13) solenoids total
 2. Two (2) banks of 6 solenoids
 3. One (1) bank of 2 solenoids (incorporates one spare)
- F. Airlines interfacing replacement pneumatic fascia valves and the existing filter solenoid panel shall be replaced as a part of this project. Replacement tubing shall be 1/4" O.D. x 0.17" I.D. low density polyethylene tubing. Tubing shall be classified for use with potable water applications.

2.8 AERATOR PACKING

- A. The packing existing within the aeration section of the unit shall be replaced as a part of this project. The existing tube-style packing shall be removed and provided to the Owner.
- B. The tube style packing required for installation is comprised of 190, 1” diameter, SDR 21 PVC pipes (1.305” OD).

2.9 SAMPLE TAP MEDIA RETAINING SCREENS

- A. The screens in place interior to the unit on each of the sample taps existing within the unit shall be replaced as a part of this project.
- B. The screens are installed on the interior of the unit at each of twelve (12) locations, three (3) within each filter cell.
- C. Replacement screens shall be acquired from the original filtration equipment manufacturer to assure compatibility of the components with the unit design.

PART 3 - EXECUTION

3.1 REPAIR OF EXISTING UNIT

- A. Requirements of rehabilitation of existing filtration unit shall include, at a minimum, the following items. Contractor shall prepare a Sequence of Operations for submittal to Owner and Engineer for review and approval before initiating work.
 1. Coordinate with Owner to remove existing unit from operation.
 2. Remove pipe insulation.

3. Protect existing piping connections from entrance of foreign debris.
4. Disconnect unit electrical connections and related controls as necessary to facilitate painting and related repair operations.
5. Remove components from unit likely to be damaged as a result of painting and related repair operations. Store components to protect them from damage during repair operations.
6. Remove existing unit media and dispose of properly.
7. Remove interior air distribution laterals.
8. Remove diffuser nozzles installed in the filter section base plate.
9. Conduct blasting and coating operations on interior of unit. Special attention shall be paid to cleaning and repair of interior surfaces of detention tank that exhibit corrosion. Refer to this specification and to Section 099100 for details of coating systems to be utilized. Coating systems shall cure in accordance with manufacturer's guidelines in advance of media loading and introduction of water to the unit.
10. Conduct power washing and overcoating operations on exterior of unit. Special attention shall be paid to spot repair of exterior surfaces of unit that exhibit corrosion. Refer to this specification and to Section 099100 for details of coating systems to be utilized.
11. Reconnect unit electrical connections providing supplemental and / or replacement conduit, wiring and other appurtenances as needed. All installations shall be in accordance with the provisions of the National Electrical Code.
12. Install replacement diffuser nozzles into filter section base plate in accordance with manufacturer's instructions.
13. Install media in accordance with the related media loading schedule and unit manufacturer's recommendations. Stage installation as required for interior components.
14. Install replacement internal air wash grid components in accordance with filter manufacturer's instructions.
15. Install replacement media retaining screens on the sample taps.
16. Install replacement fascia valves, protecting piping coating system to prevent damage.
17. Install replacement solenoid valves and route replacement air lines from filter solenoid panel to individual valves.
18. Remove and replace tube-style packing within the aeration section of the unit.
19. Reinstall components removed prior to painting operations.
20. Follow O&M Manual for preparing the unit for service, including procedures necessary for charging of media and disinfection of the unit. Coordinate with the unit manufacturer as necessary.
21. Conduct sampling and testing of the unit.
22. Install new insulation materials and aluminum jacketing on exposed piping between unit and exterior plant wall.
23. Coordinate with Owner to restore unit to operation following results of safe samples.

3.2 CLEANING AND DISINFECTION

- A. The Owner will furnish water for the initial disinfection at no charge. The Owner reserves the right to charge for water required for repeated attempts at disinfection.

- B. Disinfection of the filtration unit shall be conducted in accordance with the requirements of AWWA C653, latest edition. The Contractor shall submit his proposed method and sequence of disinfection activities to the Engineer for review and approval in accordance with Section 01300.
- C. The Contractor shall be responsible for obtaining water sample bottles, the actual water samples and for submitting the samples to an Ohio EPA approved laboratory for analysis. Cost of the sampling and analysis shall be the responsibility of the Contractor. Sampling shall be coordinated with the Owner and/or the Owner's representative. Copies of the results of the analysis shall be provided to the Owner and the Engineer.

3.3 START-UP SERVICES

- A. The Contractor shall coordinate with the filtration equipment manufacturer to provide factory supervision to restore the filter backwash sequence and flow rates within the parameters of the original equipment design. Time allowance for onsite services shall be three (3) days inclusive of both softener and filtration support services.

END OF SECTION 466100.01

SECTION 466316.01 - CATION EXCHANGE SYSTEM REHABILITATION

PART 1 - GENERAL

1.1 GENERAL

- A. The existing softeners in place are to be repaired in accordance with this specification. Items incorporated as a part of the repair include the following (for each of the two softeners):
 1. Removal and disposal of existing softener media.
 2. Blast and recoating of the existing softener interior.
 3. Supply and installation of new softener media, inclusive of gravel support layer.
 4. Removal and replacement of brine distributor.
 5. Removal and replacement of specified softener fascia valves.
 6. Removal and replacement of softener solenoid valves and related air lines.
 7. Protection of components both interior and exterior of the unit not effected by the rehabilitation operations, including but not limited to, brine feed lines, sample taps, valves, etc.
- B. A portion of this specification describes the replacement components to be furnished by a single responsible equipment manufacturer and shall interface with the existing unit components designated to remain.

1.2 RELATED WORK

- A. Section 099100 – Painting

1.3 QUALITY ASSURANCE

- A. Reference Standards. AWWA, ANSI, ASME, FDA, and NSF.

1.4 SUBMITTALS / SHOP DRAWINGS / O&M MANUALS

- A. Product Data:
 1. Provide submittals in accordance with Section 013300.
 2. Submit manufacturer's technical data and application instructions for replacement and maintenance components.
 3. Contractor/Manufacturer shall provide to the Owner media reports for resin prior to installation.
- B. Operation and Maintenance Manuals
 1. Comply with Section 017823.
 2. Provide one (1) printed copy and one (1) digital media copies. Printed copy of O&M Manuals shall be provided after completion of Engineers review and upon acceptance of the start-up.

1.5 EXISTING EQUIPMENT INFORMATION

- A. The manufacturer information for the existing softening equipment is as follows:

1. Manufacturer:
Kurita America, Inc. (Tonka Water)
6600 94th Ave North
Minneapolis, MN 55445
Project S.O.# 100853

2. Manufacturer's Representative:
Tim Shaw
The Henry P. Thompson Company
1046 Techne Center Drive
Milford, OH 45150
(513) 807-7256
Email: tshaw@hpthompson.com

PART 2 - PRODUCTS

2.1 MATERIALS/EQUIPMENT

- A. All components of the system herein described shall be fabricated and manufactured from new, unused materials, free from defects, of the highest quality possible.

2.2 BRINE DISTRIBUTOR

- A. The existing softener each incorporate a 2" SCH 80 PVC brine distributor. The brine distributor interior to the softener vessel is to be replaced as a part of this project.

- B. The distribution system shall be a header-lateral design incorporating SCH 80 PVC pipe and fittings. Laterals shall be shop fabricated from SCH 80 PVC, minimum 3/4" diameter, and solvent welded in place by the Contractor. Each lateral shall be fitted with an end cap and a specially machined SCH 80 male adapter for solvent welding into the distribution header. Laterals shall be evenly spaced at not more than 12" lateral to lateral spacing along the entire length of the header, each side. Laterals shall be supported in accordance with the manufacturer's recommendations.

- C. Lateral Design. Each lateral shall be secured using a double wrap at each support with polypropylene ties. Specially sized brine metering control orifices shall be placed at 6" intervals along each lateral. Each orifice shall be installed at a 45° angle, alternating from the vertical axis of the installed brine laterals.

- D. Replacement brine distributor components shall be acquired from the original softener equipment manufacturer.

2.3 UNDERDRAIN NOZZLES

- A. The existing softener vessels each incorporate 32± ABS High Impact Underdrain Nozzles on approximate 12" centers into the false bottom underdrain plate. Nozzles are to be replaced as a part of this project.

- B. Replacement underdrain nozzles shall be acquired from the original softener equipment manufacturer.

2.4 MANWAY GASKETS

- A. Each existing vessel incorporates one (1) manway to facilitate access to the softener interior. The gasket required to seal this manway is to be replaced as a part of this project.
- B. Manway gaskets shall be acquired from the original equipment manufacturer to assure compatibility of the components with the unit design.

2.5 SUPPORT GRAVELS

- A. The Contractor shall acquire the support gravel required for this project and shall install it in accordance with the recommendations outlined within the existing softener O&M Manual.
- B. The support gravel shall consist of hard rounded stones with an average specific gravity of not less than 2.5. It shall not contain more than 2% of weight of pieces in which the length is three times the width. The gravel shall be free of shale, mica, clay, sand, dirt and organic impurities.
- C. The support graded gravels shall be placed in the softener vessel as follows:

<u>Layer</u>	<u>Depth</u>	<u>Size</u>
Bottom	3"	3/4" x 1/2"
Second	3"	1/2" x 1/4"
Third	3"	1/4" x 1/8"
Fourth	3"	1/8" x 1/16"
Top	3"	0.8 - 1.2 mm torpedo sand (≤ 1.7 uniformity coefficient)

- D. The bottom layer of the screened support gravel shall be placed by hand to avoid damage to the diffuser assemblies. Each layer shall be placed and leveled before the addition of the next layer is started.
- E. The support gravels shall be procured from a manufacturer that complies with AWWA B-100 standards. Installation of the support gravel shall be in accordance with AWWA B-100 procedures.

2.6 ION EXCHANGE RESIN

- A. A high-capacity polystyrene cation exchange resin shall be furnished for each ion exchange vessel. The resin shall have a minimum rated exchange capacity of 20,000 grains of hardness as CaCO₃ per cubic foot when regenerated with six pounds of salt per cubic foot of resin. Approved manufacturers are Thermax, Purolite, and Dow.
- B. The resin shall be placed in the ion exchange vessels above the support gravel beds.

2.7 FASCIA VALVES AND RELATED SOLENOIDS

- A. Designated softener fascia valves shall be replaced as a part of this project.
- B. Softener vessel influent, effluent and rate set valves shall be Bray Series 30 resilient seated wafer end butterfly valves equipped with Bray Series 92 direct acting air actuators suitable for an 80-psig air supply. Valves each shall be equipped with a Bray Series S05 declutchable manual override with handwheel.
 - 1. The actuator(s) shall be weatherproof and furnished with a corrosion resistant cover complete with sealing gaskets. Air supply connections shall be 1/4-inch diameter. Three-way, 120 V, 60 Hz, single phase weatherproof solenoids with manual overrides for pneumatic and auxiliary local manual operation shall be provided on each valve for air supply control to the valve actuator. Rate of opening and closing speed control shall be provided for each valve. The valve and pneumatic actuator shall be furnished by one manufacturer.
- C. The brine influent PVC diaphragm valves shall be AQ MATIC Model AquaMatic K535 valves suitable for use with 100% saturated brine.
- D. Fascia valves for the two existing softener units to be replaced shall include the following:
 - 1. Two (2) – 4” hard water influent valves
 - 2. Two (2) – 4” soft water effluent valves
 - 3. Two (2) – 4” backwash influent valves – rate set
 - 4. Two (2) – 4” backwash effluent valves
 - 5. Two (2) – 4” fast rinse effluent valves - rate set
 - 6. Two (2) – 2” Brine influent PVC diaphragm valves
- E. Solenoid valves associated with this filtration unit shall be replaced as a part of this project. The replacement solenoids shall be installed within the existing solenoid panel.
 - 1. New pneumatic solenoid valves shall be supplied as a direct replacement to the existing solenoids.
 - 2. Solenoids shall be MAC series 120 volt.
- F. Solenoid valves to be replaced shall include the following:
 - 1. Twelve (12) solenoids total
 - 2. Two (2) banks of 6 solenoids
- G. Airlines interfacing replacement pneumatic fascia valves and the existing softener solenoid panel shall be replaced as a part of this project. Replacement tubing shall be 1/4" O.D. x 0.17" I.D. low density polyethylene tubing. Tubing shall be classified for use with potable water applications.

2.8 PAINTING

- A. All sections of the interior of the vessel(s) shall be sandblasted, damaged areas of the base steel repaired, and protected from corrosion by proper application of approved coatings for potable water.

- B. Refer to Section 099100 for the requirements of surface preparation and the coatings systems to be applied.
- C. The total paint system shall be the product of and be applied in accordance with the recommendations of one manufacturer. Alternate paint systems must be pre-approved by Engineer. Contractor shall provide touch-up paint in accordance with Section 099100.

PART 3 - EXECUTION

3.1 REPAIR OF EXISTING SOFTENER VESSELS

- A. Requirements of rehabilitation of existing softener vessels shall include, at a minimum, the following items. Contractor shall prepare a Sequence of Operations for submittal to Owner and Engineer for review and approval before initiating work.
 1. Coordinate with Owner to remove existing units from operation.
 2. Protect existing piping connections from entrance of foreign debris.
 3. Disconnect unit electrical connections and related controls as necessary to facilitate repair operations.
 4. Remove components from unit likely to be damaged as a result of repair operations. Store components to protect them from damage during repair operations.
 5. Remove existing unit media and dispose of properly.
 6. Remove diffuser nozzles installed in the underdrain plate.
 7. Conduct blasting and coating operations on interior of vessel(s). Refer to this specification and to Section 099100 for details of coating systems to be utilized. Coating systems shall cure in accordance with manufacturer's guidelines in advance of media loading and introduction of water to the unit.
 8. Reconnect unit electrical connections providing supplemental and / or replacement conduit, wiring and other appurtenances as needed. All installations shall be in accordance with the provisions of the National Electrical Code.
 9. Install replacement diffuser nozzles into underdrain plate in accordance with manufacturer's instructions.
 10. Install media in accordance with the related media loading schedule and unit manufacturer's recommendations. Stage installation as required for interior components.
 11. Install replacement brine distributor components in accordance with softener manufacturer's instructions.
 12. Install replacement fascia valves, protecting piping coating system to prevent damage.
 13. Install replacement solenoid valves and route replacement air lines from softener solenoid panel to individual valves.
 14. Reinstall components removed prior to painting operations.
 15. Follow O&M Manual for preparing the unit for service, including procedures necessary for disinfection of the vessel(s). Coordinate with the softener manufacturer as necessary.
 16. Conduct sampling and testing of the vessel(s).
 17. Coordinate with Owner to restore vessel(s) to operation following results of safe samples.

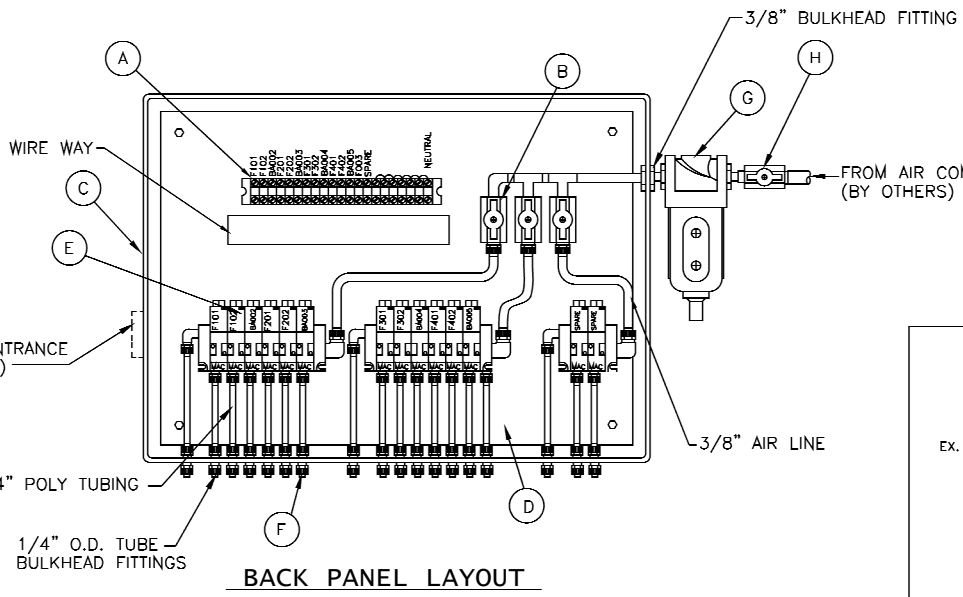
3.2 CLEANING AND DISINFECTION

- A. The Owner will furnish water for the initial disinfection at no charge. The Owner reserves the right to charge for water required for repeated attempts at disinfection.
- B. Disinfection of the softener(s) shall be conducted in accordance with the requirements of AWWA C653, latest edition. The Contractor shall submit his proposed method and sequence of disinfection activities to the Engineer for review and approval in accordance with Section 01300.
- C. The Contractor shall be responsible for obtaining water sample bottles, the actual water samples and for submitting the samples to an Ohio EPA approved laboratory for analysis. Cost of the sampling and analysis shall be the responsibility of the Contractor. Sampling shall be coordinated with the Owner and/or the Owner's representative. Copies of the results of the analysis shall be provided to the Owner and the Engineer.

3.3 START-UP SERVICES

- A. The Contractor shall coordinate with the ion exchange equipment manufacturer to provide factory supervision to restore the softener regeneration sequence and flow rates within the parameters of the original equipment design. Time allowance for onsite services shall be three (3) days inclusive of both softener and filtration support services.

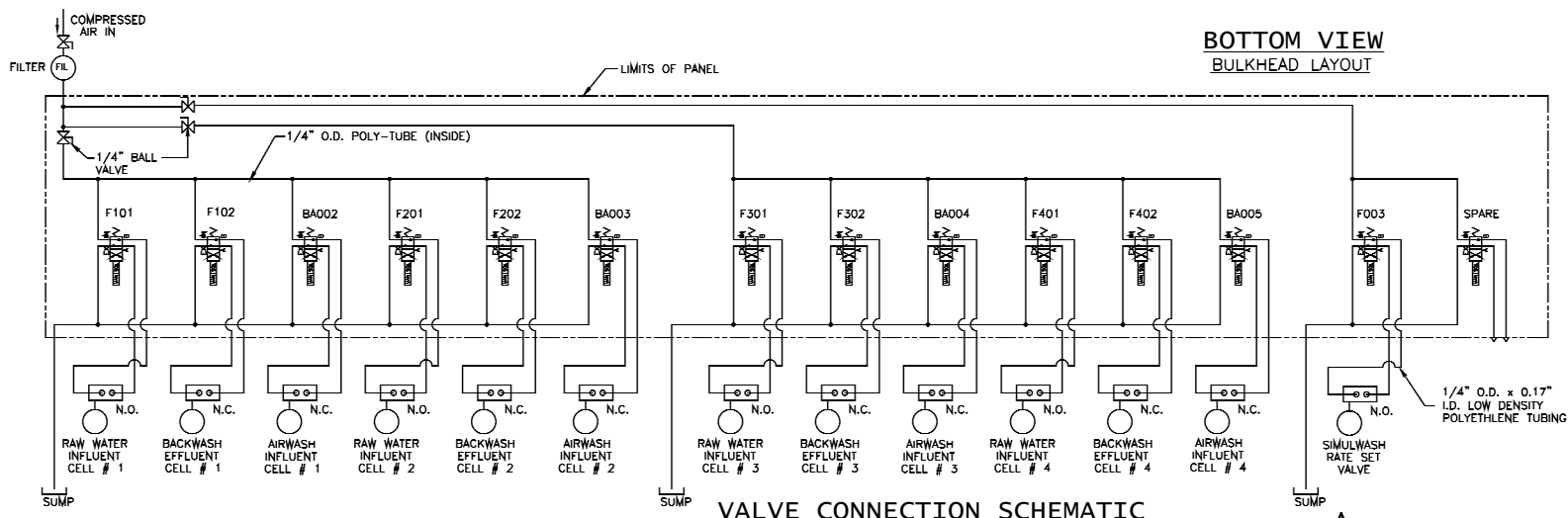
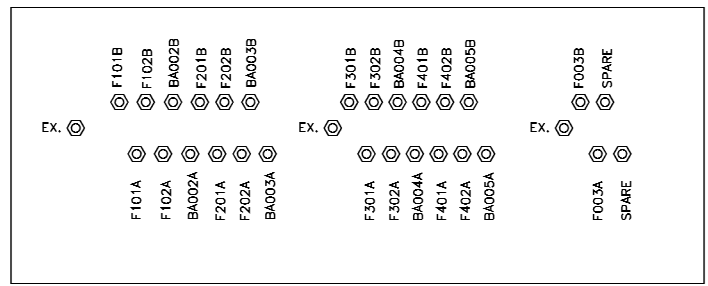
END OF SECTION 466316.01



- NOTES:**
- (1) INTERCONNECTING WIRING BY OTHERS
 - (2) INTERCONNECTING AIR LINES BETWEEN COMPRESSOR, VALVES, AND PANEL BY OTHERS
 - (3) ELECTRICAL ENTRY TO BE SEALED AIR AND WATER TIGHT (BY OTHERS)

CALL-OUT	QTY.	DESCRIPTION
A	A/R	TERMINAL STRIP
B	3	1/4" BALL VALVE (AIR SHUT-OFF)
C	1	24" x 24" x 8" NEMA 4 PANEL
D	1	22" x 22" SUBPANEL
E	14	MAC 45 SERIES SOLENOID VALVES. (4-WAY)
F	31	1/4" BULKHEAD FITTINGS
G	1	3/8" AIR FILTER, #06F24AC
H	1	3/8" BALL VALVE (AIR SHUT-OFF)

UL INFORMATION		
ITEM	QTY	VA
MAC #45A-LAD-DAAJ-4KD	14	5.4



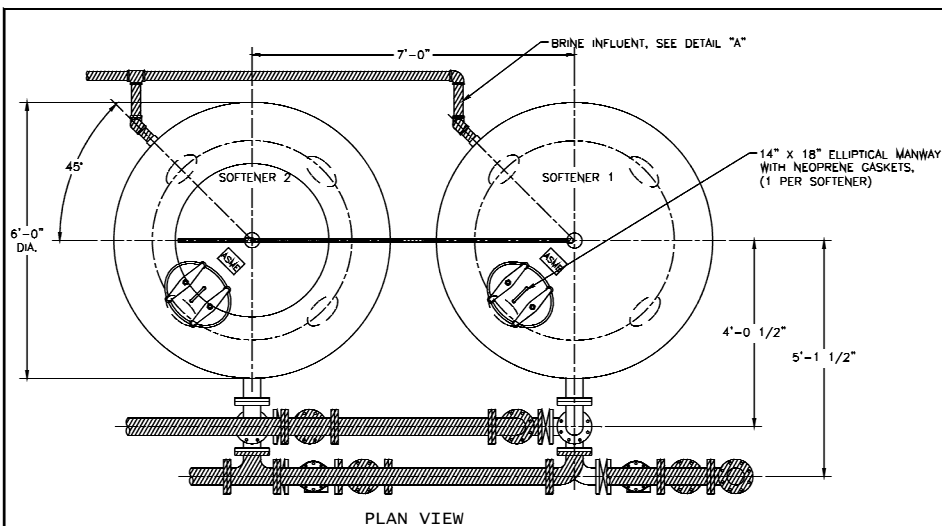
BOTTOM VIEW
BULKHEAD LAYOUT

VALVE CONNECTION SCHEMATIC

TONKA EQUIPMENT COMPANY
 SERVING PEOPLE SINCE 1985 THROUGH THE DESIGN AND MANUFACTURE OF MUNICIPAL AND INDUSTRIAL WATER TREATMENT SYSTEMS.
 LEADER IN WATER TREATMENT SYSTEMS OFFICE: (781) 889-2827 FAX: (781) 889-1978 <http://www.tonkaequipment.com>

DESIGN BY: KVD PROJECT MGR: GAD DATE: 8/30/03 APPR. DATE: 1/27/03	DATE: 1/20/03 DATE: NONE DATE: 1/27/03	FILTER SOLENOID PANEL FRANKFORT, OH	SHEET NUMBER: 1 OF 1 DRAWING NUMBER: D00015A15
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REV.	DESCRIPTION	BY	DATE	APPR.
A	CHANGED AIRLINE LOOK AT VALVE ACTUATOR	GAD	8/30/03	



VALVE NUMBER	DESCRIPTION
S101, S201	HMD WATER INFLUENT, 4"
S103, S203	SOFT WATER EFFLUENT, 4"
S104, S204	BACKWASH INFLUENT, 4"
S102, S202	BACKWASH EFFLUENT, 4"
BR014, BR015	BRINE INFLUENT, 2"
S105, S205	FAST RINSE EFFLUENT, 4"

VALVE OPERATION:

UNIT #1 FUNCTION
 SERVICE - VALVES S101 & S105 OPEN
 BACKWASH - VALVES S102 & S104 OPEN
 BRINE - VALVES BR014 & S105 OPEN
 SLOW RINSE - VALVES BR014 & S105 OPEN
 FAST RINSE - VALVES S101 & S105 OPEN

UNIT #2 FUNCTION
 SERVICE - VALVES S201 & S205 OPEN
 BACKWASH - VALVES S202 & S204 OPEN
 BRINE - VALVES BR015 & S205 OPEN
 SLOW RINSE - VALVES BR015 & S205 OPEN
 FAST RINSE - VALVES S201 & S205 OPEN

SPECIFICATIONS:

SOFTENER AREA:
28.27 SQ. FT./SOFTENER

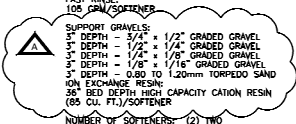
SOFTENING RATE:
285 GPM PLANT DESIGN
210 GPM SOFTENED
75 GPM BLENDED

BACKWASH RATE:
85-141 GPM (3-5 GPM/SQ. FT.)

BRINE RATE:
16 GPM 50% CONCENTRATION BY VOLUME

SLOW RINSE:
16 GPM

FAST RINSE:
105 GPM/SOFTENER

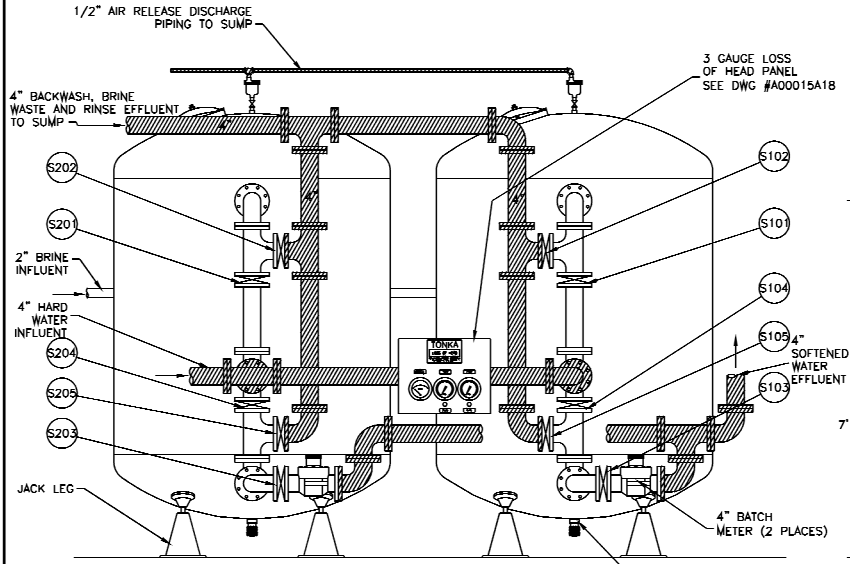


CONSTRUCTION:
 6'-0" DIA. x 6'-0" STRAIGHT SIDE
 BUILT IN ACCORDANCE WITH ASME CODE
 AND STAMPED ACCORDINGLY
 WORKING PRESSURE - 100 PSI
 HYDROSTATIC TEST PRESSURE - 130 PSI

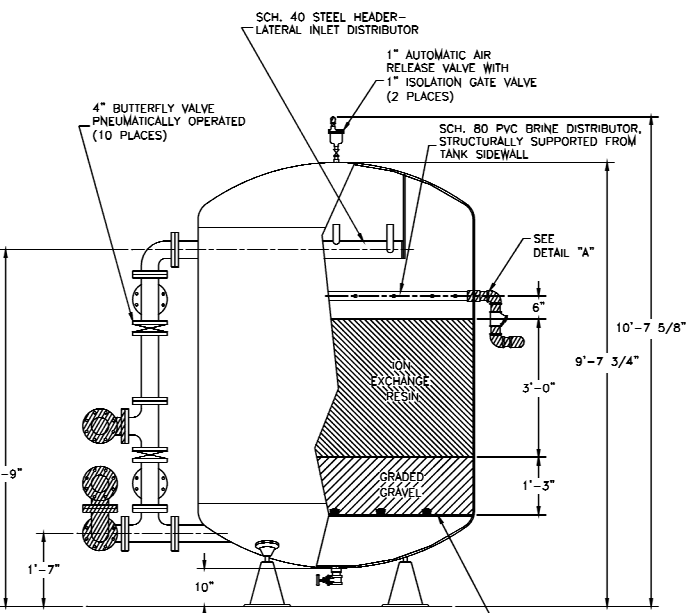
UNDERDRAIN:
 TONKA STANDARD FALSE BOTTOM UNDERDRAIN
 SYSTEM WITH TEC HIGH IMPACT ABS DIFFUSER
 NOZZLES ON APPROXIMATELY 12" CENTERS.

PIPE:
 INTERIOR BRINE PIPING - SCH. 80 PVC
 INTERIOR PIPING - SCH. 40 STEEL
 EXTERIOR FACE PIPING - SCH. 40 STEEL

PLAN VIEW



FRONT ELEVATION
SHADED PIPING NOT BY TONKA



RIGHT SIDE VIEW
(BRINE ROTATED FOR CLARITY)

SURFACE PREPARATION:
 INTERIOR - (SSPC-SP10) NEAR WHITE BLAST CLEANING
 EXTERIOR - (SSPC-SP6) COMMERCIAL BLAST CLEANING

COATING:
 STRIKE COAT INTERIOR WITH TNEMEC #20-1211 (RED).
 APPLIED TO ALL WELDS AND HARD TO REACH AREAS TO A DRY
 FILM THICKNESS OF 3-5 MILS. TOUCH UP PINHOLES OR FLAWS
 BEFORE APPLYING PRIME COAT.

INTERIOR:
 COAT WITH TNEMEC #20-1255 (BEIGE) PRIMER TO A DRY MIL
 THICKNESS OF 3-5 MILS. BEFORE ANY RUST CAN FORM,
 FOLLOWED BY A FINISH COAT OF TNEMEC #20-1102
 (WHITE) POTL-POX TO A DRY MIL THICKNESS OF 4-6
 MILS FOR A TOTAL DRY MIL THICKNESS OF 7-11 MILS.

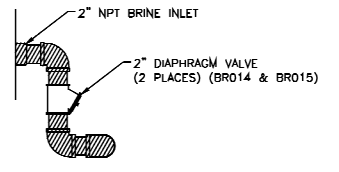
EXTERIOR:
 STRIKE COAT EXTERIOR WITH TNEMEC #20-1211 (RED).
 APPLIED TO ALL WELDS AND HARD TO REACH AREAS TO A DRY
 FILM THICKNESS OF 3-5 MILS. TOUCH UP PINHOLES OR FLAWS
 BEFORE APPLYING PRIME COAT.

SPECIFICATIONS FOR VESSELS SHIPPED WITHOUT FINISH PAINT:

TONKA EQUIPMENT CO. IS PROVIDING THE HEREIN DESCRIBED EQUIPMENT WITH
 SOME SURFACES RECEIVING ONLY SURFACE PREPARATION AND PRIME COATING.

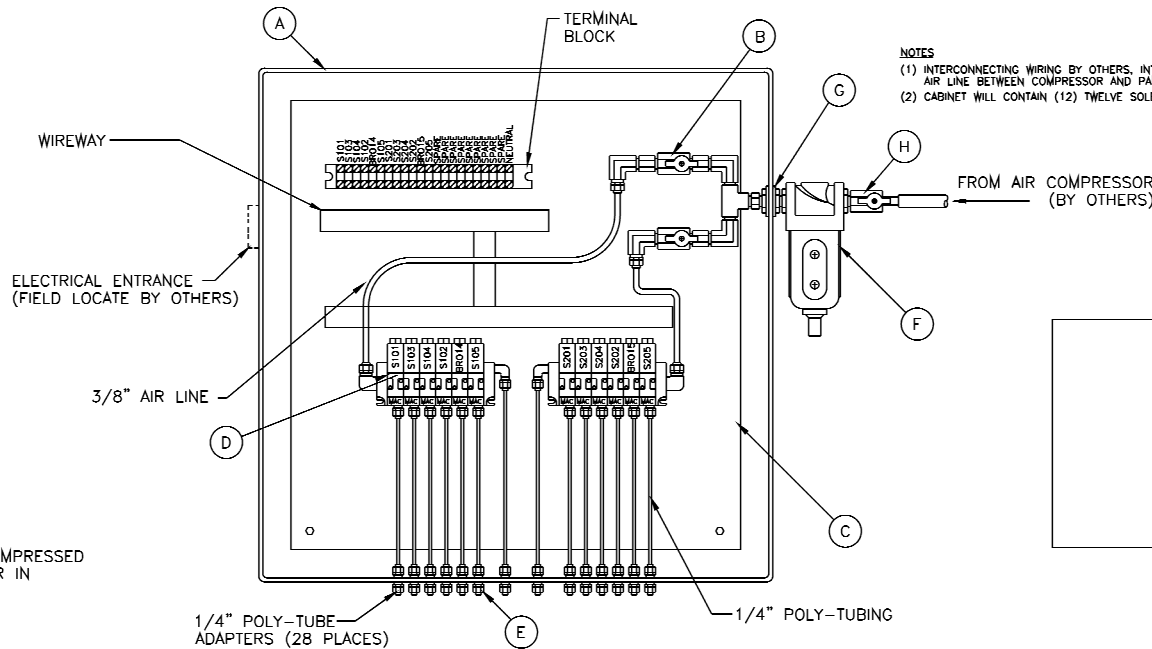
BEFORE APPLICATION OF THE FINISH COAT THE PRIMED SURFACE MUST BE
 PROPERLY CLEANED AND PREPARED. THE FINISH COAT MUST BE APPLIED
 WITHIN (60) SIXTY DAYS OF APPLICATION OF THE PRIMER COAT OR SPECIAL
 SURFACE PREPARATION PROCEDURES MUST BE FOLLOWED.

TONKA EQUIPMENT CO. WILL NOT WARRANT THE SURFACE PREPARATION OR THE
 PRIME COAT IF THE PRODUCTS OF ANY MANUFACTURER OTHER THAN THAT OF
 THE PRIME COAT ARE USED; OR, IF THE ABOVE NAMED PAINT MANUFACTURER'S
 RECOMMENDATIONS ARE NOT FOLLOWED DURING APPLICATION OF THE FINISH
 COATS, INCLUDING PROPER BASE AND SURFACE
 TEMPERATURE, AND MOISTURE CONDITIONS.



DETAIL "A"
(SCALE: 2X)

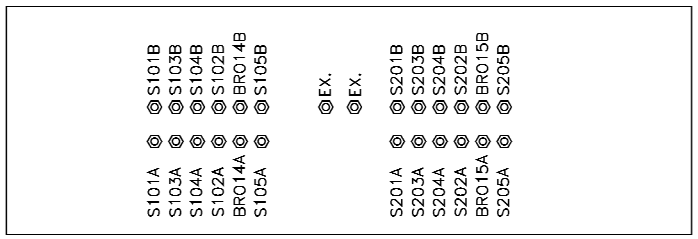
		TONKA EQUIPMENT COMPANY <small>SERVING PEOPLE SINCE 1966 THROUGH THE DESIGN AND MANUFACTURE OF MUNICIPAL AND INDUSTRIAL WATER TREATMENT SYSTEMS.</small>	
DRAWN BY: P.M.R. PROJECT NO.: 4/14/03 DATE: 4/14/03	CHECKED BY: K.J.B. DATE: 2/4/03	TITLE: 6'-0" DIA. X 6'-0" S.S. ION EXCHANGE SOFTENERS FRANKFORT, OH	SHEET NUMBER: 1 OF 1 DRAWING NUMBER: D00015A16



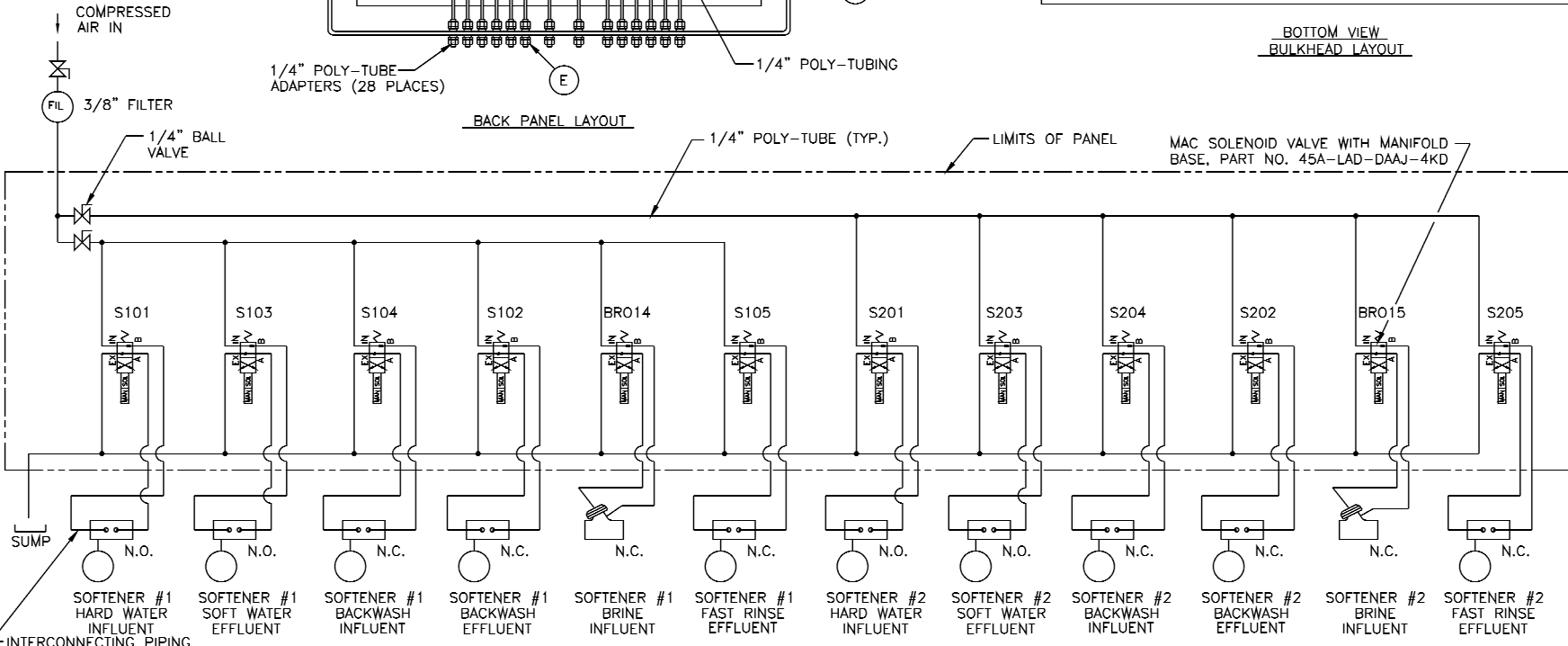
CALL-OUT	QTY.	DESCRIPTION
A	1	24" x 24" x 8" NEMA 12 PANEL
B	2	1/4" BALL VALVE (AIR SHUT-OFF)
C	1	21" x 21" SUBPANEL
D	12	SOLENOID VALVES (# 45A-LAD-DAAJ-4KD) MAC
E	26	1/4" BULKHEAD FITTINGS
F	1	AIR FILTER #06F224C
G	1	BULKHEAD FITTING 3/8"
H	1	3/8" BALL VALVE (AIR SHUT-OFF)

UL INFORMATION		
ITEM	QTY	VA
MAC #45A-LAD-DAAJ-4KD	12	5.4

NOTES
 (1) INTERCONNECTING WIRING BY OTHERS, INTERCONNECTING AIR LINE BETWEEN COMPRESSOR AND PANEL BY OTHERS.
 (2) CABINET WILL CONTAIN (12) TWELVE SOLENOID VALVES.



BOTTOM VIEW
 BULKHEAD LAYOUT



VALVE CONNECTION SCHEMATIC

INTERCONNECTING PIPING TUBING AND FITTINGS (NOT BY TONKA)

DO NOT SCALE DRAWING. ALL RIGHTS TO MANUFACTURE, COPY, REPRODUCE OR DISPOSE OF THIS DRAWING OR ITS CONTENTS ARE RESERVED UNLESS OTHERWISE SPECIFIED IN WRITING BY TONKA EQUIPMENT COMPANY.



TONKA EQUIPMENT COMPANY
 SERVING PEOPLE SINCE 1956 THROUGH THE DESIGN AND MANUFACTURE OF MUNICIPAL AND INDUSTRIAL WATER TREATMENT SYSTEMS.

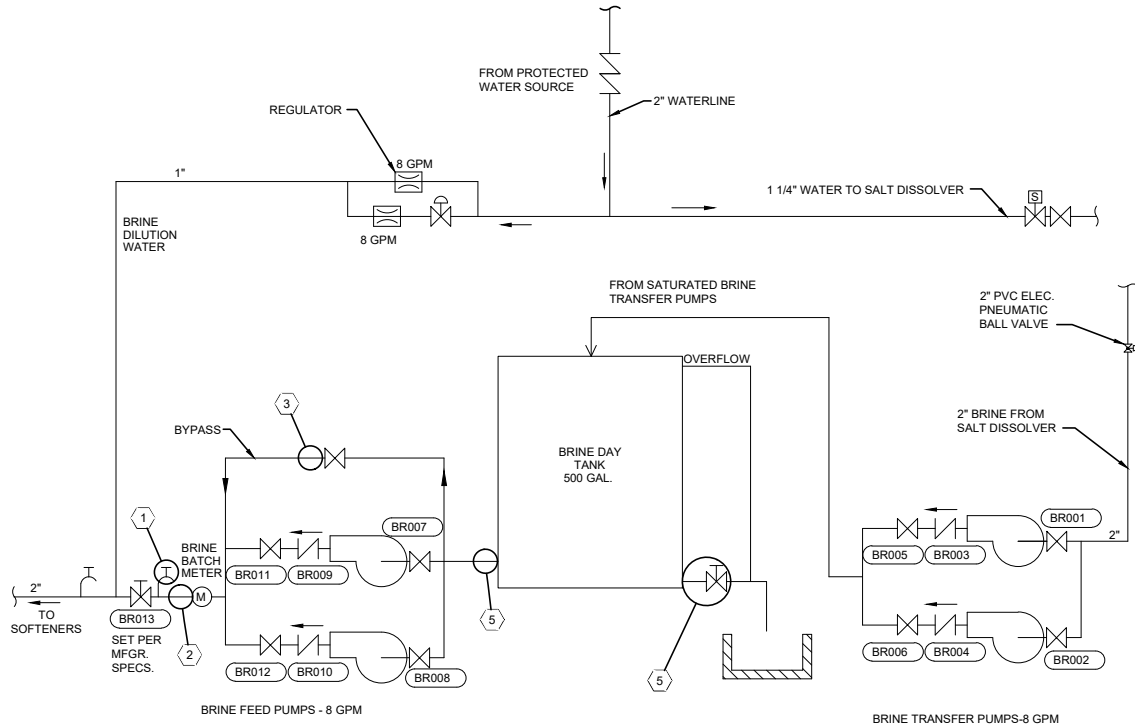
13305 WATERTOWER CIRCLE OFFICE: (763) 558-2837
 PLYMOUTH, MN 55441 FAX: (763) 558-1979 <http://www.tonkaywater.com>

REV.	DESCRIPTION	BY	DATE	APPR.
A	CHANGED AIR LINE LOOK AT VALVE ACTUATOR	GAD	8/30/03	

DRAWN BY:	START DATE:
GAD	1/29/03
PROJECT MGR:	DWG. SCALE:
GAD	1 1/2" = 1'-0"
APPR. BY:	APPR. DATE:
KJB	2/4/03

SOFTENER SOLENOID PANEL
 FRANKFORT, OH

SHEET NUMBER:	1 OF 1
DRAWING NUMBER:	C00015A21



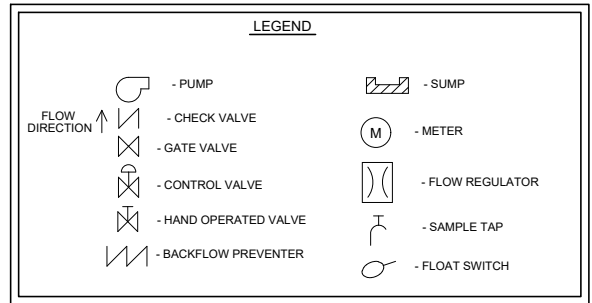
BRINE SYSTEM SCHEMATIC

NOTES:

1. BRINE SYSTEM PIPING IS CONSTRUCTED OF SCH 80 PVC.
2. CONTRACTOR SHALL REPLACE PIPING COMPONENTS AS IDENTIFIED IN CODED NOTES. INCLUDE COUPLINGS TO SUPPORT INTERFACE WITH PIPING COMPONENTS TO REMAIN.
3. COORDINATE WITH OWNER TO EMPTY BRINE DAY TANK TO FACILITATE REPAIRS.
4. REMOVE BRINE DEPOSITS PRIOR TO COMPLETING PIPING REPAIRS.

CODED NOTES:

1. REMOVE AND REPLACE EXISTING HAND OPERATED DRAIN VALVE AND IMMEDIATELY ADJACENT PIPING, 3/4" DIAMETER. LENGTH OF PIPING, 6".
2. REMOVE AND REPLACE BRINE PIPING @ BRINE BATCH METER, 1" DIAMETER. LENGTH OF PIPING, < 6".
3. REMOVE AND REPLACE BRINE PIPING @ EXISTING VALVE, 1" DIAMETER. LENGTH OF PIPING, < 6".
4. REMOVE AND REPLACE BRINE TANK DRAIN VALVE AND IMMEDIATELY ADJACENT PIPING, 1" DIAMETER. LENGTH OF PIPING, < 12". SEAL EXISTING FIBERGLASS CONNECTION @ DRAIN LINE INTERFACE.
5. SEAL EXISTING FIBERGLASS CONNECTION AT DAY TANK DISCHARGE, 2" DIAMETER.



\\CTC.LOCAL\CT_DATA\PROJECTS\2024\241269\DWG\SHEETS\DWG - WORK - 10/17/2024 8:28:46 AM - ADAM DAWSON



ISSUE DATE: 10/16/24
 SCALE: AS SHOWN
 DESIGNED BY: BRA
 DRAWN BY: AGD
 CHECKED BY: BRA

VILLAGE OF FRANKFORT WTP IMPROVEMENTS

BRINE SYSTEM

PROJECT NO.	
241269	
DISCIPLINE	
PROCESS	
SHEET	OF
1	1