

PROJECT MANUAL

ENTRANCE STEP AND SIDEWALK REPLACEMENT

**DEFIANCE PUBLIC LIBRARY
320 Fort Street
Defiance, Ohio 43512**

August 27, 2020

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Registered Architect #9482



Project C0-4679

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Public Notice

Sealed bids will be received by the Board of Trustees of the Defiance Public Library System as provided in this notice for the **Entrance Step and Sidewalk Replacement Project**. Contract Documents, which include additional details, are on file and available for purchase from Newfax Corp at www.newfaxcorp.com. All questions on and requests to view the Contract Documents should be addressed to Jerry Overmier, Beilharz Architects, at jerryo@beilharzarchitects.com by the deadline in the Instruction to Bidders.

Bids shall be enclosed in a sealed envelope addressed to Board of Trustees of the Defiance Public Library System, ATTN Nancy Roehrig, CFO, 320 Fort St, Defiance, OH 43512, and plainly marked on the outside "BOARD OF TRUSTEES OF THE DEFIANCE PUBLIC LIBRARY SYSTEM – ENTRANCE STEP AND SIDEWALK REPLACEMENT PROJECT BID." Bids will be received until 12:00 PM, local time September 10, 2020 and immediately after the deadline, the bids will be publicly read by the CFO via live video stream on the Library's YouTube Channel or via Zoom Meetings at <https://us02web.zoom.us/j/86039569330>.

All bids must include a Bid Guaranty, as described in the Instructions to Bidders. Prevailing wage rates apply. No bidder may withdraw its bid within 60 days after the opening; the Board reserves the right to waive irregularities, reject any or all bids, and conduct necessary investigations to determine bidder responsibility.

INSTRUCTIONS TO BIDDERS

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A. BIDDER'S PLEDGE AND AGREEMENT

1. Each Bidder acknowledges that this is a public project involving public funds and that the Owner expects and requires that each successful Bidder adhere to the highest ethical and performance standards. Each Bidder by submitting a bid pledges and agrees that (a) it will act at all times with absolute integrity and truthfulness in its dealings with the Owner and the Design Professional, (b) it will use its best efforts to cooperate with the Owner and the Design Professional and all other Contractors on the Project and at all times will act with professionalism and dignity in its dealings with the Owner, Design Professional, and other Contractors, (c) it will assign only competent supervisors and workers to the Project, each of whom is fully qualified to perform the tasks that are assigned to him/her, and (d) it has read, understands and will comply with the terms of the Contract Documents.

B. EXAMINATION OF CONTRACT DOCUMENTS AND SITE CONDITIONS AND RELIANCE UPON TECHNICAL DATA

1. Each Bidder shall have a competent person carefully and diligently review each part of the Contract Documents, including the Divisions of the Specifications and parts of the Drawings that are not directly applicable to the Work on which the Bidder is submitting its bid. By submitting its bid, each Bidder represents and agrees, based upon its careful and diligent review of the Contract Documents, that it is not aware of any conflicts, inconsistencies, errors, or omissions in the Contract Documents for which it has not notified the Design Professional in writing at least ten (10) days prior to the bid opening. If there are any such conflicts, inconsistencies, errors, or omissions in the Contract Documents, the Bidder (i) will provide the labor, equipment, or materials of the better quality or greater quantity of Work and/or (ii) will comply with the more stringent requirements. The Bidder will not be entitled to any additional compensation for any conflicts, inconsistencies, errors, or omissions that would have been discovered by such careful and diligent review, unless it has given prior written notice to the Design Professional.
2. Each Bidder shall have a competent person carefully and diligently inspect and examine the entire site and the surrounding area, including all parts of the site applicable to the Work for which it is submitting its bid, including location, condition, and layout of the site and the location of utilities, and carefully correlate the results of the inspection with the requirements of the Contract Documents. The Bidder's bid shall include all costs attributable to site and surrounding area conditions that would have been discovered by such careful and diligent inspection and examination of the site and the surrounding area, and the Bidder shall not be entitled to any Change Order, additional compensation, or additional time on account of such conditions.
3. The Bidder may rely upon the general accuracy of any technical data identified in the Owner-Contractor Agreement (e.g., any soils exploration reports, soil boring logs, site survey, or abatement reports) in preparing its bid, but such technical data are not part of the Contract Documents. Except for the limited reliance described in the preceding sentence, Bidder may not, if awarded a contract for the Work, rely upon or make any Claim against the Owner or Design Professional, or any of their agents or employees, with respect to any of the following:
 - (a) the completeness of such reports and drawings for Bidder's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by the successful Bidder and safety precautions and programs incident thereto; or

- (b) any interpretation by the successful Bidder of or conclusion drawn from any technical data or any such other data, interpretations, opinions, or information. For example, all interpolations and extrapolations of data performed by the Bidder to estimate locations or quantities of subsurface strata are independent factual assumptions, which Owner does not warrant.
- 4. Each Bidder will be deemed to have actual knowledge of all information provided or discussed at the pre-bid meeting.

C. PROJECT

1. The Project is Entrance Step and Sidewalk Replacement Project ("the Project"). The Project and Work for the Project consists of the removal and replacement of the main entrance concrete steps, lower sidewalk to curb, and railing, resurfacing the upper landing, and adding an electric cable snow melt system at the Defiance Public Library, located at 320 Fort Street, Defiance, OH 43512 in accordance with the Drawings and Specifications prepared by the Design Professional.
2. The Design Professional for the Project is:

Beilharz Architects, Inc.
701 1/2 West First Street, Defiance, Ohio 43512
Design Professional Representative: Jerry S. Overmier, R.A., Principal/Architect
Phone: (419) 782-6211 ext 204
Email: jerryo@beilharzarchitects.com

D. WORK

1. Only one contract will be issued by the Owner for constructing the Project, the General Contract, which will cover all scopes of work necessary to construct the Project.
2. The Contractor awarded the General Contract (General Contractor) will be responsible for the performance and coordination of any and all subcontractors and suppliers either directly or indirectly contracted with the General Contractor.
3. No pre-bid conference will be held. In order to access to the Project site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid, Bidders may visit the exterior portion of the Project site from the general public's perspective. To access the interior portion, Bidders must make an appointment with Nancy Roehrig, Chief Fiscal Officer, at nroehrig@defiancelibrary.org and Bidders must comply with COVID-19 safety protocols including provide/wear a mask and adhering to social distancing requirements. 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.

E. ESTIMATE OF COST

The total estimated construction cost for the base bid is **\$93,130.00**.

The total estimated construction cost of each Alternate for the Project is as follows:

Alternate Description		Add or Deduct	Estimated Cost
1A	Railings shall be galvanized steel, powder coated; refer to Sections 05 5200, and Drawings A-2	Add	\$4,349
1B	Railings shall be satin finish stainless steel; refer to Sections 05 5200 and Drawings A-2	Add	\$6,953
1C	Railings shall be stainless steel, powder coated; refer to Sections 05 5200 and Drawings A-2	Add	\$8,399
2	Include snow melting system; refer to Section 321743 and Drawings E-1	Add	\$27,226

F. CONTRACT DOCUMENTS

The Contract Documents consist of the Contract Documents listed in Section 6.1.7 of the Owner-Contractor Agreement (AIA Document A104™ – 2017 Abbreviated Form of Agreement Between Owner and Contractor as modified for the Project).

Copies of the Contract Documents will be available for purchase from Newfax Corporation, 333 West Woodruff, Toledo, OH 43604, 419-241-5157/419-241-2018; www.newfaxcorp.com at the non-refundable cost of reproduction plus shipping, if requested.

Bidders shall use complete sets of Contract Documents in preparing bids. Neither the Owner nor the Design Professional assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Contract Documents.

The Owner or the Design Professional, in making the Contract Documents available on the above terms, does so only for the purpose of obtaining bids on the Work and does not confer a license or grant for any other use.

G. PREPARATION OF BIDS

1. All bids must be submitted on the "Bid Form" furnished with the Contract Documents.
2. All blank spaces shall be filled in, in ink or typewritten, in words and figures, and in figures only where no space is provided for words, and signed by the Bidder. The wording on the Bid Form shall be used without change, alteration, or addition. Any change in the wording or omission of specified accompanying documents may cause the bid to be rejected. If there is an inconsistency or conflict in the bid amount, the lowest amount shall control, whether expressed in numbers or words.
3. Bidders shall note receipt of Addenda on the Bid Form. If the Bidder fails to acknowledge receipt of each Addendum, the Bid shall be deemed non-responsive, unless the Bid amount clearly and unambiguously reflects receipt of the Addendum or the Addendum involves only a matter of form and does not affect the price, quantity or quality of the Work to be performed.
4. Each Bidder shall submit **1 original and 1 copy** of its bid to the Owner. The Bid Form shall be signed with the name typed or printed below the signature. A Bid shall not be submitted by facsimile transmission. A Bidder that is a corporation shall sign its bid with the legal name of the corporation followed by the name of the state of incorporation and the legal signature of an officer authorized to bind the corporation to a contract.

5. Bids shall be enclosed in a sealed opaque envelope with the Bidder's name, plainly marked on the outside "BOARD OF TRUSTEES OF THE DEFIANCE PUBLIC LIBRARY SYSTEM – ENTRANCE STEP AND SIDEWALK REPLACEMENT PROJECT BID," and addressed as follows:

**Board of Trustees of the Defiance Public Library System
ATTN: Nancy Roehrig, Chief Fiscal Officer
320 Fort Street
Defiance, OH 43512**

Bids must be received at the location designated above before **12:00 P.M., local time September 10, 2020. Hand deliveries to this location may be made during the Defiance Library's operating hours, before the deadline. Bidders are responsible for confirming current operating hours at www.defiancelibrary.org/dpl-info/.** Immediately after the time for their filing is expired, the bids shall be publicly read by the Chief Fiscal Officer. The bids will be read via live videostream on the Library's YouTube Channel at https://www.youtube.com/channel/UCiidx6_O804qNPjmNUW4mww or or via Zoom Meetings at <https://us02web.zoom.us/j/86039569330>.

6. **The completed Bid Form shall be accompanied by the following documents:**
Bid Guaranty and if applicable, Contract Bond (See Paragraph G.8 below.)
Contractor's Qualification Statement (See Paragraph H.4 below.)
7. The Bidder shall take the following precautions in preparing its bid:
 - a. Sign the bid and check to ensure all blank spaces have been filled in with requested information and that the specified accompanying documents (listed in Paragraph G.6 above) have been included in a sealed opaque envelope addressed as described in item 5 above.
 - b. When the Bid Form provides for quoting either an addition or deduction for an Alternate item, indicate whether the sum named is an addition or deduction. If it is not indicated, it will be conclusively presumed that the amount is a deduction.
 - c. When the Bid Form provides for quoting a unit price, the Bidder should quote the unit price as set forth in the Bid Documents.
 - d. When applicable, make sure that the Bid Guaranty is properly executed and signed by:
 - 1) The Bidder
 - 2) The Surety or Sureties
 - e. Make sure that the amount of the Bid Guaranty (if the Bid Guaranty is in the form of a certified check, letter of credit, or cashier's check) is for a specific sum in an amount as instructed in Paragraph G.8.a below. If the Bid Guaranty is in the form of the Bid Guaranty and Contract Bond, the amount may be left blank; if an amount is inserted, it must equal the total of the base bid plus the amount of the highest add alternate included in the bid. If inserted, then the failure to state an amount equal to the total of the base bid and all add alternates shall make the bid non-responsive if the Owner selects alternates not included in the amount.
 - f. Make sure that the appropriate bid package and scope of work is inserted in the correct space on the Bid Guaranty and Contract Bond Form. Failure to include work covered by the bid submitted may make the bid non-responsive.

8. Bonds and Guarantees

- a. Bid Guaranty: Bidder shall furnish a Bid Guaranty, in the form prescribed in Sections 153.54, 153.57, and 153.571 of the Ohio Revised Code, in the form of either: (1) a bond for the full amount of the Base Bid plus the amount of the highest Add Alternate included in the Bidder's bid, in the form of the Bid Guaranty and Contract Bond included in the Bid Documents; or (2) a certified check, cashier's check, or irrevocable letter of credit in a form satisfactory to the Owner in an amount equal to 10% of the bid. Bid amount shall be the total of all sums bid, including all add alternatives, but excluding all deduct alternatives. NOTE: AIA Bid Bond forms are not acceptable.
- b. Contract Bond: The successful Bidder, who, as a Bid Guaranty, submits a certified check, cashier's check, or irrevocable letter of credit in an amount equal to 10% of the bid, shall furnish a Contract Bond in the form Contract Bond included in the Bid Documents in an amount equal to 100% of the Contract Sum. NOTE: AIA Bond forms are not acceptable.
- c. The bond must be issued by a surety company authorized by the Ohio Department of Insurance to transact business in the State of Ohio and acceptable to the Owner. The bond must be issued by a surety capable of demonstrating a record of competent underwriting, efficient management, adequate reserves, and sound investments. These criteria will be deemed to be met if the surety currently has an A.M. Best Company Policyholders Rating of "A-" or better and has or exceeds the Best Financial Size Category of Class VI. Other sureties may be acceptable to the Owner, in its sole discretion
- d. All bonds shall be signed by an authorized agent of an acceptable surety and by the Bidder.
- e. Surety bonds shall be supported by credentials showing the Power of Attorney of the agent, a certificate showing the legal right of the Surety Company to do business in the State of Ohio, and a financial statement of the Surety.
- f. The Bid Guaranty, as applicable, shall be in the name of or payable to the order of the Owner.
- g. The name and address of the Surety and the name and address of the Surety's Agent should be typed or printed on each bond.

H. METHOD OF AWARD

1. All bids shall remain open for acceptance for sixty (60) days following the day of the bid opening, but the Owner may, in its sole discretion, release any bid and return the Bid Guaranty prior to that date. The Bid Guaranty shall be subject to forfeiture, as provided in the Ohio Revised Code, if a bid is withdrawn during the period when bids are being held.
2. The Owner reserves the right to reject any, part of any, or all bids and to waive any informalities and irregularities. The Bidder expressly acknowledges this right of the Owner to reject any or all bids or to reject any incomplete or irregular bid. Bidders must furnish all information requested on or accompanying the Bid Form. Failure to do so may result in disqualification of the bid.
3. Determination of the Lowest Responsible Bid. Subject to the right of the Owner to reject any or all bids, the Owner will award the Contract for the Work to the bidder submitting the lowest responsible bid that is responsive to the bidding requirements, taking into consideration accepted alternates. In evaluating bids, the Owner may consider the qualifications of the Bidders, whether or not the bids comply with the prescribed requirements, and alternates and unit prices, if requested, on the Bid Form. The Owner may also consider the qualifications and experience of subcontractors and suppliers. The Owner may conduct such investigations

as are deemed necessary to establish the qualifications and financial ability of the Bidder and its subcontractors and suppliers. The factors the Owner may consider in determining which bid is lowest responsible include the factors set forth below. The Owner, in its discretion, may consider and give such weight to these criteria as it deems appropriate.

- a. The Bidder's work history. The Bidder should have a record of consistent customer satisfaction and of consistent completion of projects, including projects that are comparable to or larger and more complex than the Owner's Project, on time and in accordance with the applicable Contract Documents, and the Bidder's claims history. If the Bidder's management operates or has operated another construction company, the Owner may consider the work history of that company in determining whether the Bidder submitted the lowest responsible bid.

The Owner will consider the Bidder's prior experience on other projects of similar scope and/or complexity including prior projects with the Owner and/or Design Professional, including the Bidder's demonstrated ability to complete its work on these projects in accordance with the Contract Documents and on time, and will also consider its ability to work with the Owner and Design Professional as a willing, cooperative, and successful team member. Bringing overstated claims, an excessive number of claims, acting uncooperatively, and filing lawsuits against project owners and/or their design professionals on prior projects of similar scope and/or complexity will be deemed evidence of a Bidder's inability to work with the Owner and Design Professional as a willing, cooperative, and successful team member.

The Bidder authorizes the Owner and its representatives to contact the owners and design professionals (and construction managers, if applicable) on projects on which the Bidder has worked and authorizes and requests such owners and design professionals (and construction managers) to provide the Owner with a candid evaluation of the Bidder's performance. By submitting its bid, the Bidder agrees that if it or any person, directly or indirectly, on its behalf or for its benefit brings an action against any of such owners or design professionals (or construction managers) or the employees of any of them as a result of or related to such candid evaluation, the Bidder will indemnify and hold harmless such owners, design professionals (and construction managers) and the employees of any of them from any claims whether or not proven that are part of or are related to such action and from all legal fees and expenses incurred by any of them arising out of or related to such legal action. This obligation is expressly intended for the benefit of such owners, design professionals (and construction managers), and the employees of each of them.

- b. The Bidder's financial ability to complete the Contract successfully and on time without resort to its Surety.
- c. The Bidder's prior experience with similar work on comparable or more complex projects.
- d. The Bidder's prior history for the successful and timely completion of projects, including the Bidder's history of filing claims and having claims filed against it.
- e. The Bidder's equipment and facilities.
- f. The adequacy, in numbers and experience, of the Bidder's work force to complete the Contract successfully and on time.
- g. The Bidder's compliance with federal, state, and local laws, rules, and regulations, including but not limited to the Occupational Safety and Health Act, the Ohio Prevailing Wage laws, and Ohio ethics laws.
- h. The foregoing information with respect to each of the Subcontractors and Suppliers that the Bidder intends to use on the Project.
- i. The Bidder's participation in a drug-free workplace program acceptable to the Owner, and the Bidder's record for both resolved and unresolved findings of the Auditor of State for recovery as defined in Section 9.24 of the Ohio Revised Code.

- j. The Owner's prior experience with the Bidder's surety.
 - k. The Bidder's interest in the Project as evidenced by its attendance at any pre-bid meetings or conferences for bidders.
 - l. Depending upon the type of the work, other essential factors, as the Owner may determine and as are included in the Specifications.
4. **Qualifications Statement.** Each Bidder will submit with its bid a completed Contractor Qualifications Statement, which is included with the Contract Documents, and thereafter provide the Design Professional promptly with such additional information as the Design Professional may request regarding the Bidder's qualifications. A Bidder shall submit any requested additional information within 24 hours of the date on the request.
5. The failure to submit requested information on a timely basis may result in the determination that the Bidder has not submitted the lowest responsible bid.
6. By submitting its bid, the Bidder agrees that the Owner's determination of which bidder is the lowest responsible bidder shall be final and conclusive, and that if the Bidder or any person on its behalf challenges such determination in any legal proceeding, the Bidder will indemnify and hold the Owner and its employees and agents harmless from any claims included or related to such legal proceeding, whether or not proven, and from legal fees and expenses incurred by the Owner, its employees, or agents that arise out of or are related to such challenge.
7. **After bid opening, within 24 hours of a request made by the Owner or Design Professional, the apparent low Bidder and any other Bidder so requested must submit the following:**
- a. **For all subcontracts with an estimated value of at least \$20,000, a list of all Subcontractors that the Bidder will use to construct the Project, as well as an indication of whether or not the Bidder has ever worked with a proposed Subcontractor before, including the following information for the three most recent projects on which the Bidder and each Subcontractor have worked together:**
 - i. Project Owner
 - ii. Project Name
 - iii. Subcontract Scope
 - iv. Subcontract Value
 - v. Owner's contact name and phone number.

If Bidder and a proposed Subcontractor have not worked together on at least three projects in the five years, Bidder must submit the information set forth above for the three most recent similar projects to the Project that a proposed Subcontractor has worked on.

The above Subcontractor information, as well as the information pertaining to each proposed Subcontractor, shall be used in the Owner's determination of the lowest responsible bid.

Once a Bidder identifies its proposed Subcontractors as set forth herein, and Owner makes no objections, the list shall not be changed unless written approval of the change is authorized by the Owner and Design Professional.

8. Affidavit as to Personal Property Taxes. Each successful Bidder shall submit, prior to the time of the entry into the Contract, an affidavit in the form required by Section 5719.042, Ohio Revised Code, regarding the status of the Bidder's personal property taxes. A copy of the affidavit form is included with the Contract Documents.
9. No Bidder may withdraw its bid within sixty (60) days after the date bids are opened. The Owner reserves the right to waive any formalities or irregularities or to reject any or all bids.
10. The Owner reserves the right to disqualify bids, before or after opening, upon evidence of collusion with intent to defraud or other illegal practices on the part of the Bidder.
11. Award of Contract. The award of the Contract, when required, will only be made pursuant to a duly adopted resolution of the Owner.

I. EXECUTION OF CONTRACT

1. Within the time designated by the Design Professional after award of the Contract, the successful Bidder shall execute and deliver to the Design Professional the required number of copies of the Owner-Contractor Agreement, in the form included in the Contract Documents, and all accompanying documents requested, including, but not limited to, a Contract Bond (if applicable), insurance certificates, and a valid Workers' Compensation Certificate. The successful Bidder shall have no property interest or rights under the Owner-Contractor Agreement until the Agreement is executed by the Owner.

J. SUBSTITUTIONS/NON-SPECIFIED PRODUCTS

1. Certain brands of material or apparatus are specified. Each bid will be based on these brands, which may be referred to in the Contract Documents as Standards. The use of another brand (referred to as a substitution or proposed equal in the Contract Documents, when a bidder or the contractor seeks to have a different brand of material or apparatus than that specified approved by the Owner for use in the Project) may be requested as provided herein.
2. The products specified in the Contract Documents establish a standard of required function, dimension, appearance, and quality.
3. Bidders wishing to obtain approval to bid non-specified products shall submit written requests to the Design Professional a minimum of ten (10) calendar days before the bid date and hour. To facilitate the submission of requests, a Pre-Bid Substitution Form is included in the Contract Documents. The Bidder shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution, including the name of the proposed manufacturer and/or product and a complete description of the proposed product including manufacturer's name and model number or system proposed, drawings, product literature, performance and test data, color selections or limitations, and any other information necessary for evaluation. Include a statement including any changes in other materials, equipment, or other work that would be required if the proposed product is incorporated in the materials, equipment, or other work that would be required if the proposed product is incorporated in the work. The burden of proof of the merit of the proposed product is on the proposer. The Design Professional's decision on approval of a proposed product will be final.

The following will be cause for rejection of a proposed substitution:

- a. Requests submitted by subcontractors, material suppliers, and individuals other than Bidders;
- b. Requests submitted without adequate documentation;
- c. Requests received after the specified cut-off date.

4. When the Design Professional approves a product submission before receipt of bids, the approval will be included in an Addendum, and Bidders may include the pricing of this product in their bid. Bidders shall not rely on approvals made in any other manner.
5. In proposing a non-specified product or a substitution, the Bidder represents and warrants that each proposed product will not result in any changes to the Project, including changes to the Work of other contractors, or any decrease in the performance of any equipment or systems to be installed in the Project and agrees to pay any additional costs incurred by the Owner and the Owner's consultants as a result of a non-specified or substitute product that is accepted.
6. Following the award of the Contract, there shall be no substitutions for specified products, except pursuant to a Change Order. The Owner in its sole discretion may decline to consider a substitution for a Change Order.

K. ALTERNATES

1. The Owner may request bids on alternates. If the Owner requests bids on alternates, the Bidder should include the cost of the alternates requested on its Bid Form.
2. At the time of awarding the contract, the Owner will select or reject alternates as it determines is in its best interest. A Bidder's failure to include on its Bid Form the cost of an alternate selected by the Owner and applicable to the Bidder's work shall render the bid non-responsive and be grounds for the rejection of the bid. Otherwise, the failure to include the cost of an alternate will not be deemed material.
3. The Bidder acknowledges that although there is an estimate for the cost of the Project, the market conditions may and frequently do result in the estimate being different from the sum of the bids received, either higher or lower. The Bidder understands that the Owner may include alternates, which may include deduct alternates as well as add alternates, to give it flexibility to build the Project with the funds available. The Bidder further understands and acknowledges that use of add and deduct alternates is a long held customary practice in the construction industry in the State of Ohio. The Bidder also acknowledges that the Owner will not make a decision about the alternates on which to base the award of contracts until the bids are received, and the Owner can compare its available funds with the base bids and the cost or savings from selecting different alternates. The Bidder understands that the award to the Bidder submitting the lowest responsible bid will be based on the lowest base bid plus selected alternates, and may result in an award to a Bidder other than the Bidder that submitted the lowest base bid.
4. If, during the progress of the Work, the Owner desires to reinstate any alternate not included in the Contract, the Owner reserves the right to reinstate the alternate at the price bid by the Contractor provided that such action is taken in sufficient time so as not to delay the progress of the work or cause the Contractor additional expense.

L. UNIT PRICES

1. Where unit prices are requested in the Bid Form the Bidder should quote a unit price. Unless otherwise expressly provided in the Bid Documents, such unit prices shall include all labor, materials, and services necessary for the timely and proper installation of the item for which the unit prices are requested. The unit prices quoted in the bid shall be the basis for any Change Orders entered into under the Owner-Contractor Agreement, unless the Design Professional determines that the use of such unit prices will cause substantial inequity to either the Contractor or the Owner.

M. ADDENDA

1. The Owner reserves the right to issue Addenda changing, altering, or supplementing the Contract Documents prior to the time set for receiving bids. The Design Professional will

issue the Addenda to clarify bidders' questions and/or to change, alter, or supplement the Contract Documents.

2. Any explanation, interpretation, correction, or modification of the Contract Documents will be issued in writing in the form of an Addendum, which shall be the only means considered binding; explanations, interpretations, etc., made by any other means shall NOT be legally binding. All Addenda shall become a part of the Contract Documents.
3. Bidders shall submit written questions to **Jerry S. Overmier, Beilharz Architects, Inc., at jerryo@beilharzarchitects.com by 5 p.m. on September 3, 2020** to allow sufficient time for the Design Professional to respond. All Addenda will be issued, except as hereafter provided, and e-mailed or otherwise furnished to persons who have obtained Contract Documents for the Project, at least seventy-two (72) hours prior to the published time for the opening of bids, excluding Saturdays, Sundays, and legal holidays. If any Addendum is issued within such seventy-two (72) hour period, then the time for opening of bids shall be extended one (1) week with no further advertising of bids required.
4. Copies of each Addendum will be sent only to the Bidders to whom Contract Documents have been issued and to Plan Rooms where copies of the Contract Documents are maintained. Receipt of Addenda shall be indicated by Bidders in the space provided on the Bid Form. Bidders are responsible for acquiring issued Addenda in time to incorporate them into their bid. Bidders should contact the Design Professional prior to the bid opening to verify the number of Addenda issued.
5. Each Bidder shall carefully read and review the Contract Documents and immediately bring to the attention of the Design Professional any error, omission, inconsistency, or ambiguity therein.
6. If a Bidder fails to indicate receipt of all Addenda through the last Addendum issued by the Design Professional on its Bid Form, the bid of such Bidder will be deemed to be responsive only if:
 - a. The bid received clearly indicates that the Bidder received the Addendum, such as where the Addendum added another item to be bid upon and the Bidder submitted a bid on that item; or
 - b. The Addendum involves only a matter of form or is one which has either no effect or has merely a trivial or negligible effect on price, quantity, quality, or delivery of the item bid upon.

N. INTERPRETATION

1. If a Bidder contemplating submitting a bid for the proposed Project is in doubt as to the true meaning of any part of the Contract Documents, it may submit a written request for an interpretation thereof to **Jerry S. Overmier, Beilharz Architects, Inc., at jerryo@beilharzarchitects.com by the deadline for questions per paragraph M.3 above.** Any interpretation of the proposed documents will be made by Addendum only, duly signed by the Design Professional, and a copy of such Addendum will be mailed or delivered to each Bidder receiving a set of Contract Documents and each plan room where the Contract Documents are maintained. The Owner will not be responsible for any other explanation or interpretation of the proposed documents.
2. In interpreting the Contract Documents, words describing materials that have a well-known technical or trade meaning, unless otherwise specifically defined in the Contract Documents, shall be construed in accordance with the well-known meaning recognized by the trade.
3. Bidders are responsible for notifying the Owner and the Design Professional in a timely manner of any ambiguities, inconsistencies, errors, or omissions in the Contract Documents. The Bidder shall not, at any time after the execution of the Contract, be compensated for a claim alleging insufficient data, incomplete Contract Documents, or incorrectly assumed

conditions regarding the nature or character of the Work, if no request was made by the Bidder prior to the bid opening.

O. STATE SALES AND USE TAXES

1. The Owner is a political subdivision of the State of Ohio and is exempt from taxation under the Ohio Sales Tax and Use Tax Laws. Building materials that the successful Bidder purchases for incorporation into the Project will be exempt from state sales and use taxes if the successful Bidder provides a properly completed Ohio Department of Taxation Construction Contract Exemption Certificate to the vendors or suppliers when the materials are acquired. The Owner will execute properly completed certificates on request.

P. DATE FOR SUBSTANTIAL COMPLETION/ DATE FOR FINAL COMPLETION /LIQUIDATED DAMAGES

1. The Date for Substantial Completion (aka Contract Time), Date for Final Completion, and Liquidated Damages shall be as defined and set forth in the Owner-Contractor Agreement. **By submitting its Bid, each Bidder agrees that the period for performing its Work is reasonable.**

Q. OWNER'S RIGHT TO WAIVE DEFECTS AND IRREGULARITIES

1. The Owner reserves the right to waive any and all irregularities provided that the defects and irregularities do not affect the amount of the bid in any material respect or otherwise give the Bidder a competitive advantage.

R. MODIFICATION/WITHDRAWAL OF BIDS

1. Modification. A Bidder may modify its bid by written communication to the Owner addressed to the Owner's Representative at any time prior to the scheduled closing time for receipt of bids, provided such written communication is received by Owner's Representative prior to the bid deadline. The written communication shall not reveal the bid price, but should provide the addition or subtraction or other modification so that the final prices or terms will not be known until the sealed bid is opened. If the Bidder's written instructions with the change in bid reveal the bid amount in any way prior to the bid opening, the bid may be rejected as non-responsive.
2. Withdrawal Prior to Bid Deadline. A Bidder may withdraw its bid at any time for any reason prior to the bid deadline for the opening of bids established in the Request for Bids. The request to withdraw shall be made in writing to and received by the Owner's Representative prior to the time of the bid opening.
3. Withdrawal after Bid Deadline.
 - a. All bids shall remain valid and open for acceptance for a period of at least 60 days after the bid opening; provided, however, that a Bidder may withdraw its bid from consideration after the bid deadline when all of the following apply:
 - (1) the price bid was substantially lower than the other bids;
 - (2) the reason for the bid being substantially lower was a clerical mistake, rather than a mistake in judgment, and was due to an unintentional and substantial error in arithmetic or an unintentional omission of a substantial quantity of work, labor, or material;
 - (3) the bid was submitted in good faith; and
 - (4) the Bidder provides written notice to the Owner, to the attention of the Owner's Representative, within two (2) business days after the bid opening for which the right to withdraw is claimed.

- b. No bid may be withdrawn under this provision if the result would be the awarding of the contract on another bid for the bid package from which the Bidder is withdrawing its bid to the same Bidder.
- c. If a bid is withdrawn under this provision, the Owner may award the Contract to another Bidder determined by the Owner to be the lowest responsible bidder or the Owner may reject all bids and advertise for other bids. In the event the Owner advertises for other bids, the withdrawing Bidder shall pay the costs incurred in connection with the rebidding by the Owner, including the cost of printing new Contract Documents, required advertising, and printing and mailing notices to prospective bidders, if the Owner finds that such costs would not have been incurred but for such withdrawal.

S. COMPLIANCE WITH APPLICABLE LAWS

- 1. By submitting a bid for Work on the Project, the Bidder acknowledges that it is in compliance with applicable federal, state, and local laws and regulations, including, but not limited to, the following:
 - a. Equal Employment Opportunity/Nondiscrimination. The Bidder agrees that if it is awarded a contract that in the hiring of employees for performance of work under the contract or any subcontract, neither it nor any subcontractor, or any person acting on its behalf or its subcontractor's behalf, by reason of race, creed, sex, disability as defined in Section 4112.01 of the Ohio Revised Code, or color, shall discriminate against any citizen of the state in the employment of labor or workers who are qualified and available to perform work to which the employment relates. The Bidder further agrees that neither it nor any subcontractor or any person on its behalf or on behalf of any subcontractor, in any manner, shall discriminate against or intimidate any employees hired for the performance of the work under the contract on account of race, creed, sex, disability as defined in Section 4112.01 of the Ohio Revised Code, or color.
 - b. Ethics Laws. The Bidder represents that it is familiar with all applicable ethics law requirements, including without limitation Sections 102.04 and 3517.13 of the Ohio Revised Code, and certifies that it is in compliance with such requirements.

T. FINDINGS FOR RECOVERY

- 1. 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.

U. PREVAILING WAGES

- 1. The successful Bidder and all of its subcontractors, regardless of tier, will strictly comply with its obligation to pay a rate of wages on the Project not less than the rate of wages fixed for this Project under Section 4115.04 of the Ohio Revised Code. Additionally, the successful Bidder will comply with all other provisions of Chapter 4115 of the Ohio Revised Code.

END OF INSTRUCTIONS TO BIDDERS

BID FORM

1.01 BID SUBMITTED BY:

(Contractor)

Date bid submitted: _____

1.02 DELIVER TO:

Board of Trustees of the Defiance Public Library System
ATTN: Nancy Roehrig, Chief Fiscal Officer
320 Fort Street
Defiance, OH 43512

- 1.03** Having carefully reviewed the Instructions to Bidders, Drawings, Specifications and other Contract Documents for the Project titled **Entrance Step and Sidewalk Replacement Project** including having also received, read, and taken into account the following Addenda:

Addendum No.	Dated
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

and likewise having inspected the site and the conditions affecting and governing the Project, the undersigned hereby proposes to furnish all materials and to perform all labor, as specified and described in the said Specifications and/or as shown on the said Drawings for all Work necessary to complete the Project on a timely basis and in accordance with the Contract Documents regardless of whether expressly provided for in such Specifications and Drawings.

- 1.04** Before completing the Bid Form, the undersigned represents that it has carefully reviewed the Request for Bids, Instructions to Bidders, this Bid Form, Form of Bid Guaranty and Contract Bond, Contractor's Affidavit (O.R.C. 5719.042), Owner-Contractor Agreement (AIA Document A104™ – 2017 Standard Abbreviated Form of Agreement Between Owner and Contractor as modified for the Project), Drawings, Project Specifications, and other Contract Documents. Failure to comply with provisions of the Contract Documents may be cause for disqualification of the bid.

- 1.05 BONDS AND CONTRACT:** If the undersigned is notified of bid acceptance, it agrees to furnish required bonds as indicated in the Instructions to Bidders.

- 1.06 COMPLETION OF WORK:** In submitting a bid, the undersigned agrees to execute the Owner-Contractor Agreement in the form included in the Contract Documents and to complete its Work as required by the Contract Documents.

NOTE A: The wording of the Bid Form shall be used throughout, without change, alteration, or addition. Any change may cause it to be rejected.

NOTE B: Bidder is cautioned to bid only on the Brands or Standards specified.

NOTE C: If there is an inconsistency or conflict in the Bid amount, the lowest amount shall control, whether expressed in numbers or words.

2.01 BID:

Include the cost of all labor and material for the contract listed below. Bidder is to fill in all blanks related to the Bid Package for which a bid is being submitted. If no bid is submitted for an item, leave the item blank or insert "NO BID" in the blank. For alternate items, indicate whether the amount stated is in addition to or a deduction from the base bid amount (if there is no indication whether the amount for an alternate is an addition or a deduction, the amount shall be a deduction).

2.02 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Lump Sum – All work, not including alternates.

_____ Dollars (\$ _____)
(Words) (Figures)

2.03 Alternates:

	Alternate Description	Add or Deduct	Cost in Words	Cost in Figures
1A	Railings shall be galvanized steel, powder coated; refer to Sections 05 5200 and 09 9000, and Drawings A-2			\$ _____
1B	Railings shall be satin finish stainless steel; refer to Sections 05 5200 and Drawings A-2			\$ _____
1C	Railings shall be stainless steel, powder coated; refer to Sections 05 5200 and Drawings A-2			\$ _____
2	Include snow melting system; refer to Section 321743 and Drawings E-1			\$ _____

2.04 Unit Prices: Not Applicable**3.01 INSTRUCTIONS FOR SIGNING**

- A. The person signing for a sole proprietorship must be the sole proprietor or his authorized representative. The name of the sole proprietor must be shown below.
- B. The person signing for a partnership must be a partner or his authorized representative.
- C. The person signing for a corporation must be the president, vice president or other authorized representative; or he must show authority, by affidavit, to bind the corporation.
- D. The person signing for some other legal entity must show his authority, by affidavit, to bind the legal entity.

4.01 BIDDER CERTIFICATIONS. The Bidder hereby acknowledges that the following representations in this bid are material and not mere recitals:

1. **The Bidder acknowledges that this is a public project involving public funds, and that the Owner expects and requires that each successful Bidder adhere to the highest ethical**

and performance standards. The Bidder by submitting its bid pledges and agrees that (a) it will act at all times with absolute integrity and truthfulness in its dealings with the Owner and the Design Professional, (b) it will use its best efforts to cooperate with the Owner and the Design Professional and all other Contractors on the Project and at all times will act with professionalism and dignity in its dealings with the Owner, Design Professional and other Contractors, (c) it will assign only competent supervisors and workers to the Project, each of whom is fully qualified to perform the tasks that are assigned to him/her, and (d) it has read, understands and will comply with the terms of the Contract Documents.

2. The Bidder represents that it has had a competent person carefully and diligently review each part of the Contract Documents, including any Divisions of the Specifications and parts of the Drawings that are not directly applicable to the Work on which the Bidder is submitting its bid. By submitting its bid, each Bidder represents and agrees, based upon its careful and diligent review of the Contract Documents, that it is not aware of any conflicts, inconsistencies, errors or omissions in the Contract Documents for which it has not notified the Design Professional in writing at least seven (7) days prior to the bid opening. If there are any such conflicts, inconsistencies, errors or omissions in the Contract Documents, the Bidder (i) will provide the labor, equipment or materials of the better quality or greater quantity of Work; and/or (ii) will comply with the more stringent requirements. The Bidder will not be entitled to any additional compensation for any conflicts, inconsistencies, errors or omissions that would have been discovered by such careful and diligent review, unless it has given such prior written notice to Design Professional.
3. The Bidder represents that it has had a competent person carefully and diligently inspect and examine the entire site for the Project and the surrounding area, including all parts of the site applicable to the Work for which it is submitting its bid, and carefully correlate the results of the inspection with the requirements of the Contract Documents. The Bidder agrees that its bid shall include all costs attributable to site and surrounding area conditions that would have been discovered by such careful and diligent inspection and examination of the site and the surrounding area, and the Bidder shall not be entitled to any Change Order, additional compensation, or additional time on account of conditions that could have been discovered by such an investigation.
4. The Bidder represents, understands and agrees that a) the Claim procedures in the General Conditions as modified for the Project are material terms of the Contract Documents, b) if it has a Claim, it will have its personnel provide complete and accurate information to complete and submit the Statement of Claim form on a timely basis, c) the proper completion and timely submission of a Statement of Claim form is a condition precedent to any change in the Contract Sum or the Contract Time(s), and d) the proper and timely submission of the Statement of Claim form provides the Owner and the Design Professional with necessary information so that the Owner may investigate the Claim and mitigate its damages.
5. The Bidder represents that the bid contains the name of every person interested therein and is based upon the Standards specified by the Contract Documents.
6. The Bidder and each person signing on behalf of the Bidder certifies, and in the case of a bid by joint venture, each member thereof certifies as to such member's entity, under penalty of perjury, that to the best of the undersigned's knowledge and belief: (a) the Base Bid, any Unit Prices and any Alternate bid in the bid have been arrived at independently without collusion, consultation, communication or agreement, or for the purpose of restricting competition as to any matter relating to such Base Bid, Unit Prices or Alternate bid with any other Bidder; (b) unless otherwise required by law, the Base Bid, any Unit Prices and any Alternate bid in the bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to the

bid opening, directly or indirectly, to any other Bidder who would have any interest in the Base Bid, Unit Prices or Alternate bid; (c) no attempt has been made or will be made by the Bidder to induce any other Person to submit or not to submit a bid for the purpose of restricting competition; and (d) the statements made in this Bid Form are true and correct.

7. The Bidder will execute the form of Owner/Contractor Agreement in the form included with the Contract Documents, if a Contract is awarded on the basis of this bid, and if the Bidder does not execute the Contract Form for any reason, other than as authorized by law, the Bidder and the Bidder's Surety are liable to the Owner.
8. The Bidder certifies that the upon the award of a Contract, the Contractor will ensure that all of the Contractor's employees, while working on the Project site, will not purchase, transfer, use or possess illegal drugs or alcohol or abuse prescription drugs in any way.
9. The Bidder agrees to furnish any information requested by the Design Professional or the Owner's authorized representative to evaluate that the Bidder has submitted the lowest responsible bid and that the bid is responsive to the specifications.
10. The Bidder certifies that it has no unresolved findings for recovery issued by the Auditor of State.
11. The Bidder certifies that it is aware of and in compliance with the requirements of Ohio Revised Code Section 3517.13 regarding campaign contributions.
12. The Bidder further states that it is a duly licensed contractor, for the type of work proposed, in accordance with the **City of Defiance, Defiance County** local requirements, and that all fees, permits, etc., pursuant to submitting this Bid have been paid in full.

LEGAL NAME OF BIDDER: _____

BIDDER IS (check one): ☐ sole proprietor ☐ partnership ☐ corporation ☐ other legal entity

NAME & TITLE OF PERSON LEGALLY AUTHORIZED TO BIND BIDDER TO A CONTRACT:

Name	Title
DATE SIGNED: _____	SIGNATURE: _____
	ADDRESS: _____

	TELEPHONE: _____
	FAX: _____
	FEDERAL TAX I.D. # _____

When the Bidder is a partnership or a joint venture, state name and address of each partner in the partnership or participant in the joint venture below:

Name

Address

Name

Address

Name

Address

Name

Address

Name

Address

END OF SECTION

**BID GUARANTY AND
CONTRACT BOND**
(O.R.C. § 153.571)

KNOW ALL PERSONS BY THESE PRESENTS, that we, the undersigned _____
_____ ("Contractor") as principal and _____
_____ as surety are hereby held and firmly bound unto the **Board of Trustees
of the Defiance Public Library System**, as obligee in the penal sum of the dollar amount of the bid
submitted by the principal to the obligee on _____, 20__, to undertake the construction of
the _____ ("Project"). The penal sum referred to herein shall be
the dollar amount of the principal's bid to the obligee, incorporating any additive or deductive Alternates
made by the principal on the date referred to above to the obligee, which are accepted by the obligee. In
no case shall the penal sum exceed the amount of _____ Dollars
(\$_____). (If the foregoing blank is not filled in, the penal sum will be the full amount of the
principal's bid, including add Alternates. Alternatively, if the blank is filled in the amount stated must not
be less than the full amount of the bid including add Alternates, in dollars and cents. A percentage is not
acceptable.) For the payment of the penal sum well and truly to be made, we hereby jointly and severally
bind ourselves, our heirs, executors, administrators, successors, and assigns.

Signed this _____ day of _____, 20__.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that whereas the above named principal has
submitted a bid for work on the Project.

Now, therefore, if the obligee accepts the bid of the principal and the principal fails to enter into a
proper contract in accordance with the bid, plans, details, specifications, and bills of material; and in the
event the principal pays to the obligee the difference not to exceed ten percent (10%) of the penalty
hereof between the amount specified in the bid and such larger amount for which the obligee may in good
faith contract with the next lowest bidder to perform the work covered by the bid; or in the event the
obligee does not award the contract to the next lowest bidder and resubmits the project for bidding, the
principal pays to the obligee the difference not-to-exceed ten percent (10%) of the penalty hereof
between the amount specified in the bid, or the costs, in connection with the resubmission, of printing new
contract documents, required advertising, and printing and mailing notices to prospective bidders,
whichever is less, then this obligation shall be null and void, otherwise to remain in full force and effect; if
the obligee accepts the bid of the principal and the principal within ten (10) days after the awarding of the
contract enters into a proper contract in accordance with the bid, plans, details, specifications, and bills of
material, which said contract is made a part of this bond the same as though set forth herein.

Now also, if the said principal shall well and faithfully do and perform the things agreed by said
principal 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; and surety shall
indemnify the obligee against all damage suffered by failure of the principal to perform the contract
according to its provisions and in accordance with the plans, details, specifications, and bills of material
therefor and to pay all lawful claims of subcontractors, materialmen, and laborers for labor performed or
material furnished in carrying forward, performing, or completing the contract and surety further agrees
and assents that this undertaking is for the benefit of any subcontractor, materialman, or laborer having a
just claim, as well as for the obligee; 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

By: _____

Printed Name & Title: _____

SURETY

By: _____

Printed Name & Title: _____

Surety's Address: _____

Surety's Telephone Number: _____

Surety's Fax Number: _____

SURETY'S AGENT

Surety's Agent's Address: _____

Surety's Agent's Telephone Number: _____

Surety's Agent's Fax Number: _____

NOTE: The Contract Bond form that follows is to be used ONLY by a bidder that is awarded a contract and submits a form of bid guaranty other than the combined Bid Guaranty and Contract Bond with its bid. If a bidder submits a combined Bid Guaranty and Contract Bond, then the bid guaranty becomes the contract bond when the contract is awarded.

AIA Bid Bond or Payment and Performance Bond forms are not acceptable for this Project.

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 **Board of Trustees of the Defiance Public Library System** ("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 construction of the _____ ("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: _____

SUBSTITUTION REQUEST FORM

Specified Product:

Section	Paragraph	Description
---------	-----------	-------------

Proposed Substitution: _____

Attachments: _____

The undersigned requests consideration of this Substitution and certifies that the attached product data and other supporting information indicates all variations from the specified Product, in accordance with the requirements and representations of Paragraph J of the Instructions to Bidders and Section 01 6000, and that the following statements are correct unless modified by attachments:

1. The Prime Bidder/Contractor has personally investigated proposed Product and determined that it meets or exceeds the function, appearance, sustainable design requirements, and quality level of the specified Product.
2. The same warranty will be provided for the Substitution as for the specified Product.
3. Installation will be coordinated with other Work, including the Work of separate Contractors, without additions to the total Contract Sum or Contract Time.
4. The Prime Bidder/Contractor will pay for changes to the building design if additional design or detailing is required to properly integrate the Substitution into the Work, and for additional services required to obtain the approval of governing authorities.

SUBMITTER:
(if other than Prime Bidder/Contractor)

PRIME BIDDER/CONTRACTOR:
(must be completed)

Name of Company or Corporation

Name of Company or Corporation

Phone

Phone

email

email

By:

Signature

By:

Signature

Printed Name

Printed Name

ARCHITECT'S RESPONSE:

____ Addendum or contract modification to be issued

____ Not approved

____ Additional information needed

____ Received too late

By: _____ Date: _____

Notes: _____

CONTRACTOR'S QUALIFICATION STATEMENT

SUBMITTED TO: Board of Trustees of the Defiance Public Library System
ATTN: Nancy Roehrig, Chief Fiscal Officer
320 Fort Street
Defiance, OH 43512

SUBMITTED BY:

NAME:

ADDRESS:

PRINCIPAL OFFICE:

- ☐ Corporation
- ☐ Partnership
- ☐ Individual
- ☐ Joint Venture
- ☐ Other

NAME OF PROJECT:

1. ORGANIZATION

1.1 How many years has your organization been in business as a Contractor?

1.2 How many years has your organization been in business under its present business name?

1.2.1 Under what other or former names has your organization operated?

1.3 If your organization is a corporation, answer the following:

1.3.1 Date of incorporation:

1.3.2 State of incorporation:

1.3.3 President's name:

1.3.4 Vice President's name(s):

1.3.5 Secretary's name:

1.3.6 Treasurer's name:

1.4 If your organization is a partnership, answer the following:

CONTRACTOR'S QUALIFICATION STATEMENT

CQS-1

1.4.1 Date of organization:

1.4.2 Type of partnership (if applicable):

1.4.3 Name(s) of general partner(s):

1.5 If your organization is individually owned, answer the following:

1.5.1 Date of organization:

1.5.2 Name of owner:

1.6 If the form of your organization is other than those listed above, describe it and name the principals:

2. LICENSING

2.1 List jurisdictions and trade categories in which your organization is legally qualified to do business, and indicate registration or license numbers, if applicable.

2.2 List jurisdictions in which your organization's partnership or trade name is filed.

3. EXPERIENCE

3.1 List the categories of work that your organization normally performs with its own forces.

3.2 Claims and Lawsuits (If the answer to any of the questions below is yes, please attach details.)

3.2.1 Has your organization ever failed to complete any work?

3.2.2 Within the last five (5) years has your organization or any of its officers prosecuted any Claims, had any Claims prosecuted against it or them, or been involved in or is currently involved in any mediation or arbitration proceedings or lawsuits suits related to any construction project, or has any judgments or awards outstanding against it or them? If the answer is yes, please attach the details for

CONTRACTOR'S QUALIFICATION STATEMENT

CQS-2

each Claim, including the names and telephone numbers of the persons who are parties, the amount of the Claim, the type of Claim and basis for the Claim, and the outcome.

Note: As used in this document "Claim" means a Claim initiated under the Contract Documents for a project.

- 3.3 Within the last five years, has any officer or principal of your organization ever been an officer or principal of another organization when it failed to complete a construction contract? If the answer is yes, please attach details for each instance, including the names and telephone numbers of the persons who are parties to the contract, and the reason(s) the contract was not completed.

- 3.4 On a separate sheet, list construction projects your organization has in progress with an original Contract Sum of **more than \$50,000.00**, giving the name of project, owner and its telephone number, design professional and its telephone number, contract amount, percent complete and scheduled completion date.

3.4.1 State total amount of work in progress and under contract:

- 3.5 Provide the following information for each contract your organization has had during the last five (5) years, including current contracts, where the Contract Sum is fifty percent (50%) or more of the bid amount for this Project, including add alternates. If there are more than ten (10) of these contracts only provide information on the most recent ten (10) contracts, including current contracts.

Project And Work	Contract Sum	Owner's Representative & Telephone Number	Engineer's Or Architect's Representative Name & Telephone Number

CONTRACTOR'S QUALIFICATION STATEMENT

CQS-3

Project And Work	Contract Sum	Owner's Representative & Telephone Number	Engineer's Or Architect's Representative Name & Telephone Number

- 3.5.1 Provide the following information for each project your organization has had during the last five (5) years, which your organization believes is of comparable or greater size and complexity than the Owner's project. If there are more than five (5) of these projects, only provide information on the most recent five (5) projects, including current projects.

Project And Work	Contract Sum	Owner's Representative & Telephone Number	Engineer's Or Architect's Representative Name & Telephone Number

- 3.5.2 State average annual amount of construction work your organization has performed during the last five years.

- 3.5.3 If any of the following members of your organization's management--president, chairman of the board, or any director--operates or has operated another construction company during the last five (5) years, identify the member of management and the name of the construction company.

- 3.5.4 If your organization is operating under a trade name registration with the Secretary of State for the State of Ohio, identify the entity for which the trade name is registered. If none, state "none."

- 3.5.5. If your organization is a division or wholly-owned subsidiary of another entity or has another relationship with another entity, identify the entity of which it is a division or wholly-owned subsidiary or with which it has another relationship and also identify the nature of the relationship. If none, state "not applicable."

- 3.6 On a separate sheet, list the construction education, training and construction experience for each person who will fill a management role on the Project, including without limitation the Project Executive, Project Architect, Project Manager, and Project Superintendent. For each person listed, include with the other information the last three projects on which the person worked and the name and telephone number of the Design Professional and the Owner.

4. REFERENCES

- 4.1 Trade References:

- 4.2 Bank References:

- 4.3 Surety:

- 4.3.1 Name of bonding company:

- 4.3.2 Name and address of agent:

5. FINANCING

- 5.1 Financial Statement

- 5.1.1 Attach a financial statement, preferably audited, including your organization's latest balance sheet and income statement showing the following items:

Current Assets (e.g., cash, joint venture accounts, accounts receivable, notes receivable, accrued income, deposits, materials inventory and prepaid expenses);

Net Fixed Assets;

Other Assets;

Current Liabilities (e.g., accounts payable, notes payable, accrued expenses, provision for income taxes, advances, accrued salaries and accrued payroll taxes); and

Other Liabilities (e.g., capital, capital stock, authorized and outstanding shares par values, earned surplus and retained earnings).

- 5.1.2 Name and address of firm preparing attached financial statement, and date thereof.

- 5.1.3 Is the attached financial statement for the identical organization named on page one?

- 5.1.4 If not, explain the relationship and financial responsibility of the organization whose financial statement is provided (e.g., parent-subsidary).

CONTRACTOR'S QUALIFICATION STATEMENT

CQS-5

5.2 Will the organization whose financial statement is attached act as guarantor of the contract for construction?

Certification. The undersigned certifies for the reliance of the Owner that after diligent investigation, to the best of the undersigned's belief, the information provided with this Contractor's Qualification Statement is true, accurate and not misleading.

SIGNATURE

Dated at this ____ day of _____, 20__.

Name of Organization: _____

By: _____[PRINT NAME]

Signature: _____

Title: _____

_____, being duly sworn, deposes and says that the information provided herein is true and sufficiently complete so as not to be misleading. The notarial act certified hereby is a jurat. An oath or affirmation was administered to the signer with regard to the notarial act certified to hereby.

Subscribed and sworn before me this ____ day of _____ 20__.

Notary Public

My Commission Expires: _____

SEAL



AGREEMENT made as of the day of in the year date signed by Owner at the end of this Agreement
(In words, indicate day, month and year.)

(Name, legal status, address and other information)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

(Name, legal status, address and other information)

(Name, location and detailed description)

320 Fort Street
Defiance, OH 43512

Email: jerryo@beilharzarchitects.com

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~~EXHIBIT A DETERMINATION OF THE COST OF THE WORK~~

ARTICLE 1 THE WORK OF THIS CONTRACT

The Contractor shall execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 2.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

☐ The date of this Agreement.

Init.

[] Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

§ 2.2 The Contract Time shall be measured from the date of commencement.

§ 2.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

[] Not later than () calendar days from the date of commencement of the Work.

Substantial Completion Date

3

§ 3.2.1 The Stipulated Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:
(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

§ 3.2.2 Unit prices, if any:
(Identify the item and state the unit price and the quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)
------	-----------------------	-------------------------

§ 3.2.3 Allowances, if any, included in the stipulated sum:
(Identify each allowance.)

Item	Price
------	-------

§ 3.3 Cost of the Work Plus Contractor's Fee – Not Applicable

§ 3.3.1 The Cost of the Work is as defined in Exhibit A, Determination of the Cost of the Work. [Not Used.]

§ 3.3.2 The Contractor's Fee:

(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee and the method of adjustment to the Fee for changes in the Work.)

[Not Used.]

§ 3.4 Cost of the Work Plus Contractor's Fee With a Guaranteed Maximum Price – Not Applicable

§ 3.4.1 The Cost of the Work is as defined in Exhibit A, Determination of the Cost of the Work. [Not Used.]

§ 3.4.2 The Contractor's Fee:

(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee and the method of adjustment to the Fee for changes in the Work.)

[Not Used.]

§ 3.4.3 Guaranteed Maximum Price - Not Applicable

§ 3.4.3.1 The sum of the Cost of the Work and the Contractor's Fee is guaranteed by the Contractor not to exceed — (\$), subject to additions and deductions by changes in the Work as provided in the Contract Documents. This maximum sum is referred to in the Contract Documents as the Guaranteed Maximum Price. Costs which would cause the Guaranteed Maximum Price to be exceeded shall be paid by the Contractor without reimbursement by the Owner.
(Insert specific provisions if the Contractor is to participate in any savings.)

Not Used.]

§ 3.4.3.2 The Guaranteed Maximum Price is based on the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

[Not Used.]

§ 3.4.3.3 Unit Prices, if any:

Init.

(Identify the item and state the unit price and the quantity limitations, if any, to which the unit price will be applicable.)

[Not Used.]

Item

Units and Limitations

Price per Unit (\$0.00)

§ 3.4.3.4 Allowances, if any, included in the Guaranteed Maximum Price:

(Identify each allowance.)

[Not Used.]

Item

Price

§ 3.4.3.5 Assumptions, if any, on which the Guaranteed Maximum Price is based:

[Not Used.]

§ 3.4.3.6 To the extent that the Contract Documents are anticipated to require further development, the Guaranteed Maximum Price includes the costs attributable to such further development consistent with the Contract Documents and reasonably inferable therefrom. Such further development does not include changes in scope, systems, kinds and quality of materials, finishes or equipment, all of which, if required, shall be incorporated by Change Order.

[Not Used.]

§ 3.4.3.7 The Owner shall authorize preparation of revisions to the Contract Documents that incorporate the agreed-upon assumptions contained in Section 3.4.3.5. The Owner shall promptly furnish such revised Contract Documents to the Contractor. The Contractor shall notify the Owner and Architect of any inconsistencies between the agreed-upon assumptions contained in Section 3.4.3.5 and the revised Contract Documents.

[Not Used.]

§ 3.5 Liquidated damages, if any:

(Insert terms and conditions for liquidated damages, if any.)

Liquidated damages will be assessed on a daily basis if Contractor does not achieve substantial completion of its Work by the Date of Substantial Completion, as such date may be adjusted by the parties, in the per diem amount of \$250. Liquidated damages will be assessed on a daily basis if Contractor does not achieve final completion of its Work by the Date of Final Completion, as such date may be adjusted by the parties, in the per diem amount of \$50.

ARTICLE 4 PAYMENT

§ 4.1 Progress Payments

§ 4.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 4.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

month.

§ 4.1.3 Provided that an Application for Payment is received by the Architect not later than the last day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the last day of the following month. If an Application for Payment is received by the Architect after the date fixed above, payment shall be made by the Owner not later than thirty (30) days after the Architect receives the Application for Payment, the Application for Payment, including all required lien waivers. Beginning with the second Application for Payment, the Contractor will submit (a) a release and/or waiver of claims, including a waiver of all lien rights, in the form included in the Contract Documents or required by the Owner for itself and each of its Subcontractors and Suppliers, regardless of tier, and (b) a complete list of its Subcontractors and Suppliers in the form included in the Contract Documents or as required by the Owner.

(Federal, state or local laws may require payment within a certain period of time.)

Init.

§ 4.1.4 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold retainage from the payment otherwise due as follows:
(Insert a percentage or amount to be withheld as retainage from each Application for Payment and any terms for reduction of retainage during the course of the Work. The amount of retainage may be limited by governing law.)

Partial payments to the Contractor for labor performed shall be made at the rate of 92 percent of the amount invoiced through the Application for Payment that shows the total Contract completion at 50 percent or greater, pursuant to Ohio Revised Code Section 153.14. For materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work partial payments to the Contractor shall be made at the rate of 92 percent of the amount invoiced, in accordance with the Ohio Revised Code. After the Contract is 50 percent complete as evidenced by payments in the amount of at least 50 percent of the Contract Price to the Contractor, no additional funds shall be retained from payments for labor. The Owner will withhold retainage from the amount set forth in the Application for Payment approved by the Architect, as provided in the Contract Documents. However if the time for completing and invoicing for the Work requires only one (1) application for payment, no retainage will be withheld.

Contractor agrees that if retainage is withheld, Owner may hold retained amounts in the project construction fund and is not required to deposit the retained funds into a separate interest-bearing savings account. Contractor waives the statutory requirement to withhold funds from the construction contract awarded by the Owner and to deposit those withheld funds into a separate interest-bearing account deposit funds. Contractor acknowledges that the funds appropriated to pay the Contract Sum are held in a separate cost center for the Owner's finances, managed by the Owner, and paid as applications for payment are submitted and approved during the course of performing the Work covered by this Agreement.

§ 4.1.5 Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
below.

(Insert rate of interest agreed upon, if any.)

0.00 % (zero percent)

§ 4.2 Final Payment

§ 4.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 18.2, and to satisfy other requirements, if any, which extend beyond final payment;
- .2 the Contractor has submitted a final accounting for the Cost of the Work, where payment is on the basis of the Cost of the Work with or without a Guaranteed Maximum Price; the final certified payroll report and the required Affidavit of Compliance (Prevailing Wages); and
- .3 a final Certificate for Payment has been issued by the Architect in accordance with Section 15.7.1.

§ 4.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

Following delivery of the Warranty, as required by the specifications for the Work and all lien releases and/or waivers from subcontractors and material suppliers, in the form required by Owner.

ARTICLE 5 DISPUTE RESOLUTION

§ 5.1 Binding Dispute Resolution

For any claim subject to, but not resolved by, mediation pursuant to Section 21.5, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

☐ Arbitration pursuant to Section 21.6 of this Agreement

☒ Litigation in a court of competent jurisdictionjurisdiction, per Section 20.3.1

Init.

[] Other (Specify)

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, claims will be resolved in a court of competent jurisdiction.

ARTICLE 6 ENUMERATION OF CONTRACT DOCUMENTS

§ 6.1 The Contract Documents are defined in Article 7 and, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 6.1.1 The Agreement is this executed modified AIA Document A104™–2017, Standard Abbreviated Form of Agreement Between Owner and Contractor, as modified.

§ 6.1.2 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:

(Insert the date of the E203–2013 incorporated into this Agreement.)

Not Used.

§ 6.1.3 The Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
<u>None</u>			

§ 6.1.4 The ~~Specifications~~ Specifications identified in document 00 0110 included in the Project Manual dated August 27, 2020 prepared by the Architect for the Project.

(Either list the Specifications here or refer to an exhibit attached to this Agreement.)

Section	Title	Date	Pages
---------	-------	------	-------

§ 6.1.5 The ~~Drawings~~ Drawings identified in sheet A-1 and document 00 0110 included in the Project Manual dated August 27, 2020 prepared by the Architect for the Project.

(Either list the Drawings here or refer to an exhibit attached to this Agreement.)

§ 6.1.6 The Addenda, if any:

Number	Title	Date	Pages
<u> </u>	<u> </u>	<u> </u>	<u> </u>

§ 6.1.6 The Addenda, if any:

Number	Date	Pages
--------	------	-------

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are enumerated in this Article 6.

§ 6.1.7 Additional documents, if any, forming part of the Contract Documents:

.1 Other Exhibits:
(Check all boxes that apply.)

[] Exhibit A, Determination of the Cost of the Work.

Init.

[] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

[] The Sustainability Plan:

Title	Date	Pages
-------	------	-------

[] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
----------	-------	------	-------

.2 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents.)

Legal Notice and Instructions to Bidders issued to all bidders for the Work
Any Addenda issued during the bid period
Bid Guaranty and Contract Bond
Bid Form
Personal Property Tax Affidavit
Statement of Claim Form
Modifications issued after execution of this Agreement
Prevailing Wage Rates and Documents included in the Project Manual
Payment Application Form
Affidavit with List of Subcontractors and Suppliers with Amounts Withheld
Contractor Waiver and Release Affidavit
Subcontractors & Suppliers Waiver and Release Affidavit
Contractor Final Lien Waiver and Release Affidavit
Subcontractor Final Lien Waiver and Release Affidavit

ARTICLE 7 GENERAL PROVISIONS

§ 7.1 The Contract Documents

The Contract Documents are enumerated in Article 6 and consist of this Agreement (including, if applicable, Supplementary and other Conditions of the Contract), Drawings, Specifications, Addenda issued prior to the execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results. In the event of inconsistencies within or between parts of the Contract Documents, or between the Contract Documents and applicable standards, codes, and ordinances, Contractor is responsible to (1) provide the better quality or greater quantity of Work; or (2) comply with the more stringent requirements, either or both in accordance with Design Professional's interpretation.

§ 7.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind between any persons or entities other than the Owner and the Contractor.

Init.

§ 7.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 7.4 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 7.5 Ownership and use of Drawings, Specifications and Other Instruments of Service

§ 7.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 7.5.2 The Contractor, Subcontractors, Sub-subcontractors and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to the protocols established pursuant to Sections 7.6 and 7.7, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants.

§ 7.6 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. ~~The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.~~

§ 7.7 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

§ 7.8 Severability

The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 7.9 Notice

§ 7.9.1 Except as otherwise provided in Section 7.9.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or ~~by electronic transmission in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:~~

(If other than in accordance with AIA Document E203–2013, insert requirements for delivering Notice in electronic format such as name, title and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

Notice must be given to the Owner Representative at the address stated on page 1 of this Agreement.

Notice must be given to Contractor at the address stated on page 1 of this Agreement.

§ 7.9.2 Notice of Claims shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 7.10 Relationship of the Parties

~~Where the Contract is based on the Cost of the Work plus the Contractor's Fee, with or without a Guaranteed Maximum Price, the~~ The Contractor accepts the relationship of trust and confidence established by this Agreement and covenants with the Owner to cooperate with the Architect and exercise the Contractor's skill and judgment in furthering the interests of the Owner; to furnish efficient business administration and supervision; to furnish at all times an adequate supply of workers and materials; and to perform the Work in an expeditious and economical manner consistent with the Owner's interests. The Owner agrees to furnish and approve, in a timely manner, information required by the Contractor and to make payments to the Contractor in accordance with the requirements of the Contract Documents.

ARTICLE 8 OWNER

§ 8.1 Information and Services Required of the Owner

§ 8.1.1 Prior to commencement of the Work, at the written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. ~~The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 8.1.1, the Contract Time shall be extended appropriately.~~ Contract by signing the ORC Section 5705.41 certificate at the end of this Agreement.

§ 8.1.2 The Owner shall furnish all necessary surveys and a legal description of the site.

§ 8.1.3 The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 8.1.4 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 9.6.1, the Owner shall secure and pay for other necessary approvals, easements, assessments, and charges required for the construction, use, or occupancy of permanent structures or for permanent changes in existing facilities.

§ 8.2 Owner's Right to Stop the Work

If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents, or repeatedly fails to carry out the Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order is eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

§ 8.3 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents, and fails within a ~~ten-day period~~ period of two (2) business days after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to any other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 15.4.3, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including the Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 21.

ARTICLE 9 CONTRACTOR

§ 9.1 Review of Contract Documents and Field Conditions by Contractor

§ 9.1.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 9.1.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 8.1.2, shall take field measurements of any existing conditions related to that portion of the Work and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies, or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents.

§ 9.1.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 9.2 Supervision and Construction Procedures

§ 9.2.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters.

§ 9.2.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for or on behalf of the Contractor or any of its Subcontractors.

§ 9.3 Labor and Materials

§ 9.3.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 9.3.2 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

§ 9.3.3 The Contractor may make a substitution only with the consent of the Owner, after evaluation by the Architect and in accordance with a Modification.

§ 9.4 Warranty

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation or normal wear and tear under normal usage. All other warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 15.6.3. Notwithstanding anything to the contrary in the Contract Documents, no warranties by Contractor shall be limited to any time shorter than the statute of limitations for written contracts in Ohio.

§ 9.5 Taxes

The Contractor shall pay sales, consumer, use, and other similar taxes that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect. Owner will provide Contractor with a signed completed Ohio sales tax exemption certificate for construction contracts for its use and the use of Contractor's subcontractors to purchase materials and equipment to be incorporated into the Work.

§ 9.6 Permits, Fees, Notices, and Compliance with Laws

§ 9.6.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 9.6.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work. If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 9.7 Allowances

The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. The Owner shall select materials and equipment under allowances with reasonable promptness. Allowance amounts shall include the costs to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts. Contractor's costs for unloading and handling at the site, labor, installation, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowance.

§ 9.8 Contractor's Construction Schedules

§ 9.8.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 9.8.2 The Contractor shall perform the Work in general accordance with the most recent schedule submitted to the Owner and Architect.

§ 9.9 Submittals

§ 9.9.1 The Contractor shall review for compliance with the Contract Documents and submit to the Architect Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents in coordination with the Contractor's construction schedule and in such sequence as to allow the Architect reasonable time for review. By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them; (2) determined and verified materials, field measurements, and field construction criteria related thereto, or will do so; and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. The Work shall be in accordance with approved submittals.

§ 9.9.2 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents.

§ 9.9.3 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents or unless the Contractor needs to provide such services in order to carry out the Contractor's own responsibilities. If professional design services or certifications by a design professional are specifically required, the Owner and the Architect will specify the performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional. If no criteria are specified, the design shall comply with applicable codes and ordinances. Each Party shall be entitled to rely upon the information provided by the other Party. The Architect will review and approve or take other appropriate action on submittals for the limited purpose of checking for conformance with information provided and the design concept expressed in the Contract

Documents. The Architect's review of Shop Drawings, Product Data, Samples, and similar submittals shall be for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. In performing such review, the Architect will approve, or take other appropriate action upon, the Contractor's Shop Drawings, Product Data, Samples, and similar submittals.

§ 9.10 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 9.11 Cutting and Patching

The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly.

§ 9.12 Cleaning Up

The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus material from and about the Project.

§ 9.13 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

§ 9.14 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

§ 9.15 Indemnification

§ 9.15.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, ~~provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, in the performance of the Work or any breach of the Contractor's obligations under the Contract Documents,~~ regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 9.15.1.

§ 9.15.2 In claims against any person or entity indemnified under this Section 9.15 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 9.15.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

§ 9.16 RESTRICTED ACTIVITIES

§ 9.16.1 Contractor will conduct Work in a manner that minimizes disruption to Owner's Operations; Contractor agrees to coordinate its Work at the site with Owner, through the Design Professional, and to provide sufficient notice to Owner with proposed times when areas on the site must be closed to the public during construction activities in order for Owner to determine which times work best for its operations and to provide notice to the public and to its employees of the closed areas. Unless expressly permitted by the Contract Documents or by Owner in writing, Contractor will not permit any of its employees or its Subcontractor's or materialmen's employees to use any existing

facilities on the Project site, including, without limitation, lavatories, toilets, entrances, and parking areas, and will not permit its employees or its Subcontractor's or materialmen's employees to bring any tobacco products, alcoholic beverages, controlled substances, or firearms onto the Project site or any other property owned or controlled by the Owner. Additionally, Contractor will not permit its employees or its Subcontractor's or materialmen's employees to use any radios, tape or compact disc players, or sound amplification equipment that is audible outside of the immediate area where the Work is being performed.

§ 9.17 UNDERGROUND UTILITY FACILITIES

§ 9.17.1 Contractor, at least two (2) working days prior to commencing construction in an area that may involve underground utility facilities, will give notice to Design Professional and Owner and to the registered underground utility protection services and the owners of underground utility facilities shown on the Drawings and Specifications.

§ 9.17.2 Contractor will notify immediately the occupants of any premises near the Work and Design Professional and Owner as to any emergency that it may create or discover. Contractor will notify immediately the operator of any underground utilities and Design Professional and Owner of any break or leak in the lines of such operator or any dent, gouge, groove, or other damage to such lines or to their rating or cathodic protection, made or discovered in the course of excavation.

ARTICLE 10 ARCHITECT

§ 10.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction, until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract.

§ 10.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 10.3 The Architect will visit the site at intervals appropriate to the stage of the construction to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general, if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 10.4 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 10.5 Based on the Architect's evaluations of the Work and of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 10.6 The Architect has authority to reject Work that does not conform to the Contract Documents and to require inspection or testing of the Work.

§ 10.7 The Architect will review and approve or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 10.8 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect will make initial decisions on all claims, disputes, and other matters in question between the Owner and Contractor but will not be liable for results of any interpretations or decisions rendered in good faith.

§ 10.9 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

ARTICLE 11 SUBCONTRACTORS

§ 11.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site.

§ 11.2 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the Subcontractors or suppliers proposed for each of the principal portions of the Work. The Contractor shall not contract with any Subcontractor or supplier to whom the Owner or Architect has made reasonable written objection within ten days after receipt of the Contractor's list of Subcontractors and suppliers. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. Work, provided that Contractor timely submits a Claim for adjustment of the Contract Sum and/or Contract Time in accordance with Article 21 of this Agreement. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 11.3 Contracts between the Contractor and Subcontractors shall (1) require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by the Contract Documents, assumes toward the Owner and Architect, and (2) allow the Subcontractor the benefit of all rights, remedies and redress against the Contractor that the Contractor, by these Contract Documents, has against the ~~Owner~~. Owner, and (3) comply with Ohio Administrative Code Section 153:1-3-02.

ARTICLE 12 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 12.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 12.2 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's activities with theirs as required by the Contract Documents.

§ 12.3 The Owner shall be reimbursed by the Contractor for costs incurred by the Owner which are payable to a Separate Contractor because of delays, improperly timed activities, or defective construction of the Contractor. The Owner shall be responsible to the Contractor for costs incurred by the Contractor because of delays, improperly timed activities, damage to the Work, or defective construction of a Separate ~~Contractor~~. Contractor, provided that Contractor timely submits a Claim for adjustment of the Contract Sum and/or Contract Time in accordance with Article 21 of this Agreement.

ARTICLE 13 CHANGES IN THE WORK

§ 13.1 By appropriate Modification, changes in the Work may be accomplished after execution of the Contract. The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, with the Contract Sum and Contract Time being adjusted accordingly. Such changes in the Work shall be authorized by written Change Order signed by the Owner, Contractor, and Architect, or by written Construction Change Directive signed by the Owner and Architect. Upon issuance of the Change Order or Construction Change Directive, the Contractor shall proceed promptly with such changes in the Work, unless otherwise provided in the Change Order or Construction Change Directive.

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§ 13.1.1 The agreement on any Change Order constitutes a final settlement of all matters relating to the change in the Work that is the subject of the Change Order, including but not limited to, all direct, indirect, and cumulative costs associated with such change and any and all adjustments to the Contract Sum and Contract Time. Contractor will not proceed with any change in the Work without a signed Change Order, Construction Change Directive, or Minor Change in the Work notice. Contractor's failure to obtain such authorization as specified herein constitutes an irrevocable waiver by Contractor of an adjustment to the Contract Sum or Contract Time for the related Work.

§ 13.2 Adjustments in the Contract Sum and Contract Time resulting from a change in the Work shall be determined by mutual agreement of the parties or, in the case of a Construction Change Directive signed only by the Owner and Architect, by the Contractor's cost of labor, material, equipment, and reasonable overhead and profit, unless the parties agree on another method for determining the cost or credit. Pending final determination of the total cost of a Construction Change Directive, the Contractor may request payment for Work completed pursuant to the Construction Change Directive. The Architect will make an interim determination of the amount of payment due for purposes of certifying the Contractor's monthly Application for Payment. When the Owner and Contractor agree on adjustments to the Contract Sum and Contract Time arising from a Construction Change Directive, the Architect will prepare a Change Order.

§ 13.3 The Architect will have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work.

§ 13.4 If concealed or unknown physical conditions are encountered at the site that differ materially from those indicated in the Contract Documents or from those conditions ordinarily found to exist, the Contract Sum and Contract Time shall be equitably adjusted as mutually agreed between the Owner and Contractor; provided that the Contractor provides notice to the Owner and Architect promptly and before conditions are ~~disturbed~~-disturbed and provided that Contractor timely submits a Claim for adjustment of the Contract Sum and/or Contract Time in accordance with Article 21 of this Agreement.

ARTICLE 14 TIME

§ 14.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing this Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 14.2 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 14.3 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 14.4 The date of Substantial Completion is the date certified by the Architect in accordance with Section 15.6.3.

§ 14.5 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) changes ordered in the Work; (2) by labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions not reasonably anticipatable, unavoidable casualties, or any causes beyond the Contractor's control; or (3) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine, subject to the provisions of Article 21.

ARTICLE 15 PAYMENTS AND COMPLETION

§ 15.1 Schedule of Values

§ 15.1.1 Where the Contract is based on a Stipulated Sum or the Cost of the Work with a Guaranteed Maximum Price pursuant to Section 3.2 or 3.4, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Stipulated Sum or Guaranteed Maximum Price to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy required by the Architect. This schedule of values shall be used as a basis for reviewing the Contractor's

Applications for Payment. By submitting such schedule of values, Contractor represents for the reliance of Design Professional and Owner that the allocation of values to the portions of the Work is a fair and reasonable estimate of such allocation. Once approved, Contractor will not change the allocations in the schedule of values with Design Professional's approval.

§ 15.1.2 The allocation of the Stipulated Sum or Guaranteed Maximum Price under this Section 15.1 shall not constitute a separate stipulated sum or guaranteed maximum price for each individual line item in the schedule of values.

§ 15.2 Control Estimate – Not Applicable

§ 15.2.1 Where the Contract Sum is the Cost of the Work, plus the Contractor's Fee without a Guaranteed Maximum Price pursuant to Section 3.3, the Contractor shall prepare and submit to the Owner a Control Estimate within 14 days of executing this Agreement. The Control Estimate shall include the estimated Cost of the Work plus the Contractor's Fee. [Not Used.]

§ 15.2.2 The Control Estimate shall include:

- .1 the documents enumerated in Article 6, including all Modifications thereto;
- .2 a list of the assumptions made by the Contractor in the preparation of the Control Estimate to supplement the information provided by the Owner and contained in the Contract Documents;
- .3 a statement of the estimated Cost of the Work organized by trade categories or systems and the Contractor's Fee;
- .4 a project schedule upon which the Control Estimate is based, indicating proposed Subcontractors, activity sequences and durations, milestone dates for receipt and approval of pertinent information, schedule of shop drawings and samples, procurement and delivery of materials or equipment the Owner's occupancy requirements, and the date of Substantial Completion; and
- .5 a list of any contingency amounts included in the Control Estimate for further development of design and construction. [Not Used.]

§ 15.2.3 When the Control Estimate is acceptable to the Owner and Architect, the Owner shall acknowledge it in writing. The Owner's acceptance of the Control Estimate does not imply that the Control Estimate constitutes a Guaranteed Maximum Price. [Not Used.]

§ 15.2.4 The Contractor shall develop and implement a detailed system of cost control that will provide the Owner and Architect with timely information as to the anticipated total Cost of the Work. The cost control system shall compare the Control Estimate with the actual cost for activities in progress and estimates for uncompleted tasks and proposed changes. This information shall be reported to the Owner, in writing, no later than the Contractor's first Application for Payment and shall be revised and submitted with each Application for Payment. [Not Used.]

§ 15.2.5 The Owner shall authorize preparation of revisions to the Contract Documents that incorporate the agreed-upon assumptions contained in the Control Estimate. The Owner shall promptly furnish such revised Contract Documents to the Contractor. The Contractor shall notify the Owner and Architect of any inconsistencies between the Control Estimate and the revised Contract Documents. [Not Used.]

§ 15.3 Applications for Payment

§ 15.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment in the form included in the Contract Documents or other format acceptable to Design Professional prepared in accordance with the schedule of values, if required under Section 15.1, for completed portions of the Work. The application shall be notarized, if required; be supported by all data substantiating the Contractor's right to payment that the Owner or Architect require; shall reflect retainage if provided for in the Contract Documents; and include any revised cost control information required by Section 15.2.4. Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay. Each Application for Payment must also include the required Certified Payroll Report for payment of prevailing wages.

§ 15.3.2 With each Application for Payment where the Contract Sum is based upon the Cost of the Work, or the Cost of the Work with a Guaranteed Maximum Price, the Contractor shall submit payrolls, petty cash accounts, receipted

invoices or invoices with check vouchers attached, and any other evidence required by the Owner to demonstrate that cash disbursements already made by the Contractor on account of the Cost of the Work equal or exceed progress payments already received by the Contractor plus payrolls for the period covered by the present Application for Payment, less that portion of the progress payments attributable to the Contractor's Fee.

§ 15.3.3 Payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment stored, and protected from damage, off the site at a location agreed upon in writing.

§ 15.3.4 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or other encumbrances adverse to the Owner's interests. Contractor agrees to bond off any lien claim filed against the remaining balance of the Contract Sum by providing a bond meeting the requirements of the Ohio Revised Code. Contractor will do so within 60 days of the filing of the lien.

§ 15.3.5 Upon request, Contractor will immediately supply Design Professional with such information as may be requested so as to verify the amounts due to Contractor, including but not limited to original invoices for materials and equipment and documents showing that Contractor has paid for such materials and equipment, and so as to verify that amounts due laborers, Subcontractors, and material suppliers have been paid to them. Failure to provide such information will be justification for withholding payment to Contractor.

§ 15.4 Certificates for Payment

§ 15.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner of the Architect's reasons for withholding certification in whole or in part as provided in Section 15.4.3.

§ 15.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluations of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 15.4.3 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 15.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 15.4.1. If the Contractor and the Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 9.2.2, because of

- .1 defective Work not remedied;
- .2 third-party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;

- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 15.4.4 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 15.4.3, in whole or in part, that party may submit a Claim in accordance with Article 21.

§ 15.5 Progress Payments

§ 15.5.1 The Contractor shall pay each Subcontractor, no later than seven days or the time required by Ohio law after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to sub-subcontractors in a similar manner. Neither Contractor nor its subcontractors will withhold retainage from its subcontractors or their sub-subcontractors beyond the retainage withheld by Owner from Contractor.

§ 15.5.2 Neither the Owner nor Architect shall have an obligation to pay or see to the payment of money to a Subcontractor or supplier except as may otherwise be required by law.

§ 15.5.3 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

~~§ 15.5.4 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.~~[Not Used.]

§ 15.6 Substantial Completion

§ 15.6.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 15.6.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 15.6.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. When the Architect determines that the Work or designated portion thereof is substantially complete, the Architect will issue a Certificate of Substantial Completion which shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 15.6.4 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 15.7 Final Completion and Final Payment

§ 15.7.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect

finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions stated in Section 15.7.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 15.7.2 Final payment shall not become due until the Contractor has delivered to the Owner a complete release of all liens arising out of this Contract in the forms included in the Contract Documents or receipts in full covering all labor, materials and equipment for which a lien could be filed, or a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including costs and reasonable attorneys' fees.

§ 15.7.3 The making of final payment shall constitute a waiver of claims by the Owner except those arising from

- .1 liens, claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 15.7.4 Acceptance of final payment by the Contractor, a Subcontractor or supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of the final Application for Payment.

ARTICLE 16 PROTECTION OF PERSONS AND PROPERTY

§ 16.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the ~~Contract~~. Contract, including compliance with OSHA and other state and federal regulations applicable to the Work. Contractor's safety program must be written and a copy maintained at the Project site for inspection, upon request. Neither Owner nor Design Professional accepts responsibility or liability for the safety of Contractor's employees or for enforcing Contractor's safety program. The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation, or replacement in the course of construction.

The Contractor shall comply with, and give notices required by, applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons and property and their protection from damage, injury, or loss. The Contractor shall promptly remedy damage and loss to property caused in whole or in part by the Contractor, a Subcontractor, a sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 16.1.2 and 16.1.3. The Contractor may make a claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 9.15.

§ 16.2 Hazardous Materials and Substances

§ 16.2.1 The Contractor is responsible for compliance with the requirements of the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents, and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition. When the material or substance

has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shutdown, delay, and ~~start-up~~start-up, provided Contractor complies with the requirements of Article 21 of this Agreement.

§ 16.2.2 ~~To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area, if in fact, the material or substance presents the risk of bodily injury or death as described in Section 16.2.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.~~[Not Used.]

§ 16.2.3 ~~If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.~~[Not Used.]

ARTICLE 17 INSURANCE AND BONDS

§ 17.1 Contractor's Insurance

§ 17.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in this Section 17.1 or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the insurance required by this Agreement from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 18.4, unless a different duration is stated below:

§ 17.1.2 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than One Million Dollars (\$ 1,000,000.00) each occurrence, Two Million Dollars (\$ 2,000,000.00) general aggregate, and Two Million Dollars (\$ 2,000,000.00) aggregate for products-completed operations hazard, providing coverage for claims including

- .1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2 personal and advertising injury;
- .3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and
- .5 the Contractor's indemnity obligations under Section 9.15.

§ 17.1.3 Automobile Liability covering vehicles owned by the Contractor and non-owned vehicles used by the Contractor, with policy limits of not less than One Million Dollars (\$ 1,000,000.00) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance, and use of those motor vehicles along with any other statutorily required automobile coverage.

§ 17.1.4 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as those required under Section 17.1.2 and 17.1.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ 17.1.5 Workers' Compensation at statutory limits.

§ 17.1.6 Employers' Liability with policy limits not less than One Million Dollars (\$ 1,000,000.00) each accident, One Million Dollars (\$ 1,000,000.00) each employee, and One Million Dollars (\$ 1,000,000.00) policy limit.

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§ 17.1.7 If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than One Million Dollars (\$ 1,000,000.00) per claim and One Million Dollars (\$ 1,000,000.00) in the aggregate.

§ 17.1.8 If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than One Million Dollars (\$ 1,000,000.00) per claim and One Million Dollars (\$ 1,000,000.00) in the aggregate.

§ 17.1.9 Coverage under Sections 17.1.7 and 17.1.8 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than (\$) per claim and (\$) in the aggregate. The Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance on an "all-risk" or equivalent policy form, including builder's risk, in the amount of the initial Contract Sum, plus the value of subsequent modifications and cost of materials supplied and installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 15.7 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 17.1.9 to be covered, whichever is later. The insurance shall include interests of the Owner, the Contractor, Subcontractors, and Sub-subcontractors in the Project.

§ 17.1.10 The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Section 17.1 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the period required by Section 17.1.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy.

§ 17.1.11 The Contractor shall disclose to the Owner any deductible or self- insured retentions applicable to any insurance required to be provided by the Contractor.

§ 17.1.12 To the fullest extent permitted by law, the Contractor shall cause the commercial liability coverage required by this Section 17.1 to include (1) the Owner, the Architect, and the Architect's Consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's Consultants, CG 20 32 07 04.

§ 17.1.13 Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by this Section 17.1, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 17.1.14 Other Insurance Provided by the Contractor

(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

Coverage

Limits

Init.

§ 17.2 Owner's Insurance

§ 17.2.1 Owner's Liability Insurance

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

§ 17.2.2 Property Insurance

§ 17.2.2.1 The Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner's property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed or materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section 17.2.2.2, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees. [Not Used.]

§ 17.2.2.2 Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section 17.2.2.1 or, if necessary, replace the insurance policy required under Section 17.2.2.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 18.4. [Not Used.]

§ 17.2.2.3 If the insurance required by this Section 17.2.2 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.

§ 17.2.2.4 If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 18.4, "all-risks" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties. [Not Used.]

§ 17.2.2.5 Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Section 17.2.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies required by this Section 17.2.2. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements. [Not Used.]

§ 17.2.2.6 Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any insurance required by this Section 17.2.2, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance. [Not Used.]

§ 17.2.2.7 Waiver of Subrogation

§ 17.2.2.7.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by this Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this Section 17.2.2.7 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of

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indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property. [Not Used.]

§ 17.2.2.7.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 17.2.2.7.1 for damages caused by fire or other causes of loss covered by this separate property insurance. [Not Used.]

§ 17.2.2.8 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements, written where legally required for validity, the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner. [Not Used.]

§ 17.2.3 Other Insurance Provided by the Owner

(List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Coverage

Limits

§ 17.3 Performance Bond and Payment Bond

§ 17.3.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in the Contract Documents on the date of execution of the Contract. Contractor will provide a contract bond for the Work using the statutory form of contract bond for payment and performance of the Work, unless Contractor submitted the combined bid guaranty and contract bond form included in the Project Manual issued to bidders with its bid.

§ 17.3.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

ARTICLE 18 CORRECTION OF WORK

§ 18.1 The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed, or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense, unless compensable under Section A.1.7.3 in Exhibit A, Determination of the Cost of the Work. expense.

§ 18.2 In addition to the Contractor's obligations under Section 9.4, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 15.6.3, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty.

§ 18.3 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Section 8.3.

§ 18.4 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 18.5 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Article 18.

ARTICLE 19 MISCELLANEOUS PROVISIONS

§ 19.1 Assignment of Contract

Neither party to the Contract shall assign the Contract without written consent of the other, except that the Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

§ 19.2 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 21.6.

§ 19.3 Tests and Inspections

Tests, inspections, and approvals of portions of the Work required by the Contract Documents or by applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities shall be made at an appropriate time. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.


§ 19.4 The Owner's representative:

(Name, address, email address and other information)

Nancy Roehrig, CFO
Defiance Public Library System
320 Fort Street
Defiance, OH 43512
Email: nroehrig@defiancelibrary.org

§ 19.5 The Contractor's representative:

(Name, address, email address and other information)


Email: 

§ 19.6 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 19.7 Partial Invalidity. If any term or provision of this Agreement is found to be illegal, unenforceable, or in violation of any laws, statutes, ordinances, or regulations of any public authority having jurisdiction, then, notwithstanding such term or provision, this Agreement will remain in full force and effect and such term will be deemed stricken; provided this Agreement will be interpreted, when possible, so as to reflect the intentions of the parties as indicated by any such stricken term or provision.

§ 19.8 Counterparts. This Agreement may be executed in any number of counterparts each of which when so executed and delivered will be an original hereof, and it will not be necessary in making proof of this Agreement to produce or account for more than one counterpart hereof. This Agreement may be executed and delivered by facsimile or via electronic mail.

§ 19.9 Construction. The parties acknowledge that each party has reviewed this Agreement and voluntarily entered into this Agreement. Accordingly, the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party will not be employed in the interpretation of this Agreement, or any amendments or exhibits to it.

§ 19.10 Compliance with Laws and Regulations. Contractor, at its expense, will comply with all applicable federal, state, and local laws, rules, and regulations applicable to the Work, including but not limited to Ohio Revised Code (ORC) Sections 153.59 and 153.60, which prohibit discrimination in the hiring and treatment of employees, with respect to which Contractor agrees to comply and to require its subcontractors to comply, ORC Section 3517.13 regarding campaign contributions, and ORC Chapter 4115 regarding prevailing wage rates.

§ 19.10.1 Non-Discrimination. Contractor agrees:

1. That in the hiring of employees for the performance of Work under this Agreement or in any subcontract, neither Contractor, subcontractor, nor any person acting on behalf of either of them, will by reason of race, creed, sex, handicap, or color, discriminate against any citizen of the state in the employment of labor or workers who are qualified and available to perform the Work to which the employment relates.
2. That neither Contractor, subcontractor, nor any person acting on behalf of either of them, will, in any manner, discriminate against or intimidate any employee hired for the performance of Work under this Agreement on account of race, creed, sex, handicap, or color.
3. That there will be deducted from the amount payable to Contractor by Owner under this Agreement a forfeiture of \$25.00 as required by ORC Section 153.60 for each person who is discriminated against or intimidated in violation of this Agreement.
4. That this Agreement may be canceled or terminated by Owner and all money to become due hereunder may be forfeited for a second or subsequent violation of the terms of this section of this Agreement.

§ 19.11 Modification. No modification or waiver of any of the terms of this Agreement or of any other Contract Documents will be effective against a party unless set forth in writing and signed by or on behalf of a party. Under no circumstances will forbearance, including the failure or repeated failure to insist upon compliance with the terms of the Contract Documents, constitute the waiver or modification of any such terms. The parties acknowledge that no person has authority to modify this Agreement or the other Contract Documents or to waive any of its or their terms, except as expressly provided in this Agreement.

§ 19.11 No Findings for Recovery. Contractor represents that Contractor is not subject to a finding for recovery under ORC Section 9.24, or that Contractor has taken the appropriate remedial steps required under ORC Section 9.24, or otherwise qualifies under this section.

§ 19.12 Limitation on Liability. Owner's total liability under this Agreement is limited to the Stipulated Sum stated in this Agreement, which is the amount encumbered by the Fiscal Officer's certificate at the end of this Agreement. Under no circumstances will the elected officials, officers, employees, board members, or agents of Owner be personally liable for any obligations or claims arising out of or related to this Agreement.

ARTICLE 20 TERMINATION OF THE CONTRACT

§ 20.1 Termination by the Contractor

If the Architect fails to certify payment as provided in Section 15.4.1 for a period of 30 days through no fault of the Contractor, or if the Owner fails to make payment as provided in Section 4.1.3 for a period of 30 days, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

§ 20.2 Termination by the Owner for Cause

§ 20.2.1 The Owner may terminate the Contract if the Contractor

1. repeatedly-refuses or fails to supply enough properly skilled workers or proper materials;

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- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 20.2.2 When any of the reasons described in Section 20.2.1 exists, the Owner, upon certification by the Architect that sufficient cause exists to justify such action, may, without prejudice to any other remedy the Owner may have and after giving the Contractor seven days' notice, terminate the Contract and take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor and may finish the Work by whatever reasonable method the Owner may deem expedient. Upon request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 20.2.2.1 As set forth in this section, Owner's termination of Contractor is without prejudice to any other rights and remedies of Owner, including but not limited to Owner's rights and remedies under the Contract Documents and at law, all of which will survive termination.

§ 20.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 20.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 20.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, including but not limited to Owner's attorney and consultant fees and expenses arising out of or related to the termination, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect, upon application, and this obligation for payment shall survive termination of the Contract.

§ 20.3 Termination by the Owner for Convenience

The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. The Owner shall pay the Contractor for Work ~~executed; and costs incurred by reason of such termination, including costs attributable to termination of Subcontracts; and a termination fee, if any, as follows:~~ executed.

(Insert the amount of or method for determining the fee payable to the Contractor by the Owner following a termination for the Owner's convenience, if any.)

ARTICLE 21 CLAIMS AND DISPUTES

§ 21.1 Claims, disputes, and other matters in question arising out of or relating to this Contract, including those alleging an error or omission by the Architect but excluding those arising under Section 16.2, shall be referred initially to the Architect for decision. Such matters, except those waived as provided for in Section 21.11 and Sections 15.7.3 and 15.7.4, shall, after initial decision by the Architect or 30 days after submission of the matter to the Architect, be subject to mediation ~~as a condition precedent to binding dispute resolution.~~ if both parties agree in writing.

§ 21.2 Notice of Claims

§ 21.2.1 Claims by ~~either the Owner or Contractor~~, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 18.2, shall be initiated by notice to the Architect and the Owner within 21 days after occurrence of the event giving rise to such Claim ~~or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.~~ Claim. Owner shall give written notice to Contractor of Claims.

§ 21.2.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 18.2, shall be initiated by notice to the other party.

§ 21.3 Time Limits on Claims

The Owner and Contractor shall commence all claims and causes of action against the other and arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in this Agreement whether in contract, tort, breach of warranty, or otherwise, within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 21.3.

§ 20.3.1 Any lawsuit brought to enforce any provision of this Agreement or any remedy with respect hereto must be brought in the county in which the Project is located in either the common pleas court or local court with subject matter jurisdiction, and each party hereby expressly consents to the jurisdiction of such court. Each party expressly waives its right to remove any such suit to federal court.

§ 21.4 If a claim, dispute or other matter in question relates to or is the subject of a mechanic's lien, the party asserting such matter may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 21.5 The parties shall endeavor to resolve their disputes by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with their Construction Industry Mediation Procedures in effect on the date of this Agreement. A request for mediation shall be made in writing, delivered to the other party to this Agreement, and filed with the person or entity administering the mediation. The request may be made concurrently with the binding dispute resolution but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings. [Not Used.]

§ 21.6 If the parties have selected arbitration as the method for binding dispute resolution in this Agreement, any claim, subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association, in accordance with the Construction Industry Arbitration Rules in effect on the date of this Agreement. Demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof. [Not Used.]

§ 21.7 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation; (2) the arbitrations to be consolidated substantially involve common questions of law or fact; and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s). [Not Used.]

§ 21.8 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, any party to an arbitration may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of a Claim not described in the written Consent. [Not Used.]

§ 21.9 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to this Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof. [Not Used.]

§ 21.10 Continuing Contract Performance

Pending final resolution of a Claim, except as otherwise agreed in writing, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 21.11 Waiver of Claims for Consequential Damages

The Contractor and Owner waive claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

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- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 20. Nothing contained in this Section 21.11 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

This Agreement entered into as of the day and year ~~first written above~~ signed by Owner below.

OWNER (Signature)

CONTRACTOR (Signature)

By:
(Printed name and title)

By:
(Printed name and title)

Date

Date

CERTIFICATE OF FUNDS
(ORC Section 5705.41)

The undersigned Fiscal Officer for the Board of Trustees of the Defiance Public Library System, located in the City of Defiance, Defiance County, Ohio, certifies that the amount required to meet the obligations for the Work described in the preceding Agreement has been lawfully appropriate for the purposes and is in the treasury or in the process of collection to the credit of an appropriate fund, free from any outstanding obligation or encumbrance.

Date: _____

Nancy Roehrig Chief Fiscal Officer
Board of Trustees of the Defiance Public Library System

CONTRACTOR'S PERSONAL PROPERTY TAX AFFIDAVIT
(O.R.C. § 5719.042)

State of Ohio

County of _____, ss:

_____, being first duly sworn, deposes and says that he is the
(Name)

_____ of _____ with offices located at
(Title) (Contractor)

_____, and as its duly
(Address of Contractor)

authorized representative, states that effective this _____ day of _____, 20____,

(Name of Contractor)

() is charged with delinquent personal property taxes on the general list of personal property as set forth below:

<u>County</u>	<u>Amount</u> (includes total amount due, plus penalties and interest thereon)
---------------	--

Defiance	\$ _____
----------	----------

() is not charged with delinquent personal property taxes on the general list of personal property in Defiance County.

(Affiant)

Sworn to and subscribed before me by the above-named affiant this _____ day of _____, 20____.
The notarial act certified hereby is a jurat. An oath or affirmation was administered to the signer with regard to the notarial act certified to hereby.

(Notary Public)

My commission expires

_____, 20____

PAGE 1 OF 1

Defiance Public Library

C0-4679

[illegible]

PAGE OF

Defiance Public Library
C0-4679

01 2900 02-2

APPLICATION AND CERTIFICATE FOR PAYMENT

TO OWNER:

Defiance Public Library
320 Fort Street
Defiance, OH 43512

PROJECT:

Defiance Public Library
320 Fort Street
Defiance, OH 43512

APPLICATION NO:
PERIOD TO:

ARCHITECT'S PROJECT NO:
C0-4679

FROM CONTRACTOR:

VIA ARCHITECT: Beilharz Architects, Inc.
701½ West First Street
Defiance, OH 43512

CONTRACT FOR:

Entrance Step
and Sidewalk Replacement

CONTRACT DATE:

CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract.
Schedule of Values, Document G703,is attached.

1. ORIGINAL CONTRACT SUM \$

2. CHANGE ORDERS

- a. Changes Approved in Previous Months \$
- C.O. #
- b. Changes Approved This Month \$
- C.O. #

c. Net change by Change Orders \$

3. CONTRACT SUM TO DATE (Line 1 + Line 2c) \$

4. WORK COMPLETED TO DATE

- a. Labor Completed to Date \$
- b. Material Completed to Date \$
- c. Stored Material \$
- d. Total Completed and Stored to Date \$
- e. Percent Complete (Line 4d/Line 3) %

5. RETAINAGE

- a. Completed Labor (8% of Line 4a) \$
- (same as previous application if Line 4e on previous application is >50%)
- b. Stored Material (8% of Line 4c) \$

c. Total Retainage \$

6. TOTAL EARNED LESS RETAINAGE

(Line 4d less Line 5c) \$

7. LESS PREVIOUS CERTIFICATES FOR PAYMENT

(Line 6 from prior Certificate) \$

8. CURRENT PAYMENT DUE

(Line 6 less Line 7) \$

9. BALANCE TO FINISH, INCLUDING RETAINAGE

(Line 3 less Line 6) \$

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

CONTRACTOR:

By: Date:

State of Ohio

County of:

Subscribed and sworn to before me
this day of , 20

Notary Public:

My Commission expires:

ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

AMOUNT CERTIFIED

\$

(Attach explanation if amount certified differs from amount applied for. Initial all figures on this Application and on the Continuation Sheet that are changed to conform to the amount certified.)

Beilharz Architects, Inc.

By: Date:

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.



Sales and Use Tax Construction Contract Exemption Certificate

Identification of Contract:

Contractee's (owner's) name _____

Exact location of job/project _____

Name of job/project as it appears
on contract documentation _____

The undersigned hereby certifies that the tangible personal property purchased under this exemption certificate was purchased for incorporation into:

<input type="checkbox"/> A building used exclusively for charitable purposes by a nonprofit organization operated exclusively for charitable purposes as defined in Ohio Revised Code (R.C.) section 5739.02(B)(12);	<input type="checkbox"/> Real property that is owned, or will be accepted for ownership at the time of completion, by the United States government, its agencies, the state of Ohio or an Ohio political subdivision;
<input type="checkbox"/> Real property under a construction contract with the United States government, its agencies, the state of Ohio or an Ohio political subdivision;	<input type="checkbox"/> A computer data center entitled to exemption under R.C. 122.175;
<input type="checkbox"/> A horticulture structure or livestock structure for a person engaged in the business of horticulture or producing livestock;	<input type="checkbox"/> A building under a construction contract with an organization exempt from taxation under section 501(c)(3) of the Internal Revenue Code of 1986 when the building is to be used exclusively for the organization's exempt purposes;
<input type="checkbox"/> A house of public worship or religious education;	
<input type="checkbox"/> The original construction of a sports facility under R.C. section 307.696;	<input type="checkbox"/> A hospital facility entitled to exemption under R.C. section 140.08;
<input type="checkbox"/> Real property outside this state if such materials and services, when sold to a construction contractor in the state in which the real property is located for incorporation into real property in that state, would be exempt from a tax on sales levied by that state;	<input type="checkbox"/> Building and construction materials and services sold for incorporation into real property comprising a convention center that qualifies for property tax exemption under R.C. 5709.084 (until one calendar year after the construction is completed).

The original of this certificate must be signed by the owner/contractee and/or government official and must be retained by the prime contractor. Copies must be maintained by the owner/contractee and all subcontractors. When copies are issued to suppliers when purchasing materials, each copy must be signed by the contractor or subcontractor making the purchase.

Prime Contractor

Name _____

Signed by _____

Title _____

Street address _____

City, state, ZIP code _____

Date _____

Subcontractor

Name _____

Signed by _____

Title _____

Street address _____

City, state, ZIP code _____

Date _____

Owner/Contractee

Name _____

Signed by _____

Title _____

Street address _____

City, state, ZIP code _____

Date _____

Political Subdivision

Name _____

Signed by _____

Title _____

Street address _____

City, state, ZIP code _____

Date _____

STATEMENT OF CLAIM FORM

Claim No. ____ for Contractor

1. Name of Contractor: _____

2. Date written claim given: _____.

3. Contractor's representative to contact regarding the claim:

Name: _____ Title: _____

Telephone No. _____ (office) FAX No. _____

E-mail: _____

4. General description of claim:

5. Contract Documents. If the claim is based upon any part or provision in the Contract Documents, including but not limited to pages in the Drawings and/or paragraphs in the Specifications, Owner-Contractor Agreement, General Conditions or Supplementary General Conditions, state upon which parts or provisions the claim is based:

6. Delay claims:

6.1 Date delay commenced: _____

6.2 Duration or expected duration of the delay, if known: _____

6.3 Apparent cause of the delay and part of critical path affected:

6.4 Expected impact of the delay and recommendations for minimizing such impact:

7. Additional compensation. Set forth in detail all additional compensation to which the Contractor believes it is entitled with respect to this claim:

8. Instructions for Completing the Statement of Claim Form ("Instructions"). The Instructions are incorporated in this Form.

9. Truth of Claim. By submitting this claim, the Contractor and its representative certify that after conscientious and thorough review and to the best of his or her knowledge and belief a) the Contractor has complied fully with the Instructions, b) the information in this State of Claim is accurate, c) the Contractor is entitled to recover the compensation in paragraph 7, and d) the Contractor has not knowingly presented a false or fraudulent claim. The Contractor by its authorized representative must acknowledge this Statement of Claim before a notary public.

CONTRACTOR: _____

By: _____

Name and Title: _____

Date: _____

CONTRACTOR'S ACKNOWLEDGMENT

State of _____,

County of _____, ss:

_____ first being sworn, states that after conscientious and thorough review, the statements made in attached Statement of Claim Form are complete and true to the best of his or her knowledge and belief.

Sworn to before me a notary public by _____ on _____, 20____. The notarial act certified hereby is a jurat. An oath or affirmation was administered to the signer with regard to the notarial act certified to hereby.

Notary Public

WHEN COMPLETED, FORWARD A COPY OF THIS NOTICE AND STATEMENT OF CLAIM FORM TO THE OWNER AND DESIGN PROFESSIONAL.

INSTRUCTIONS FOR COMPLETING THE STATEMENT OF CLAIM FORM

1. Completing the Statement of Claim Form ("Claim Form") is a material term of the Contract. The Claim Form tells the Owner and Design Professional that the Contractor is making a Claim and that they need to act promptly to mitigate the effects of the occurrence giving rise to the Claim. The Claim Form also provides them with information so that they can mitigate such effects. The Contractor acknowledges that constructive knowledge of the conditions giving rise to the Claim through job meetings, correspondence, site observations, etc. is inadequate notice, because knowledge of these conditions does not tell the Owner and Design Professional that the Contractor will be making a Claim and most often is incomplete.
2. If the space provided in the Claim Form is insufficient, the Contractor, as necessary to provide complete and detailed information, must attach pages to the Claim Form with the required information.
3. Paragraph 4. The Contractor must state what it wants, *i.e.*, time and/or compensation, and the reason why it is entitled to time and/or compensation.
4. Paragraph 5. The Contractor must identify the exact provisions of the Contract Documents it is relying on in making its Claim. For example, if the Claim is for a change in the scope of the Contractor's Work, the Contractor must identify the specific provisions of the Specifications, and the Plan sheets and details that provide the basis for the scope change.
5. Paragraph 6. This paragraph applies to delay claims, including delays that the Contractor believes result in constructive acceleration. The Contractor must identify the cause of the delay, party or parties responsible, and what the party did or did not do that caused the delay, *i.e.*, specific work activities. The Contractor acknowledges that general statements are not sufficient, and do not provide the Owner with sufficient information to exercise the remedies available to the Owner or to mitigate the effects of the delay.

For example, if the Contractor claims a slow response time on submittals caused a delay, the Contractor must identify the specific submittals, all relevant dates, and then show on the applicable schedule, by circling or highlighting, the activities immediately affected by the delays. Also for example, if the Contractor claims it was delayed by another Contractor, the Contractor must identify the delaying Contractor, specifically what the delaying Contractor did or did not do that caused the delay, and then show the applicable schedule, by circling or highlighting, the activities immediately affected by the delays. Further by example, if the Contractor seeks an extension of time for unusually severe weather, the Contractor must submit comparative weather data along with a record of the actual weather at the job site and job site conditions.

6. Paragraph 6.4. Time is of the essence under the Contract Documents. If there is a delay, it is important to know what can be done to minimize the impact of the delay. It therefore is important that the Contractor provide specific recommendations on how to do so.
7. Paragraph 7. The Contractor must provide a specific and detailed breakdown of the additional compensation it seeks to recover. For future compensation, the Contractor shall provide its best estimate of such compensation.
8. Paragraph 8 and Acknowledgment. By submitting this Claim, the Contractor and its representative certify that after conscientious and thorough review and to the best of his or her knowledge and belief a) the Contractor has complied fully with the Instructions, b) the information in this Claim Form is accurate, c) the Contractor is entitled to recover the compensation in paragraph 7, and d) the Contractor has not knowingly presented a false or fraudulent claim. The Contractor by its authorized representative must acknowledge this Statement of Claim before a notary public.

End of Instructions

CERTIFICATE OF SUBSTANTIAL COMPLETION

Project:

Contract For:

General Contract

Owner:

Board of Trustees of the Defiance Public Library
System

CONTRACTOR: [insert name and address]

The Design Professional hereby certifies that the Date for Substantial Completion of the Contractor's Work as set forth in the Owner-Contractor Agreement is:

(Insert Date for Substantial Completion of the Work)

The Design Professional hereby certifies that the Date for Substantial Completion in the Contractor's Agreement with the Owner (the "Agreement"), as extended by Change Orders and Claims submitted by the Contractor that have been Finally Resolved, as defined below, is:

1. Date for Substantial Completion in the Agreement (above): _____
2. Additional days added to Date for Substantial Completion by Change Order: _____
3. Additional days added by Claims that have been Finally Resolved: _____
4. Date for Substantial Completion in the Contract Adjusted by days under No. 2 and No. 3 _____

"Finally Resolved" means that the Design Professional has made a decision (or declined to make a decision) on the Claim under the General Conditions and that any litigation regarding the Claim has been concluded.

The Design Professional certifies that the Contractor's Work to the best of the Design Professional's knowledge, information, and belief was Substantially Complete, as Substantial Completion is defined in the Contract Documents, on _____.

The Design Professional hereby certifies that the difference between (a) the Date for Substantial Completion adjusted by the days under No. 2 and No. 3 above and (b) the date the Contractor's Work was Substantially Complete is _____ days.

NOTICES OF DELAY. The Design Professional hereby certifies that all "NOTICES OF DELAY" submitted by the Contractor and described in the General Conditions are attached to this Certificate. This certification is solely for the purpose of identifying all "NOTICES OF DELAY" submitted by the Contractor and is not intended to imply that any of these NOTICES OF DELAY were properly submitted in accordance with Contract Documents or are valid.

STATEMENT OF CLAIM FORMS. The Design Professional hereby certifies that all Statement of Claim Forms described in the General Conditions and submitted by the Contractor are attached to this Certificate. This certification is solely for the purpose of identifying all Statement of Claim Forms submitted by the Contractor and is not intended to imply that any of these Statement of Claim Forms were properly submitted in accordance with Contract Documents or are valid.

CERTIFICATE OF SUBSTANTIAL COMPLETION

CSC-1

PUNCHLIST ITEMS. A list of items to be completed by the Contractor is attached to this Certificate. The failure to include items on this list does not change the responsibility of the Contractor to complete its Work in accordance with the Contract Documents. The Contractor shall complete all items on the Punchlist in accordance with the Contract Documents.

Security, maintenance, utilities, damage to the Work and insurance are the responsibility of the Owner and the Contractor based on their operations pursuant to final completion of the Work.

Copies of this Certificate were provided to the Contractor and the Owner on [REDACTED]

Signature: _____

Date: [REDACTED]

WITHHOLDINGS FROM SUBCONTRACTORS AND/OR SUPPLIERS:

Typed or Printed Name of Subcontractor or Supplier	Amount Withheld	Reason for Withholding

Moreover, Contractor certifies that, except for as set forth immediately above, Contractor has paid all of its subcontractors and suppliers who were due to be paid with the proceeds of the prior Application for Payment and Contractor acknowledges that Owner is relying upon such certification when paying Contractor the amount asked for in the payment application that this Affidavit and Certification supports.

CONTRACTOR: [insert name]

BY: _____
(Signature of authorized representative)

NOTARY PUBLIC

Subscribed and sworn to before me on this date by _____ on behalf of _____ . The notarial act certified hereby is a jurat. An oath or affirmation was administered to the signer with regard to the notarial act certified to hereby.

Signature of Notary Public

Notary Public: _____

My Commission Expires: _____

**CONTRACTOR'S WAIVER & RELEASE AFFIDAVIT
("AFFIDAVIT")**

Project: _____

The undersigned hereby acknowledges receipt of payment for all Work on the Project through the date of the prior Application for Payment by the **Board of Trustees of the Defiance Public Library System** (the "Owner") with which it has a contract for the Project.

In return for said payment, and/or pursuant to certain contractual obligations of the undersigned, the undersigned hereby waives and releases any rights it has or may have through the date of the last Application for Payment to any and all types of claims relating to the Project, including without limitation claims of payment, Mechanic's Lien, stop notice, equitable lien, labor and material bond, breach of contract or unjust enrichment, or any other claim against the Owner, for any labor, materials, or equipment the undersigned may have delivered or provided to the Project, except for any Claims the undersigned has made by properly and timely submitting a Statement of Claim form. The undersigned further certifies that this Affidavit covers claims by all contractors, subcontractors, and suppliers who may have provided any labor, material, or equipment to the Project through the undersigned or at the undersigned's request. The undersigned acknowledges that all such contractors, subcontractors, sub-subcontractors and suppliers have signed an affidavit in the form of this Affidavit releasing any and all claims against the Owner, except for any Claims the undersigned has made by properly and timely submitting a Statement of Claim form. The undersigned hereby represents and warrants that it has paid any and all welfare, pension, vacation or other contributions required to be paid on account of the employment by the undersigned of any laborers on the Project.

This Affidavit is for the benefit of, and may be relied upon by the Owner. The undersigned hereby agrees to indemnify, defend and hold harmless each of the foregoing, the Project, work of improvement, and real property from any and all claims, or liens that are or should have been released in accordance with this Affidavit.

Company Name

Authorized Signature (Company Officer)

Title

Date

State of: _____ County of _____

Subscribed and sworn to before me this _____
day of _____. The notarial
act certified hereby is a jurat. An oath or affirmation was
administered to the signer with regard to the notarial act
certified to hereby.

Notary Public: _____

My Commission Expires: _____

**SUBCONTRACTORS, SUPPLIERS
WAIVER & RELEASE AFFIDAVIT
("AFFIDAVIT")**

Project: _____

The undersigned hereby acknowledges receipt of payment for all Work on the Project through the date of the prior Application for Payment by the Contractor ("Contractor") with which it has a contract.

In return for said payment, and/or pursuant to certain contractual obligations of the undersigned, the undersigned hereby waives and releases any rights it has or may have through the date of the Contractor's last Application for Payment and to any and all types of claims relating to the Project, including without limitation claims of payment, Mechanic's Lien, stop notice, equitable lien, labor and material bond, breach of contract or unjust enrichment, or any other claim against the Contractor, the Contractor's surety, and/or the Board of Trustees of the Defiance Public Library System (the "Owner"), for any labor, materials, or equipment the undersigned may have delivered or provided to the Project, except for any Claims the undersigned has made by properly and timely submitting a Statement of Claim form, a copy of which has been delivered to the Owner. The undersigned further certifies that this Affidavit covers claims by all contractors, subcontractors and suppliers through the date of the Contractor's last Application for Payment who may have provided any labor, material, or equipment to the Project through the undersigned or at the undersigned's request. The undersigned acknowledges that all such contractors, subcontractors, sub-subcontractors and suppliers have signed an affidavit in the form of this Affidavit releasing any and all claims against the Contractor, the Contractor's surety, and/or the Owner, except for any Claims made by properly and timely submitting a Statement of Claim form a copy of which has been delivered to the Owner. The undersigned hereby represents and warrants that it has paid any and all welfare, pension, vacation or other contributions required to be paid on account of the employment by the undersigned of any laborers on the Project.

The undersigned agrees that upon receipt of the payment from the Contractor with respect to the Contractor's current Application for Payment, it shall, if applicable, immediately execute and cause to be filed or recorded a legally effective Satisfaction of Lien, Release of Lien, or any other legal instrument necessary to cause prejudicial dismissal and release of any lien, encumbrance, lawsuit, or other claim against the Contractor, the Contractor's surety and the Owner, the property where the Project is located, and/or any surety bond posted by the Contractor or the Owner to the extent of the foresaid payment. Upon request of the Contractor, the undersigned shall provide proof of having complied with this obligation.

This Affidavit is for the benefit of, and may be relied upon by, the Contractor, the Contractor's surety and the Owner. The undersigned hereby agrees to indemnify, defend and hold harmless each of the foregoing, the Project, its Work, and real property from any and all claims, or liens that are or should have been released in accordance with this Affidavit and from any liability, cost, or expense incurred as a result of any breach of this Affidavit by the undersigned.

Company Name

Authorized Signature (Company Officer)

Title

Date

State of: _____ County of _____

Subscribed and sworn to before me this _____
day of _____. The notarial
act certified hereby is a jurat. An oath or affirmation was
administered to the signer with regard to the notarial act
certified to hereby.

Notary Public: _____

My Commission Expires: _____

**CONTRACTOR'S FINAL WAIVER & RELEASE AFFIDAVIT
("AFFIDAVIT")**

Project: _____

In consideration for payment received from the **Board of Trustees of the Defiance Public Library System** (the "Owner") in the amount requested in Contractor's Final Application for Payment to the Owner, the receipt of which is hereby acknowledged, the undersigned Contractor hereby waives and releases any rights it has or may have to any and all types of claims relating to the Project, including without limitation claims of payment, Mechanic's Lien, stop notice, equitable lien, labor and material bond, breach of contract or unjust enrichment, or any other claim against the Owner, for any labor, materials, or equipment the undersigned may have delivered or provided to the Project, except for any Claims the undersigned has made by properly and timely submitting a Statement of Claim form. The undersigned further certifies that this Affidavit covers claims by all contractors, subcontractors, and suppliers who may have provided any labor, material, or equipment to the Project through the undersigned or at the undersigned's request. The undersigned acknowledges that all such contractors, subcontractors, sub-subcontractors and suppliers have signed an affidavit in the form of this Affidavit releasing any and all claims against the Owner, except for any Claims the undersigned has made by properly and timely submitting a Statement of Claim form. The undersigned hereby represents and warrants that it has paid any and all welfare, pension, vacation or other contributions required to be paid on account of the employment by the undersigned of any laborers on the Project.

This Affidavit is for the benefit of, and may be relied upon by the Owner. The undersigned hereby agrees to indemnify, defend and hold harmless each of the foregoing, the Project, work of improvement, and real property from any and all claims, or liens that are or should have been released in accordance with this Affidavit.

Company Name

Authorized Signature (Company Officer)

Title

Date

State of: _____ County of _____

Subscribed and sworn to before me this _____
day of _____. The notarial
act certified hereby is a jurat. An oath or affirmation was
administered to the signer with regard to the notarial act
certified to hereby.

Notary Public: _____

My Commission Expires: _____

**SUBCONTRACTORS, SUPPLIERS
FINAL WAIVER & RELEASE AFFIDAVIT
("AFFIDAVIT")**

Project: _____

Upon receipt of payment in the amount of \$_____ received from _____ ("Prime Contractor") the undersigned Subcontractor or Supplier waives and relinquishes all rights of lien or claim that it may have either in law or equity (including but not limited to rights under Ohio Mechanics' Lien Laws, O.R.C. 1311.01 *et seq.*) with respect to the construction project known as _____ ("the Project"), for all labor, all equipment, and/or materials provided to or on behalf of the Project throughout its entirety, except for claims previously made pursuant to the agreement in place between Subcontractor or Supplier and Prime Contractor, and any lien previously perfected and remaining unreleased.

The undersigned Subcontractor or Supplier acknowledges and agrees that such payment represents final payment in full for all such labor, equipment and/or materials including retainage, if any, and that the Subcontractor or Supplier has completed its work on the Project. The undersigned Subcontractor or Supplier certifies that all amounts have been paid by the Subcontractor or Supplier for all work or materials furnished by others to the Subcontractor or Supplier for which the Subcontractor or Supplier has received previous payments from Prime Contractor, and Subcontractor or Supplier acknowledges that Prime Contractor is now making payment to the Subcontractor or Supplier in reliance upon such certification. The undersigned Subcontractor or Supplier further certifies that it will pay all amounts lawfully owing for all work or materials furnished by others to the Subcontractor or Supplier with the payment received from Contractor referenced herein.

This Affidavit is for the benefit of, and may be relied upon by, the Contractor, the Contractor's surety and the Owner. The undersigned hereby agrees to indemnify, defend and hold harmless each of the foregoing, the Project, its Work, and real property from any and all claims, or liens that are or should have been released in accordance with this Affidavit and from any liability, cost, or expense incurred as a result of any breach of this Affidavit by the undersigned.

IN WITNESS WHEREOF, the undersigned has caused this Affidavit to be executed by its authorized representative as of the date indicated below.

THE INDIVIDUAL SIGNING THIS AFFIDAVIT REPRESENTS THAT HE/SHE IS AUTHORIZED TO DO SO.

SUBCONTRACTOR OR SUPPLIER:

Company Name

Authorized Signature (Company Officer)

Title

Date

State of: _____ County of _____

Subscribed and sworn to before me this _____ day of _____. The notarial act certified hereby is a jurat. An oath or affirmation was administered to the signer with regard to the notarial act certified to hereby.

Notary Public: _____

My Commission Expires: _____

WAGE RATE REQUIREMENTS

1. GENERAL REQUIREMENTS:

- A. Mechanics and laborers employed on this Project shall be paid a prevailing rate of wage as required by Chapter 4115 of the Ohio Revised Code.
- B. The Prevailing Wage Coordinator is Nancy Roehrig, CFO, 320 Fort Street, Defiance, OH 43512.

2. PREVAILING WAGE RATES:

- A. A schedule of the most current prevailing wage rates and related forms may be accessed at the web site of the Ohio Department of Commerce, Division of Industrial Compliance, Bureau of Wage and Hour Administration: <http://www.com.ohio.gov/dico/>. Click on Sections, Wage & Hour, and View Wage Rates.
- B. Selected current Ohio Prevailing Wage rates are included following this document; rates not believed to be applicable to the work of the Project are not included. If a trade required for any of the specified work is not included, it is the Contractor's responsibility to obtain the additional rates from the web site or request them from the Prevailing Wage Coordinator prior to submitting a bid.
- C. Comply with the applicable Prevailing Wage Rates for all Work Classifications.

3. REPORTING REQUIREMENTS:

- A. Prepare Certified Payroll Reports using approved forms. Fill in all information on the report form.
 - 1. Work Classification: List the classification which most closely resembles the work performed. Do not use classifications not listed in the prevailing wage rates.
 - 2. For each classification listed on the report, attach a copy of the classification with the pay schedule highlighted.
 - 3. For each employee listed on the report, attach a copy of the Prevailing Wage Notification to Employee form, completed in its entirety. This form is required to be submitted once for each employee on the project, unless the employee's classification changes.
- B. Submit Certified Payroll Reports to the Prevailing Wage Coordinator biweekly.
 - 1. The first report is due two weeks after construction begins.
- C. At completion of Project, submit an Affidavit of Compliance.

END OF DOCUMENT

Prevailing Wage Rate

Skilled Crafts

Name of Union: Carpenter Millwright & Pile Driver Zone 1

Change # : LCN01-2020fbLocZone 1

Craft : Carpenter Effective Date : 06/11/2020 Last Posted : 06/11/2020

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Carpenter Millwright Pile Driver	\$31.99		\$7.65	\$11.55	\$0.55	\$0.00	\$5.37	\$0.00	\$0.00	\$0.00	\$57.11	\$73.10
Apprentice	Percent											
1st 6 months	60.00	\$19.19	\$7.65	\$0.00	\$0.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$27.39	\$36.99
2nd 6 months	60.00	\$19.19	\$7.65	\$11.55	\$0.55	\$0.00	\$5.37	\$0.00	\$0.00	\$0.00	\$44.31	\$53.91
3rd 6 months	70.00	\$22.39	\$7.65	\$11.55	\$0.55	\$0.00	\$5.37	\$0.00	\$0.00	\$0.00	\$47.51	\$58.71
4th 6 months	75.00	\$23.99	\$7.65	\$11.55	\$0.55	\$0.00	\$5.37	\$0.00	\$0.00	\$0.00	\$49.11	\$61.11
5th 6 months	80.00	\$25.59	\$7.65	\$11.55	\$0.55	\$0.00	\$5.37	\$0.00	\$0.00	\$0.00	\$50.71	\$63.51
6th 6 months	85.00	\$27.19	\$7.65	\$11.55	\$0.55	\$0.00	\$5.37	\$0.00	\$0.00	\$0.00	\$52.31	\$65.91
7th 6 months	90.00	\$28.79	\$7.65	\$11.55	\$0.55	\$0.00	\$5.37	\$0.00	\$0.00	\$0.00	\$53.91	\$68.31
8th 6 months	95.00	\$30.39	\$7.65	\$11.55	\$0.55	\$0.00	\$5.37	\$0.00	\$0.00	\$0.00	\$55.51	\$70.71

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) :

CRAWFORD, DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS, OTTAWA, PAULDING, SANDUSKY, SENECA, WILLIAMS, WOOD

Special Jurisdictional Note :

Details :

Prevailing Wage Rate

Skilled Crafts

Name of Union: Carpenter Zone II

Change # : LCN01-2020fbZonell

Craft : Carpenter Effective Date : 06/11/2020 Last Posted : 06/11/2020

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Carpenter	\$26.02		\$7.65	\$10.28	\$0.50	\$0.00	\$3.76	\$0.00	\$0.00	\$0.00	\$48.21	\$61.22
Apprentice	Percent											
1st 6 Months	60.00	\$15.61	\$7.65	\$0.00	\$0.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$23.76	\$31.57
2nd 6 Months	60.00	\$15.61	\$7.65	\$10.28	\$0.50	\$0.00	\$3.76	\$0.00	\$0.00	\$0.00	\$37.80	\$45.61
3rd 6 Months	65.00	\$16.91	\$7.65	\$10.28	\$0.50	\$0.00	\$3.76	\$0.00	\$0.00	\$0.00	\$39.10	\$47.56
4th 6 Months	75.00	\$19.51	\$7.65	\$10.28	\$0.50	\$0.00	\$3.76	\$0.00	\$0.00	\$0.00	\$41.71	\$51.46
5th 6 Months	80.00	\$20.82	\$7.65	\$10.28	\$0.50	\$0.00	\$3.76	\$0.00	\$0.00	\$0.00	\$43.01	\$53.41
6th 6 Months	85.00	\$22.12	\$7.65	\$10.28	\$0.50	\$0.00	\$3.76	\$0.00	\$0.00	\$0.00	\$44.31	\$55.37
7th 6 Months	90.00	\$23.42	\$7.65	\$10.28	\$0.50	\$0.00	\$3.76	\$0.00	\$0.00	\$0.00	\$45.61	\$57.32
8th 6 Months	95.00	\$24.72	\$7.65	\$10.28	\$0.50	\$0.00	\$3.76	\$0.00	\$0.00	\$0.00	\$46.91	\$59.27

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) :

CRAWFORD, DEFIANCE, FULTON, HANCOCK, HENRY, OTTAWA, PAULDING, SANDUSKY, SENECA, WILLIAMS, WYANDOT

Special Jurisdictional Note :

Details :

Special Work Rates:

40-100 foot free fall - \$.50 per hour above scale

Over 100 foot free fall - \$1.00 per hour above scale

Prevailing Wage Rate

Skilled Crafts

Name of Union: Cement Mason Local 886 (Market Recovery)

Change # : CN01-2011jcLoc886

Craft : Cement **Effective Date :** 09/21/2011 **Last Posted :** 09/21/2011

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Cement Mason	\$25.45		\$5.70	\$4.75	\$0.15	\$0.00	\$3.50	\$0.00	\$0.00	\$0.00	\$39.55	\$52.28
Apprentice	Percent											
1st 6 months	55.00	\$14.00	\$5.70	\$4.75	\$0.15	\$0.00	\$3.50	\$0.00	\$0.00	\$0.00	\$28.10	\$35.10
2nd 6 months	65.00	\$16.54	\$5.70	\$4.75	\$0.15	\$0.00	\$3.50	\$0.00	\$0.00	\$0.00	\$30.64	\$38.91
3rd 6 months	75.00	\$19.09	\$5.70	\$4.75	\$0.15	\$0.00	\$3.50	\$0.00	\$0.00	\$0.00	\$33.19	\$42.73
4th 6 months	80.00	\$20.36	\$5.70	\$4.75	\$0.15	\$0.00	\$3.50	\$0.00	\$0.00	\$0.00	\$34.46	\$44.64
5th 6 months	85.00	\$21.63	\$5.70	\$4.75	\$0.15	\$0.00	\$3.50	\$0.00	\$0.00	\$0.00	\$35.73	\$46.55
6th 6 months	90.00	\$22.91	\$5.70	\$4.75	\$0.15	\$0.00	\$3.50	\$0.00	\$0.00	\$0.00	\$37.01	\$48.46

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

5 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

DEFIANCE, HANCOCK, HENRY, PAULDING,
PUTNAM, WILLIAMS

Special Jurisdictional Note :

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Cement Mason Local 886 (Toledo)

Change # : LCN01-2020-fbLoc886

Craft : Cement Effective Date : 07/09/2020 Last Posted : 07/09/2020

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Cement Mason	\$29.68		\$8.90	\$9.00	\$0.40	\$0.00	\$4.70	\$0.00	\$0.00	\$0.00	\$52.68	\$67.52
Cement Mason Shophand	\$20.78		\$8.90	\$9.00	\$0.40	\$0.00	\$4.70	\$0.00	\$0.00	\$0.00	\$43.78	\$54.17
Apprentice	Percent											
1st Year	70.00	\$20.78	\$8.90	\$9.00	\$0.40	\$0.00	\$4.70	\$0.00	\$0.00	\$0.00	\$43.78	\$54.16
2nd Year	80.00	\$23.74	\$8.90	\$9.00	\$0.40	\$0.00	\$4.70	\$0.00	\$0.00	\$0.00	\$46.74	\$58.62
3rd year	90.00	\$26.71	\$8.90	\$9.00	\$0.40	\$0.00	\$4.70	\$0.00	\$0.00	\$0.00	\$49.71	\$63.07

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

5 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

DEFIANCE, ERIE, FULTON, HANCOCK, HENRY, HURON, LUCAS, OTTAWA, PAULDING, PUTNAM, SANDUSKY, SENECA, WILLIAMS, WOOD

Special Jurisdictional Note :

Details :

Prevailing Wage Rate

Skilled Crafts

Name of Union: Cement Mason & Plasterer Local 46

Change # : LCN01jc2010Loc46

Craft : Cement Mason Effective Date : 07/21/2010 Last Posted : 07/21/2010

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Cement Mason	\$27.03		\$6.40	\$8.49	\$0.63	\$0.00	\$0.00	\$0.00			\$42.55	\$56.07
Plasterer	\$27.03		\$6.40	\$8.49	\$0.63	\$0.00	\$0.00	\$0.00			\$42.55	\$56.07
Cement Mason Vertical Slip Work from base to 50 ft.	\$28.53		\$6.40	\$8.49	\$0.63	\$0.00	\$0.00	\$0.00			\$44.05	\$58.32
Cement Mason Vertical Slip Work from base to 50 ft.	\$40.55		\$6.40	\$8.49	\$0.63	\$0.00	\$0.00	\$0.00			\$56.07	\$76.34
Apprentice	Percent											
1st Year	55.00	\$14.87	\$6.40	\$8.49	\$0.63	\$0.00	\$0.00	\$0.00			\$30.39	\$37.82
2nd Year	65.00	\$17.57	\$6.40	\$8.49	\$0.63	\$0.00	\$0.00	\$0.00			\$33.09	\$41.87
3rd Year	80.00	\$21.62	\$6.40	\$8.49	\$0.63	\$0.00	\$0.00	\$0.00			\$37.14	\$47.96
4th Year	92.00	\$24.87	\$6.40	\$8.49	\$0.63	\$0.00	\$0.00	\$0.00			\$40.39	\$52.82

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

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
 18 Journeymen to 6 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

DEFIANCE, ERIE, FULTON, HANCOCK, HENRY, HURON, LUCAS, OTTAWA, PAULDING, PUTNAM, SANDUSKY, SENECA, WILLIAMS, WOOD

Special Jurisdictional Note : This jurisdiction also covers the Islands of Lake Erie North of Sandusky.

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Electrical Local 8 Inside

Change # : LCNO1-2020fbLoc8in

Craft : Electrician Effective Date : 06/11/2020 Last Posted : 06/11/2020

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Electrician Class A (less than 2 yrs)	\$41.81		\$14.32	\$7.25	\$0.63	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$64.42	\$85.32
Electrician Class B (At least 2 yrs)	\$39.81		\$14.32	\$9.19	\$0.60	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$64.33	\$84.23
Electrician Class C (At least 3 yrs)	\$38.81		\$14.32	\$10.16	\$0.58	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$64.28	\$83.68
Electrician Class D (At least 4 yrs)	\$38.31		\$14.32	\$10.65	\$0.57	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$64.26	\$83.41
Apprentice	Percent											
1st 0-900 hrs	30.00	\$12.54	\$12.75	\$0.68	\$0.19	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$26.57	\$32.84
2nd 901-1800 hrs	40.00	\$16.72	\$12.97	\$0.90	\$0.25	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$31.25	\$39.62
3rd 1801-3300 hrs	50.01	\$20.91	\$13.20	\$3.63	\$0.31	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$38.46	\$48.91
4th 3301-4800 hrs	60.00	\$25.09	\$13.42	\$4.35	\$0.38	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$43.65	\$56.19
5th 4801-6300 hrs	70.00	\$29.27	\$13.65	\$5.08	\$0.44	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$48.85	\$63.48
6th 6301-8000 hrs	80.00	\$33.45	\$13.87	\$5.80	\$0.50	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$54.03	\$70.75

Special Calculation Note : Special Calculation of Class A, B, C is for Journeymen with the appropriate years of service who elect to contribute a higher amount to their pension plan. OTHER is National Electrical Benefit Fund

Ratio :

Journeymen - - - - Max. Apprentices
from 1 to 3 2
from 4 to 6 4

Jurisdiction (* denotes special jurisdictional note) :

DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS,
OTTAWA, PAULDING, PUTNAM, SANDUSKY,
SENECA, WILLIAMS, WOOD

from 7 to 9 6
etc

Special Jurisdictional Note :

Details :

OTHER: IS SAFETY TRAINING

Respiratory Conditions:

Where this condition is found to exist, the employer will furnish adequate protective equipment and a premium of five percent (5%) above the employee's regular rate of pay.

Cable Splicing:

When a workman is required to make up cables, pot heads, or splices, on lead cable only, a five percent (5%) per hour premium shall be added to the employee's regular rate of pay.

Note:

A premium of 5% above the employee's regular rate shall be paid to workmen performing work on structures outside of buildings such as water towers, smoke stacks, radio and television towers, more than 75 feet above the ground, also similar structures 30 feet above the roofs of buildings on which the work is being performed. This premium will also apply where workmen are called upon to perform work in caissons and tunnels more than 30 feet deep and in tunnels under air pressure. All work performed 40 feet above any floor or pit floor (excepting work performed in a "Bucket Truck" or from a property erected State-approved scaffold) or any height above any hazardous location, such as acid pits, machinery, etc., a premium of 5% above the employee's regular rate of pay shall be paid.

A premium of 5 % above the employee's regular rate of pay shall be paid if a welding certification is necessary.

Prevailing Wage Rate

Skilled Crafts

Name of Union: Electrical Local 8 Lt Commercial Northern

Change # : LCN01-2020bLoc8in

Craft : Electrician Effective Date : 02/26/2020 Last Posted : 02/26/2020

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Electrician Class A (less than 2 yrs)	\$40.45		\$13.82	\$7.21	\$0.61	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$62.50	\$82.72
Electrician Class B (2 thru 3 yrs)	\$38.45		\$13.82	\$9.15	\$0.58	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$62.41	\$81.64
Class C (3-4 yrs)	\$37.45		\$13.82	\$10.12	\$0.56	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$62.36	\$81.09
CE-3 12,001-14,000 Hrs	\$25.63		\$6.15	\$0.77	\$0.83	\$0.00	\$0.77	\$0.00	\$0.00	\$0.10	\$34.25	\$47.07
CE-2 10,001-12,000 Hrs	\$20.14		\$6.15	\$0.60	\$0.83	\$0.00	\$0.60	\$0.00	\$0.00	\$0.10	\$28.42	\$38.49
CE-1 8,001-10,000 Hrs	\$18.31		\$6.15	\$0.55	\$0.83	\$0.00	\$0.55	\$0.00	\$0.00	\$0.10	\$26.49	\$35.64
CW-4 6,001-8,000 Hrs	\$16.48		\$6.15	\$0.49	\$0.83	\$0.00	\$0.49	\$0.00	\$0.00	\$0.10	\$24.54	\$32.78
CW-3 4,001-6,000 Hrs	\$14.65		\$6.15	\$0.44	\$0.83	\$0.00	\$0.44	\$0.00	\$0.00	\$0.10	\$22.61	\$29.94
CW-2 2,001-4,000 Hrs	\$13.73		\$6.15	\$0.41	\$0.83	\$0.00	\$0.41	\$0.00	\$0.00	\$0.10	\$21.63	\$28.49
CW-1 0-2,000 Hrs	\$12.82		\$6.15	\$0.38	\$0.83	\$0.00	\$0.38	\$0.00	\$0.00	\$0.10	\$20.66	\$27.07
Class D (4 or More Years)	\$36.95		\$13.82	\$10.61	\$0.55	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$62.34	\$80.81
Apprentice	Percent											
1st 0-900 hrs	30.00	\$12.14	\$12.25	\$0.66	\$0.18	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$25.63	\$31.70
2nd 901-1800 hrs	40.00	\$16.18	\$12.47	\$0.89	\$0.24	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$30.19	\$38.28

3rd 1801-3300 hrs	50.00	\$20.23	\$12.70	\$3.61	\$0.30	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$37.24	\$47.36
4th 3301-4800 hrs	60.00	\$24.27	\$12.92	\$4.33	\$0.36	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$42.29	\$54.42
5th 4801-6300 hrs	70.00	\$28.32	\$13.15	\$5.05	\$0.42	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$47.35	\$61.50
6th 6300-8000 hrs	80.00	\$32.36	\$13.37	\$5.77	\$0.49	\$0.00	\$0.00	\$0.41	\$0.00	\$0.00	\$52.40	\$68.58

Special Calculation Note : Special Calculation of Class A, B, C and D is for Journeymen with the appropriate years of service who elect to contribute a higher amount to their pension plan. Other of .41 cents is for Safety Training

Ratio :

Journeymen - - - - Max. Apprentices
from 1 to 3 2
from 4 to 6 4
from 7 to 9 6
etc

Jurisdiction (* denotes special jurisdictional note) :

DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS,
OTTAWA, PAULDING, PUTNAM, SANDUSKY,
SENECA, WILLIAMS, WOOD

Construction Electrician and Construction Wireman Ratio

There shall be a minimum ratio of one inside Journeyman Wireman to every (4) employees of different classifications per jobsite. An Inside Journeyman Wireman is required on the project as the fifth (5th) worker or when apprentices are used.

Special Jurisdictional Note : The scope of work for the light commercial agreement shall apply to the following small medical clinics, stand-alone doctor and dentist offices with up to 600 amp service (not attached to a hospital), gas stations/convenience stores, fast food restaurants and franchised chain restaurants including independent bars and taverns, funeral homes, places of worship, nursing homes, assisted living facilities and day-care facilities under 15,000 sq ft, small office, retail/wholesale facilities under 15,000 sq ft with less than 10 units attached, storage units, car washes, express hotels and motels (4 stories or less) without conference or restaurants facilities, residential units (subject to Davis Bacon Rates) small stand-alone manufacturing facilities when free standing and not part of a larger facility (less than 15,000 sq ft) solar projects (500 panels or less) unless other wise covered under this 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.

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Ironworker Local 147 HevHwy

Change # : LCN01-2015fbLoc147HevHwy

Craft : Ironworker Effective Date : 10/07/2015 Last Posted : 10/07/2015

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Ironworker	\$25.39		\$6.60	\$9.20	\$0.42	\$0.00	\$3.80	\$0.62	\$0.00	\$0.00	\$46.03	\$58.73
Apprentice	Percent											
1st 6 months	55.00	\$13.96	\$6.60	\$9.20	\$0.42	\$0.00	\$3.80	\$0.62	\$0.00	\$0.00	\$34.60	\$41.59
2nd 6 months	60.00	\$15.23	\$6.60	\$9.20	\$0.42	\$0.00	\$3.80	\$0.62	\$0.00	\$0.00	\$35.87	\$43.49
3rd 6 months	65.00	\$16.50	\$6.60	\$9.20	\$0.42	\$0.00	\$3.80	\$0.62	\$0.00	\$0.00	\$37.14	\$45.40
4th 6 months	70.00	\$17.77	\$6.60	\$9.20	\$0.42	\$0.00	\$3.80	\$0.62	\$0.00	\$0.00	\$38.41	\$47.30
5th 6 months	75.00	\$19.04	\$6.60	\$9.20	\$0.42	\$0.00	\$3.80	\$0.62	\$0.00	\$0.00	\$39.68	\$49.20
6th 6 months	80.00	\$20.31	\$6.60	\$9.20	\$0.42	\$0.00	\$3.80	\$0.62	\$0.00	\$0.00	\$40.95	\$51.11
7th 6 months	85.00	\$21.58	\$6.60	\$9.20	\$0.42	\$0.00	\$3.80	\$0.62	\$0.00	\$0.00	\$42.22	\$53.01
8th 6 months	90.00	\$22.85	\$6.60	\$9.20	\$0.42	\$0.00	\$3.80	\$0.62	\$0.00	\$0.00	\$43.49	\$54.92

Special Calculation Note : *Pension & Health and Welfare are paid on hours worked. **Annuity will be based on hours paid (time and a half = \$4.88 per hour and double time = \$6.50 per hour).

Ratio :

4 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ALLEN*, DEFIANCE, MERCER, PAULDING,
PUTNAM*, VAN WERT*, WILLIAMS*

Special Jurisdictional Note : Allen County Twps included: Monroe, Richland. Putnam County Twps included: Jennings, Sugar Creek, Pleasant, Union, Jackson, Monterey, Perry, Greensburg, Ottawa, Palmer, Monroe. VanWert County Twps included: York, Liberty, Willshire, Harrison, Pleasant, Ridge, Washington, Jackson, Hoaglin, Union, Tully. Williams County Twps included: Pulaski, Center, St. Joseph, Florence, Superior, Jefferson, Northwest, Bridgewater, Springfield.

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Ironworker Local 147

Change # : LCN01-2016fbLoc147

Craft : Ironworker Effective Date : 06/29/2016 Last Posted : 06/29/2016

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Ironworker	\$25.39		\$7.10	\$9.50	\$0.57	\$0.00	\$4.05	\$0.27	\$0.00	\$0.00	\$46.88	\$59.58
Apprentice	Percent											
1st 6 months	55.00	\$13.96	\$7.10	\$9.50	\$0.57	\$0.00	\$4.05	\$0.27	\$0.00	\$0.00	\$35.45	\$42.44
2nd 6 months	60.00	\$15.23	\$7.10	\$9.50	\$0.57	\$0.00	\$4.05	\$0.27	\$0.00	\$0.00	\$36.72	\$44.34
3rd 6 months	65.00	\$16.50	\$7.10	\$9.50	\$0.57	\$0.00	\$4.05	\$0.27	\$0.00	\$0.00	\$37.99	\$46.25
4th 6 months	70.00	\$17.77	\$7.10	\$9.50	\$0.57	\$0.00	\$4.05	\$0.27	\$0.00	\$0.00	\$39.26	\$48.15
5th 6 months	75.00	\$19.04	\$7.10	\$9.50	\$0.57	\$0.00	\$4.05	\$0.27	\$0.00	\$0.00	\$40.53	\$50.05
6th 6 months	80.00	\$20.31	\$7.10	\$9.50	\$0.57	\$0.00	\$4.05	\$0.27	\$0.00	\$0.00	\$41.80	\$51.96
7th 6 months	85.00	\$21.58	\$7.10	\$9.50	\$0.57	\$0.00	\$4.05	\$0.27	\$0.00	\$0.00	\$43.07	\$53.86
8th 6 months	90.00	\$22.85	\$7.10	\$9.50	\$0.57	\$0.00	\$4.05	\$0.27	\$0.00	\$0.00	\$44.34	\$55.77

Special Calculation Note : Other is Building Industry.

Ratio :

4 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ALLEN*, DEFIANCE, MERCER, PAULDING,
PUTNAM*, VAN WERT*, WILLIAMS*

Special Jurisdictional Note : Allen County Twps included: Monroe, Richland. Putnam County Twps included: Jennings, Sugar Creek, Pleasant, Union, Jackson, Monterey, Perry, Greensburg, Ottawa, Palmer, Monroe. VanWert County Twps included: York, Liberty, Willshire, Harrison, Pleasant, Ridge, Washington, Jackson, Hoaglin, Union, Tully. Williams County Twps included: Pulaski, Center, St. Joseph, Florence, Superior, Jefferson, Northwest, Bridgewater, Springfield.

Details :

Prevailing Wage Rate

Skilled Crafts

Name of Union: Ironworker Local 55

Change # : LCNO1-2019fbLoc55

Craft : Ironworker Effective Date : 08/28/2019 Last Posted : 08/28/2019

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Ironworker	\$30.38		\$9.85	\$11.00	\$0.75	\$0.00	\$3.00	\$0.00	\$0.00	\$0.00	\$54.98	\$70.17
Pre-Engineered Metal Bldg Siding & Decking	\$30.38		\$9.85	\$11.00	\$0.75	\$0.00	\$3.00	\$0.00	\$0.00	\$0.00	\$54.98	\$70.17
Metal Fence & Guardrail Work	\$22.27		\$8.57	\$11.00	\$0.60	\$0.00	\$1.00	\$0.00	\$0.00	\$0.00	\$43.44	\$54.58
Apprentice	Percent											
1st Year	60.00	\$18.23	\$9.85	\$0.00	\$0.75	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$28.83	\$37.94
2nd Year	70.00	\$21.27	\$9.85	\$11.00	\$0.75	\$0.00	\$3.00	\$0.00	\$0.00	\$0.00	\$45.87	\$56.50
3rd Year	80.00	\$24.30	\$9.85	\$11.00	\$0.75	\$0.00	\$3.00	\$0.00	\$0.00	\$0.00	\$48.90	\$61.06
4th Year	90.00	\$27.34	\$9.85	\$11.00	\$0.75	\$0.00	\$3.00	\$0.00	\$0.00	\$0.00	\$51.94	\$65.61

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

4 Journeyman to 1 Apprentice

Ornamental Work

2 Journeymen to 1 Apprentice

Spinning Cables on Suspension Bridges

1 Journeyman to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

CRAWFORD*, DEFIANCE*, ERIE*, FULTON, HANCOCK, HENRY, HURON*, LUCAS, OTTAWA, PUTNAM*, SANDUSKY, SENECA, WILLIAMS*, WOOD, WYANDOT*

Special Jurisdictional Note :

*Crawford From where Hwy #598 & #30 meet through W.Liberty to the Northern Border & from said Hwy junction point due west to the border.

*Defiance South from where Route #66 meets the Northern Border to the Eastern County Border.

*Erie West of Columbus Ave North to Sandusky Bay, West of Columbus Ave to Route 4 to Route 99 -all areas West of said Routes.

*Huron West from the Northern Border through Monroeville and Willard territory West of Route #99.

*Putnam East from the Northern Border through Miller City to where #696 meets the Southern Border.

*Williams East from Pioneer through Stryker to Southern Border.

*Wyandot North of Route #30.

Details :

Every employer having one or more projects is required to employ apprentices in accordance to the above Ratio Schedules.

Prevailing Wage Rate

Skilled Crafts

Name of Union: Labor HevHwy 3

Change # : LCN01-2020fbLocalHevHwy3

Craft : Laborer Group 1 Effective Date : 05/14/2020 Last Posted : 05/14/2020

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Laborer Group 1	\$32.62		\$7.00	\$3.80	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$43.97	\$60.28
Group 2	\$32.79		\$7.00	\$3.80	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$44.14	\$60.54
Group 3	\$33.12		\$7.00	\$3.80	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$44.47	\$61.03
Group 4	\$33.57		\$7.00	\$3.80	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$44.92	\$61.71
Watch Person	\$25.35		\$7.00	\$3.80	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$36.70	\$49.38
Apprentice	Percent											
0-1000 hrs	60.00	\$19.57	\$7.00	\$3.80	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$30.92	\$40.71
1001-2000 hrs	70.00	\$22.83	\$7.00	\$3.80	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$34.18	\$45.60
2001-3000 hrs	80.00	\$26.10	\$7.00	\$3.80	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$37.45	\$50.49
3001-4000 hrs	90.00	\$29.36	\$7.00	\$3.80	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$40.71	\$55.39
More than 4000 hrs	100.00	\$32.62	\$7.00	\$3.80	\$0.45	\$0.00	\$0.00	\$0.00	\$0.10	\$0.00	\$43.97	\$60.28

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 500 Building A

Change # : LCN01-2020fbLoc500b

Craft : Laborer Group 1 Effective Date : 07/01/2020 Last Posted : 04/30/2020

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Laborer Group 1	\$28.18		\$7.00	\$3.80	\$0.50	\$0.00	\$2.75	\$0.00	\$0.15	\$0.00	\$42.38	\$56.47
Group 2	\$28.38		\$7.00	\$3.80	\$0.50	\$0.00	\$2.75	\$0.00	\$0.15	\$0.00	\$42.58	\$56.77
Group 3	\$28.58		\$7.00	\$3.80	\$0.50	\$0.00	\$2.75	\$0.00	\$0.15	\$0.00	\$42.78	\$57.07
Group 4	\$28.68		\$7.00	\$3.80	\$0.50	\$0.00	\$2.75	\$0.00	\$0.15	\$0.00	\$42.88	\$57.22
Group 5	\$18.66		\$7.00	\$3.80	\$0.50	\$0.00	\$2.75	\$0.00	\$0.15	\$0.00	\$32.86	\$42.19
Group 6	\$21.68		\$7.00	\$3.80	\$0.50	\$0.00	\$2.75	\$0.00	\$0.15	\$0.00	\$35.88	\$46.72
Apprentice	Percent											
1st 1000 hrs	60.00	\$16.91	\$7.00	\$3.80	\$0.50	\$0.00	\$2.75	\$0.00	\$0.15	\$0.00	\$31.11	\$39.56
2nd 1000 hrs	70.00	\$19.73	\$7.00	\$3.80	\$0.50	\$0.00	\$2.75	\$0.00	\$0.15	\$0.00	\$33.93	\$43.79
3rd 1000 hrs	80.00	\$22.54	\$7.00	\$3.80	\$0.50	\$0.00	\$2.75	\$0.00	\$0.15	\$0.00	\$36.74	\$48.02
4th 1000 hrs	90.00	\$25.36	\$7.00	\$3.80	\$0.50	\$0.00	\$2.75	\$0.00	\$0.15	\$0.00	\$39.56	\$52.24
More than 4000 hrs	100.00	\$28.18	\$7.00	\$3.80	\$0.50	\$0.00	\$2.75	\$0.00	\$0.15	\$0.00	\$42.38	\$56.47

Special Calculation Note : No special calculations for this skilled craft wage rate are required at this time.

Ratio :

1 Journeymen to 1 Apprentice
4 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

DEFIANCE, FULTON, HENRY, LUCAS, WILLIAMS, WOOD

Special Jurisdictional Note :

Details :

Group 1

Building and Construction Laborer, Signalman, Flagman, Tool Cribman, Carpenter Tender, Utility Construction Laborer, Guardrail Erector, and Hazardous Waste (Level A)

Group 2

Finisher Tender, Concrete Handler, Bottom Men, Scaffold Builders, Tunnel Laborer, Pipe Layer, Air and Power

Driven Tools, Burner on Demolition work, Swinging Scaffold, Mucker, Caisson Worker, Cofferdam Worker, Powder Man and Dynamite Blaster, Creosote Worker, Mortar Mixer, Form Setter, Mason Tender, Plaster Tender, Hod Carrier, Laser Beam Set-up Man, Stone Mason Tender and Hazardous Waste (Level B)

Group 3
Guniting Operator and Hazardous Waste (Level C)

Group 4
Hazardous Waste (Level D)

Group 5
Watchman, Parking, Landscaping

Group 6
Installation of Fencing

Prevailing Wage Rate Skilled Crafts

Name of Union: Painter Local 1020 Commercial

Change # : LCNO1-2020fbLoc1020Com

Craft : Painter Effective Date : 04/01/2020 Last Posted : 03/11/2020

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Painter Brush Roll	\$22.17		\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$36.23	\$47.32
Spray Water Borne Products	\$22.17		\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$36.23	\$47.32
Sandblaster Pressure Cleaning and Spray of alkyd, epoxy's, and petroleum base products	\$22.92		\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$36.98	\$48.44
Wallcovering	\$23.02		\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$37.08	\$48.59
Lead Abatement	\$27.17		\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.23	\$54.82
Apprentice	Percent											
1st 0-1500 hrs	60.00	\$13.30	\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$27.36	\$34.01
2nd 1501-3000 hrs	70.00	\$15.52	\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$29.58	\$37.34
3rd 3001-4500 hrs	80.00	\$17.74	\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.80	\$40.66
4th 4501-6000 hrs	90.00	\$19.95	\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$34.01	\$43.99

Special Calculation Note : APPRENTICE PAY BASED ON % OF EACH CLASSIFICATION ABOVE PLUS FULL FRINGES.

Ratio :

1 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ALLEN, AUGLAIZE, CHAMPAIGN, DEFIANCE, HARDIN, LOGAN, MERCER, PAULDING, PUTNAM, SHELBY, VAN WERT, WILLIAMS

Special Jurisdictional Note :

Details :

Commercial Classification shall be strictly limited to:

All levels of education facilities including dormitories.

Any retail establishments including dealerships but not distribution warehouses.

All Restaurants, bars and clubs.

Medical and dental facilities.

Churches and other religious centers.

Financial Institutions.

Journeyman and apprentices applying Coal Tar products shall have \$1.00 per hour added to the prevailing rate of the classification involved.

Journeyman and apprentices working with a spray painter as a rigger, picker, or blow down man shall receive spray painter wages.

Swing stage, Chair, Spiders and Cherry Pickers shall have \$.25 added to the prevailing rate of the classification involved.

Name of Union: Painter Local 1020 HevHwy

Craft : Painter Effective Date : 04/01/2020 Last Posted : 03/11/2020

[illegible]

1ST 0-1500 Hrs	60.00	\$21.51	\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$35.57	\$46.33
2ND 1501-3000 Hrs.	70.00	\$25.09	\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.16	\$51.70
3RD 3001-4500 Hrs.	80.00	\$28.68	\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$42.74	\$57.08
4TH 4501-6000 Hrs.	90.00	\$32.27	\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46.33	\$62.46

Special Calculation Note :

Ratio :

1 Journeymen to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :
 ALLEN, AUGLAIZE, CHAMPAIGN, DEFIANCE, HARDIN, LOGAN, MERCER, PAULDING, PUTNAM, SHELBY, VAN WERT, WILLIAMS

Special Jurisdictional Note :

Details :

Prevailing Wage Rate

Skilled Crafts

Name of Union: Painter Local 1020 Industrial

Change # : LCN01-2020fbLoc1020Ind

Craft : Painter Effective Date : 04/01/2020 Last Posted : 03/11/2020

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Painter Brush Roll	\$25.42		\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$39.48	\$52.19
Spray Painter Sandblasting Pressure Cleaning Refinery	\$26.07		\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$40.13	\$53.17
Wall Coverings	\$23.02		\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$37.08	\$48.59
Lead Abatement (plus .75 premium when blasting)	\$27.17		\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.23	\$54.82
Apprentice	Percent											
1st-0-1500 hrs	60.00	\$15.25	\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$29.31	\$36.94
2nd-1501-3000 hrs	70.00	\$17.79	\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$31.85	\$40.75
3rd-3001-4500 hrs	80.00	\$20.34	\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$34.40	\$44.56
4th-4501-6000 hrs	90.00	\$22.88	\$7.25	\$6.48	\$0.33	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$36.94	\$48.38

Special Calculation Note : APPRENTIC PAY BASED ON % OF EACH CLASSIFICATION ABOVE PLUS FULL FRINGES.

Ratio :

1 Journeymen employed to 1 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

ALLEN, AUGLAIZE, CHAMPAIGN, DEFIANCE, HARDIN, LOGAN, MERCER, PAULDING, PUTNAM, SHELBY, VAN WERT, WILLIAMS

Special Jurisdictional Note :

Details :

All surfaces 40 feet or over where material is applied to or labor performed on above the ground level (exterior), floor level (interior), \$0.50 per hour shall be applied to the prevailing rate of the classification involved.

Journeymen and apprentices applying Coal Tar products shall have \$1.00 per hour added to the prevailing rate of the classification involved.

Journeymen and apprentices working with a spray painter as a rigger, picker, or blow down man shall receive spray painter wages.

Swing stage, Chair, Spiders and Cherry Pickers shall be paid \$0.25 added to the prevailing rate of the classification involved.

Prevailing Wage Rate

Skilled Crafts

Name of Union: Painter Local 639 Zone 2 Sign

Change # : LCN01-2016fbLoc639

Craft : Painter Effective Date : 08/03/2016 Last Posted : 08/03/2016

	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	\$21.25	\$1.33	\$0.14	\$0.00	\$0.00	\$0.00	\$0.57	\$0.00	\$0.00	\$23.29	\$33.92
Painter Sign Journeyman Tech/Team Leader Class B	\$21.25	\$1.33	\$0.14	\$0.00	\$0.41	\$0.00	\$0.57	\$0.00	\$0.00	\$23.70	\$34.32
Painter Sign Journeyman Tech/Team Leader Class C	\$21.25	\$1.33	\$0.14	\$0.00	\$0.82	\$0.00	\$0.57	\$0.00	\$0.00	\$24.11	\$34.74
Painter Sign Journeyman Tech/Team Leader Class D	\$21.25	\$1.33	\$0.14	\$0.00	\$1.23	\$0.00	\$0.57	\$0.00	\$0.00	\$24.52	\$35.14
Sign Journeyman Class A	\$20.98	\$1.33	\$0.14	\$0.00	\$0.00	\$0.00	\$0.56	\$0.00	\$0.00	\$23.01	\$33.50
Sign Journeyman Class B	\$20.98	\$1.33	\$0.14	\$0.00	\$0.40	\$0.00	\$0.56	\$0.00	\$0.00	\$23.41	\$33.90
Sign Journeyman Class C	\$20.98	\$1.33	\$0.14	\$0.00	\$0.81	\$0.00	\$0.56	\$0.00	\$0.00	\$23.82	\$34.31
Sign Journeyman Class D	\$20.98	\$1.33	\$0.14	\$0.00	\$1.21	\$0.00	\$0.56	\$0.00	\$0.00	\$24.22	\$34.71
Tech Sign Fabrication/ Erector Class A	\$15.90	\$1.33	\$0.14	\$0.00	\$0.00	\$0.00	\$0.43	\$0.00	\$0.00	\$17.80	\$25.75
Tech Sign Fabrication/	\$15.90	\$1.33	\$0.14	\$0.00	\$0.31	\$0.00	\$0.43	\$0.00	\$0.00	\$18.11	\$26.06

Erector Class B											
Tech Sign Fabrication/ Erector Class C	\$15.90	\$1.33	\$0.14	\$0.00	\$0.61	\$0.00	\$0.43	\$0.00	\$0.00	\$18.41	\$26.36
Tech Sign Fabrication/ Erector Class D	\$15.90	\$1.33	\$0.14	\$0.00	\$0.92	\$0.00	\$0.43	\$0.00	\$0.00	\$18.72	\$26.67

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 that 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: 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: Plumber Pipefitter Local 50 HVAC Service Mechanics

Change # : LCNO1-2020fbLoc50

Craft : Plumber Pipefitter **Effective Date :** 06/29/2020 **Last Posted :** 06/04/2020

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Pipefitter Mechanical Equipment Service	\$43.60		\$11.61	\$7.16	\$0.60	\$0.00	\$5.71	\$1.65	\$0.00	\$0.00	\$70.33	\$92.13
Serviceman	\$31.50		\$11.61	\$7.16	\$0.60	\$0.00	\$5.71	\$1.65	\$0.00	\$0.00	\$58.23	\$73.98
Apprentice	Percent											
1st Period	40.00	\$17.44	\$11.61	\$7.16	\$0.60	\$0.00	\$0.00	\$1.65	\$0.00	\$0.00	\$38.46	\$47.18
2nd Period	45.00	\$19.62	\$11.61	\$7.16	\$0.60	\$0.00	\$0.00	\$1.65	\$0.00	\$0.00	\$40.64	\$50.45
3rd Period	50.00	\$21.80	\$11.61	\$7.16	\$0.60	\$0.00	\$2.86	\$1.65	\$0.00	\$0.00	\$45.68	\$56.58
4th Period	55.00	\$23.98	\$11.61	\$7.16	\$0.60	\$0.00	\$2.86	\$1.65	\$0.00	\$0.00	\$47.86	\$59.85
5th Period	65.00	\$28.34	\$11.61	\$7.16	\$0.60	\$0.00	\$3.43	\$1.65	\$0.00	\$0.00	\$52.79	\$66.96
6th Period	70.00	\$30.52	\$11.61	\$7.16	\$0.60	\$0.00	\$3.43	\$1.65	\$0.00	\$0.00	\$54.97	\$70.23
7th Period	75.00	\$32.70	\$11.61	\$7.16	\$0.60	\$0.00	\$4.00	\$1.65	\$0.00	\$0.00	\$57.72	\$74.07
8th Period	80.00	\$34.88	\$11.61	\$7.16	\$0.60	\$0.00	\$4.00	\$1.65	\$0.00	\$0.00	\$59.90	\$77.34
9th Period	85.00	\$37.06	\$11.61	\$7.16	\$0.60	\$0.00	\$4.57	\$1.65	\$0.00	\$0.00	\$62.65	\$81.18
10th Period	90.00	\$39.24	\$11.61	\$7.16	\$0.60	\$0.00	\$4.57	\$1.65	\$0.00	\$0.00	\$64.83	\$84.45

Special Calculation Note : Other is National Pension.

Ratio :

1 Journeyman to 1 Apprentice
 2-3 Journeyman to 2 Apprentice
 4-5 Journeyman to 3 Apprentice

Jurisdiction (* denotes special jurisdictional note) :

DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS,
 OTTAWA, PAULDING, PUTNAM, SANDUSKY,
 SENECA, WILLIAMS, WOOD

Special Jurisdictional Note :

Details :

Prevailing Wage Rate

Skilled Crafts

Name of Union: Plumber Pipefitter Local 50

Change # : LCRO2-2020fbLoc50

Craft : Plumber/Pipefitter Effective Date : 07/23/2020 Last Posted : 07/23/2020

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Plumber Pipefitter	\$43.60		\$11.61	\$7.16	\$0.60	\$0.00	\$5.71	\$1.65	\$0.00	\$0.00	\$70.33	\$92.13
Apprentice	Percent											
1st Period	40.00	\$17.44	\$11.61	\$7.16	\$0.60	\$0.00	\$0.00	\$1.65	\$0.00	\$0.00	\$38.46	\$47.18
2nd Period	45.00	\$19.62	\$11.61	\$7.16	\$0.60	\$0.00	\$0.00	\$1.65	\$0.00	\$0.00	\$40.64	\$50.45
3rd Period	50.00	\$21.80	\$11.61	\$7.16	\$0.60	\$0.00	\$2.86	\$1.65	\$0.00	\$0.00	\$45.68	\$56.58
4th Period	55.00	\$23.98	\$11.61	\$7.16	\$0.60	\$0.00	\$2.86	\$1.65	\$0.00	\$0.00	\$47.86	\$59.85
5th Period	65.00	\$28.34	\$11.61	\$7.16	\$0.60	\$0.00	\$3.43	\$1.65	\$0.00	\$0.00	\$52.79	\$66.96
6th Period	70.00	\$30.52	\$11.61	\$7.16	\$0.60	\$0.00	\$3.43	\$1.65	\$0.00	\$0.00	\$54.97	\$70.23
7th Period	75.00	\$32.70	\$11.61	\$7.16	\$0.60	\$0.00	\$4.00	\$1.65	\$0.00	\$0.00	\$57.72	\$74.07
8th Period	80.00	\$34.88	\$11.61	\$7.16	\$0.60	\$0.00	\$4.00	\$1.65	\$0.00	\$0.00	\$59.90	\$77.34
9th Period	85.00	\$37.06	\$11.61	\$7.16	\$0.60	\$0.00	\$4.57	\$1.65	\$0.00	\$0.00	\$62.65	\$81.18
10th Period	90.00	\$39.24	\$11.61	\$7.16	\$0.60	\$0.00	\$4.57	\$1.65	\$0.00	\$0.00	\$64.83	\$84.45

Special Calculation Note : Other is National Pension.

Ratio :

1 Apprentice to 1 Journeymen
 2-3 Apprentices to 2 Journeymen
 4-5 Apprentices to 3 Journeymen

Jurisdiction (* denotes special jurisdictional note) :

DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS,
 OTTAWA, PAULDING, PUTNAM, SANDUSKY,
 SENECA, WILLIAMS, WOOD

Special Jurisdictional Note :

Details :

Prevailing Wage Rate Skilled Crafts

Name of Union: Sheet Metal Local 33 (Toledo)

Change # : LCN03-2020fbLoc33(Toledo)

Craft : Sheet Metal Worker Effective Date : 08/06/2020 Last Posted : 08/06/2020

	BHR		Fringe Benefit Payments						Irrevocable Fund		Total PWR	Overtime Rate
			H&W	Pension	App Tr.	Vac.	Annuity	Other	LECET (*)	MISC (*)		
Classification												
Sheet Metal Worker	\$35.39		\$8.62	\$17.73	\$1.47	\$0.00	\$2.23	\$0.50	\$0.00	\$0.00	\$65.94	\$83.64
Industrial Door	\$23.08		\$6.96	\$5.33	\$0.17	\$0.00	\$1.87	\$0.00	\$0.00	\$0.00	\$37.41	\$48.95
Apprentice Helpers Trainee 1st 60 Days Probationary Period	\$12.00		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$12.00	\$18.00
61 Days-12 Months	\$13.39		\$6.96	\$1.84	\$0.17	\$0.00	\$1.25	\$0.00	\$0.00	\$0.00	\$23.61	\$30.31
2nd Year	\$15.69		\$6.96	\$1.84	\$0.17	\$0.00	\$1.40	\$0.00	\$0.00	\$0.00	\$26.06	\$33.91
3rd Year	\$16.85		\$6.96	\$1.84	\$0.17	\$0.00	\$1.48	\$0.00	\$0.00	\$0.00	\$27.30	\$35.73
4th Year	\$18.46		\$6.96	\$1.84	\$0.17	\$0.00	\$1.58	\$0.00	\$0.00	\$0.00	\$29.01	\$38.24
5th Year	\$19.85		\$6.96	\$1.84	\$0.17	\$0.00	\$1.67	\$0.00	\$0.00	\$0.00	\$30.49	\$40.42
Apprentice	Percent											
1st	45.00	\$15.93	\$8.62	\$3.73	\$1.47	\$0.00	\$0.00	\$0.50	\$0.00	\$0.00	\$30.25	\$38.21
2nd	50.00	\$17.69	\$8.62	\$13.59	\$1.47	\$0.00	\$1.12	\$0.50	\$0.00	\$0.00	\$43.00	\$51.84
3rd	55.00	\$19.46	\$8.62	\$14.00	\$1.47	\$0.00	\$1.12	\$0.50	\$0.00	\$0.00	\$45.17	\$54.91
4th	60.00	\$21.23	\$8.62	\$14.41	\$1.47	\$0.00	\$1.12	\$0.50	\$0.00	\$0.00	\$47.35	\$57.97
5th	75.00	\$26.54	\$8.62	\$15.66	\$1.47	\$0.00	\$1.12	\$0.50	\$0.00	\$0.00	\$53.91	\$67.18

Special Calculation Note : OTHER IS:SUPPLEMENTAL UNEMPLOYMENT BENEFITS.

Ratio :

- 1 Journeyman to 1 Apprentice
- 2 Journeymen to 1 Apprentice
- 3 Journeymen to 1 Apprentice
- 4 Journeymen to 2 Apprentices
- 5 Journeymen to 2 Apprentices
- 6 Journeymen to 2 Apprentices
- 7 Journeymen to 3 Apprentices
- 8 Journeymen to 3 Apprentices
- 9 Journeymen to 3 Apprentices

Jurisdiction (* denotes special jurisdictional note) :

DEFIANCE, FULTON, HANCOCK, HENRY, LUCAS,
OTTAWA, PAULDING, PUTNAM, SENECA,
WILLIAMS, WOOD

10 Journeymen to 4 Apprentices
11 Journeymen to 4 Apprentices
12 Journeymen to 4 Apprentices
13 Journeymen to 5 Apprentices
14 Journeymen to 5 Apprentices
15 Journeymen to 5 Apprentices
Maintaining a 3 Journeymen to 1 Apprentice ratio
thereafter

Special Jurisdictional Note :

Details :

Industrial Door--Installation and service of overhead doors roll up doors, docks and dock leveling equipment

Prevailing Wage Rate

Skilled Crafts

Name of Union: Truck Driver Bldg & Hwy Class 1
Locals 20,40,92,92b,100,175,284,438,377,637,908,957

Change # : OCRO1-2019fbBldgHwy

Craft : Truck Driver **Effective Date :** 09/11/2019 **Last Posted :** 09/11/2019

	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, Oil Distributor - Asphalt Distributor-Tandems	\$28.04		\$7.00	\$7.90	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.14	\$57.16
Apprentice	Percent											
First 6 months	80.00	\$22.43	\$7.00	\$7.90	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$37.53	\$48.75
7-12 months	85.00	\$23.83	\$7.00	\$7.90	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$38.93	\$50.85
13-18 months	90.00	\$25.24	\$7.00	\$7.90	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$40.34	\$52.95
19-24 months	95.00	\$26.64	\$7.00	\$7.90	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$41.74	\$55.06
25-30 months	100.00	\$28.04	\$7.00	\$7.90	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$43.14	\$57.16

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 :

** Asphalt - Oil spray bar man when operating from cab shall receive \$0.20 cents per hour above their Basic Hourly Rate.

Prevailing Wage Rate

Skilled Crafts

Name of Union: Truck Driver Bldg & Hwy Class 2
Locals 20,40,92,92b,100,175,284,438,377,637,908,957

Change # : LCRO1-2019-fbBldgHwy

Craft : Truck Driver **Effective Date :** 10/16/2019 **Last Posted :** 10/16/2019

	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- Asphalt-Oil Spray bar men- 5 Axle & Over - Belly Dumps-End Dumps-Articulated Dump Trucks- Low boys-Heavy duty Equipment(irrespective of load carried) when used exclusively for transportation-Truck Mechanics (when needed)			\$28.46	\$7.00	\$7.90	\$0.20	\$0.00	\$0.00	\$0.00	\$0.00	\$43.56	\$57.79
Apprentice			Percent									
First 6 months			80.00	\$22.77	\$7.00	\$7.90	\$0.20	\$0.00	\$0.00	\$0.00	\$37.87	\$49.25
7-12 months			85.00	\$24.19	\$7.00	\$7.90	\$0.20	\$0.00	\$0.00	\$0.00	\$39.29	\$51.39
13-18 months			90.00	\$25.61	\$7.00	\$7.90	\$0.20	\$0.00	\$0.00	\$0.00	\$40.71	\$53.52
19-24 months			95.00	\$27.04	\$7.00	\$7.90	\$0.20	\$0.00	\$0.00	\$0.00	\$42.14	\$55.66
25-30 months			100.00	\$28.46	\$7.00	\$7.90	\$0.20	\$0.00	\$0.00	\$0.00	\$43.56	\$57.79

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 :

** Asphalt - Oil spray bar man when operating from cab shall receive \$0.20 cents per hour above their Basic Hourly Rate.

SECTION 01 1000 – SUMMARY OF WORK

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes:
 - 1. Work by Owner.
 - 2. Work restrictions.
 - 3. Use of site.
- B. Related Requirements:
 - 1. Division 00 – Procurement and Contracting Requirements:
 - a. Instructions to Bidders: Project estimate.
 - b. Contract Form: Substantial completion date, liquidated damages.

PART 2 PRODUCTS

2.01 WORK BY OWNER:

- A. The following work will be performed by others under separate contract and shall not be included under this contract.
 - 1. Testing and inspecting services identified in Section 01 4520.

PART 3 EXECUTION

3.01 WORK RESTRICTIONS:

- A. The Owner will occupy the premises during the entire period of construction for the conduct of normal operations.
- B. Schedule, coordinate and perform all Work to minimize disruption to Owner's activities.
 - 1. Allow for Owner occupancy and use by the public.
 - 2. Keep driveways and entrances serving the premises clear and available to the Owner, the Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site and to avoid peak traffic hours.
 - 3. Maintain means of egress from existing building exits at all times designated for public occupancy.
 - 4. Shutdowns of existing systems shall be limited to minimum time required and scheduled with other involved parties. Provide minimum two days written notice of shutdown to Architect and Owner. Shutdowns shall not interfere with scheduled activities. For shutdowns performed outside normal working hours, include overtime and premium labor costs.

- C. Except as otherwise limited in the Contract Documents, the Contractor shall have full use of the premises for construction operations. The Owner's right to perform work or to retain other Contractors on portions of the Project limits Contractor's use of the premises.
- D. Exterior work may be performed during regular library hours, but concrete sawing, drilling, and similar noise and fume generating activities shall be performed outside of regular library hours unless specifically approved.
 - 1. Coordinate shutdown of air intake systems with Owner to minimize dust and fumes entering building.

3.02 USE OF SITE:

- A. The Contractor shall prepare a proposed Project Use Site Plan, also referred to as a Site Logistics Plan, for approval by Architect and Owner.
- B. Confine operations at the site to areas within the boundaries indicated and approved on the Project Use Site Plan, and as permitted by law, ordinances, and permits. Site shall not be unreasonably encumbered with materials, products, or construction equipment.
- C. The Project Use Site Plan shall include access to proposed buildings for construction purposes, storage of materials and products, employee parking, temporary facilities including offices, storage, and workshop sheds or portable trailers, and unloading space.
- D. Where a temporary fence is to be provided, show any additional area needed in the Contractor's use of the site beyond that which may be indicated on the Drawings. Where additional fencing is required, such fencing shall be included at no additional cost to the Owner.
- E. The Owner will designate which portions of existing parking lots and other site areas can be used for construction activities. Damage to existing parking lots, unpaved areas, or other existing site features shall be repaired at the expense of the Contractor responsible for damage.

END OF SECTION

SECTION 01 2900 – PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SUMMARY:

A. Section Includes:

1. Contract modification procedures.
2. Schedule of values.
3. Notices of commencement and furnishing.
4. Application for payment.

B. Related Requirements:

1. Division 00 – Procurement and Contracting Requirements:
 - a. Contract Form: Retainage requirements.
 - b. Schedule of Values form.
 - c. Application for Payment form.
 - d. Statement of Claim form.
 - e. Contractor's Affidavit and Certification form.
 - f. Waiver & Release Affidavit forms.
2. Section 01 7700 – Closeout Requirements.

1.02 CONTRACT MODIFICATION PROCEDURES:

- A. The Owner shall have the right at any time, with reasonable notice to Contractor and resulting adjustment to Contract Sum or Contract Time, if any, to require alterations, additions to or deductions from the Work described in the Contract Documents.
- B. Architect will advise of minor changes in the Work not involving an adjustment to Contract Sum or Contract Time by issuing an Order for Minor Changes.
- C. Architect may issue a Request for Proposal which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications. Contractor shall promptly prepare and submit a detailed itemized proposal for revising the Contract Sum or Contract Time, or both, to incorporate the proposed change. Do not proceed with the proposed changes until a Construction Change Directive or Change Order is issued.
- D. Architect may issue a Construction Change Directive approved by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum or Contract Time. Promptly execute the change.
 1. Maintain detailed records of work performed. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.

- E. Contractor may propose changes by submitting a request for change to the Architect, describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation, and a statement describing the effect on Work by separate or other Contractors. Document any requested substitutions in accordance with Section 01 6000. Architect and Owner reserve the right to accept or reject such proposed changes, or to request modifications thereto.
- F. Accompany all proposals, whether Contractor initiated or in response to a Request for Proposal or Construction Change Directive, with a detailed itemized breakdown including the following:
 - 1. Materials: Indicate quantities and unit costs.
 - 2. Labor: Indicate man hours of labor and hourly rates for each classification of labor involved.
 - 3. Direct Costs: Fuel, supplies, scaffolding, construction equipment, insurance, taxes and related items.
 - 4. Overhead and Profit: In no case will a rate greater than 10 percent of the sum of the above items be approved for an amount to include overhead, profit, insurance, and bonds.
 - a. For deduct change orders, the rate shall be a minimum of 5 percent of the sum of the above items, but need not exceed the rate charged for add change orders.
- G. Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

1.03 SCHEDULE OF VALUES:

- A. Submit Schedule of Values within 15 days after Notice to Proceed. Revise and resubmit as required by Architect prior to initial Application for Payment.
- B. Submit on forms provided with this Project Manual. Electronic copies of the form are available from the Architect on request. Utilize the Table of Contents of this Project Manual. Identify each line item with the number and title of the specification Section.
- C. Include separate line items for each of the following: General Requirements, bonds, insurance, submittals, progress cleaning, final cleaning, punch list work, and project record submittals.
- D. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including construction progress schedules, schedule of submittals, and lists of subcontractors, products, principal suppliers and fabricators.
- E. Obtain itemized quotations from Subcontractors and suppliers performing work under multiple Sections. "Package bids" will not release Contractor from the responsibility of furnishing values for each Section of the Work.
- F. Revise schedule with each Application for Payment to list approved Change Orders.

- G. Architect reserves the right to use the Schedule of Values for guidance in evaluating Change Order proposals and claims submitted by the Contractor.

1.04 NOTICES OF COMMENCEMENT AND FURNISHING:

- A. Owner will prepare a Notice of Commencement (NOC) in accordance with the Ohio Mechanics' Lien Law (Section 1311 O.R.C.) and deliver a copy to the Contractor.
- B. Contractor shall post the NOC at the job site adjacent to the building permit, plan approval certificate, or zoning permit, and shall distribute copies upon request to Subcontractors and suppliers.
- C. If the Contractor has not received an NOC within 10 days after construction begins, the Contractor shall deliver to the Owner a written request for a Notice of Commencement.
- D. Prior to submitting each Application for Payment, deliver to the Owner a written request for a list of all parties who have requested NOCs from the Owner or delivered Notices of Furnishing to the Owner.

1.05 APPLICATION FOR PAYMENT:

- A. Submit each Application for Payment to the Architect on the forms provided with this Project Manual. No other Application for Payment document will be processed. Electronic copies of the form are available from the Architect on request.
- B. Submit sequentially numbered typewritten and notarized applications. Electronic submittal in PDF format is preferred. For hard copy applications, submit one original and two copies, keeping embossed seals away from areas intended for Architect's signature and notations.
- C. Content and Format: Rounding to whole dollar amounts is preferred.
 - 1. Value of labor, materials, and equipment incorporated in the Work or delivered and stored at the site. Utilize Schedule of Values for listing items of Work.
 - 2. Deduction of retainage.
 - 3. Deduction of all previously approved payments.
 - 4. New amount applied for.
- D. Contractor shall pay for transportation, services, materials, tools, expendables, and Subcontractor work. Each payment shall be in an amount equal to the percentage of completion allowed to the Contractor for each item or category, less the percentage retained from payments to the Contractor. Contractor shall make payments to Subcontractors.
- E. Change Orders for additional work may be included in progress payments after approval by all parties.
- F. Payment Period: Progress payments will be made at monthly intervals, from the date of the Notice to Proceed to the date specified for Substantial Completion. Each

monthly payment shall be in an amount determined in accordance with the General Conditions.

1. After the payment of the last scheduled progress payment, no further progress payments will be made until the Certificate of Substantial Completion has been issued. In the event that changes in the work result in an extension of time, the number of scheduled progress payments may be changed in accordance with the extension of time granted by Change Order.
2. After Substantial Completion, no further payment will be made until the final Application for Payment is approved.

G. Initial Application for Payment: Submittals that must precede or coincide with submittal of the first Application for Payment include the following:

1. Certificates of insurance.
2. Construction schedule in accordance with Section 01 3200.
3. Submittal Schedule, List of Subcontractors, and List of Products in accordance with Section 01 3300.

H. Final Application for Payment. Include closeout submittals in accordance with Section 01 7700.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 3100 – PROJECT MANAGEMENT AND COORDINATION

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes:
 - 1. Project coordination.
 - 2. Requests for interpretation.
 - 3. Facility services coordination.
 - 4. Project meetings.
 - 5. Alteration project procedures.

1.02 PROJECT COORDINATION:

- A. The Contractor shall assign one person who will be on site full-time and who will have authority to speak and act on behalf of the Contractor. This person shall supervise and direct the work using their best skill and attention, and shall coordinate all trades and Subcontractors and provide adequate labor, equipment and materials as needed.
 - 1. Communications to the Contractor's superintendent shall be as binding as if given directly to the Contractor.
 - 2. Upon Notice to Proceed, Contractor shall notify the Owner of the proposed superintendent, and if requested by the Owner shall also submit a summary of qualifications and experience, including references.
 - 3. Contractor shall not change their superintendent without prior written notice to the Owner, including justification for the change and identification and qualifications of the proposed replacement.
 - 4. Owner reserves the right to reject proposed superintendents within 30 days, in which case Contractor shall provide an acceptable replacement without adjustment of Contract Sum or Contract Time.
- B. Maintain a constant check on the progress of the Project; coordinate and sequence work with that of others to facilitate progress of the Project; provide reasonable advance notification to all parties concerned of any special provisions regarding the placing, setting, or preparation of work that will affect the work of others; afford others every reasonable opportunity for installation and execution of their work and storage of their materials.
- C. Alterations to work already placed and necessitated by failure to properly coordinate work shall be accomplished at the expense of the negligent party.
- D. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to assure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.

- E. Before installing any work, and before purchasing any equipment, carefully check Contract Documents for conflicts or lack of coordination between or among required Work, Contract Documents, and job conditions; immediately report same to Architect in writing.
 - 1. In the event of failure to bring such lack of coordination between or among Contract Documents, work of other trades, and job conditions to Architect's attention in writing before work is performed or before equipment is purchased, resulting conflicts shall be corrected as directed by the Architect, without adjustment of Contract Sum or Contract Time.
- F. Coordinate completion and clean up of Work of separate sections in preparation for Substantial Completion.
- G. 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.

1.03 REQUESTS FOR INTERPRETATION (RFI):

- A. In the event the Contractor determines that some portion of the Contract Documents requires clarification or interpretation, submit a Request for Interpretation in writing on forms approved by the Architect.
- B. Each RFI shall clearly and concisely set forth the issue for which clarification or interpretation is sought and why a response is needed, the date by which a response is requested, and shall include his interpretation or understanding of the contract requirements along with reasons why such an understanding was reached.
- C. RFIs shall be submitted by the Prime Contractor only and shall not be used for routine project communication, to transmit submittals, to request substitutions, or for other correspondence. Documents which are not RFIs will be returned for resubmittal on the proper form.
- D. Minor detail items related to shop drawing submittals shall be highlighted on the shop drawings and do not require an RFI.
- E. Submit each RFI in sufficient time to avoid delaying the project, allowing minimum one week for Architect's response. If the Architect determines that a longer time is necessary to provide an adequate response, the Architect will advise of the anticipated response time within one week of receipt of the RFI. Adjustment of Contract Time will not be granted due to the Architect's response time.
- F. Responses to RFIs shall be considered interpretations and clarifications of the contract requirements and do not change the Contract Documents. If the Contractor believes that a response constitutes a change to the Contract Documents, Contractor shall promptly give written notice.
- G. In the event of an excessive number of RFIs where the requested information is available from the Contract Documents, field observations, or prior Project

correspondence or documentation, the Owner shall be entitled to deduct from the Contract Sum all reasonable costs charged by the Architect to the Owner for additional services required for the processing of such RFIs.

1.04 FACILITY SERVICES COORDINATION:

- A. Contract Documents: Facility Services work (including electrical work) may be shown throughout the Drawings. Information required for proper coordination of the work may be contained in specifications of other trades. Become thoroughly familiar with all documents referenced in the Project Manual Contents and List of Drawings and coordinate the Work with all provisions thereof.
- B. System Layout: Facility Services drawings are diagrammatic and are intended to show the approximate locations of components. Field verify dimensions shown on the Drawings. Do not scale drawings to obtain exact dimensions.
 - 1. Coordinate space requirements and installation of work indicated diagrammatically on Drawings. Follow routing shown for pipes and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
 - 2. The exact location of items not located by dimensions on the Drawings shall be determined in the field with consideration given to appearance, clearances, and potential conflicts, and is subject to approval by the Architect.
 - 3. Before beginning installation, verify required clearances for structural and architectural work as shown on the Drawings. If any work is installed and it later develops that the architectural design cannot be followed, make such changes as the Architect may direct to facilitate completion of the architectural work in accordance with the Contract Documents.
 - 4. Report actual and potential interferences and conflicts among Facility Services work and the work of other trades to the Architect as soon as they are discovered. The Architect's decision shall be final in regard to the rearrangement of conflicting work, regardless of which was first installed.
 - 5. Throughout the course of the work, up to the time of roughing-in and installation, minor changes and adjustments to the installation may be requested by the Architect. Make such adjustments without modification to the Contract Sum or Contract Time, where such adjustments are necessary to facilitate proper installation and operation within the intent of the Contract Documents. This does not include work already completed.
 - 6. Position equipment, devices, outlets, and related components to avoid interferences with and to assure proper coordination with work of other trades, and architectural features.
 - 7. Maintain service access clearances to equipment as indicated on submittals. Verify that repair parts replacement can be performed without obstruction by other systems or components.

8. In finished areas except as otherwise indicated, conceal conduit and wiring within the construction. Coordinate locations with finish elements.
- C. Equipment Requirements: Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
 1. Verify voltage, amperage, and phase requirements for the work with the service available at the building.
 2. Prior to ordering electrically operated items, verify requirements so that they will operate on the voltage, amperage, and phase provided for them.
 3. Any item delivered to the job which will not operate on the current provided will be rejected or the Contractor will stand the expense of changing the wiring to accommodate the equipment.
 4. Verify equipment can be installed and removed through permanent building openings. Where necessary, provide modular components which can be disassembled and reassembled. Bring exceptions to the attention of the Architect and provide lintels, knockout panels, and other construction as directed to facilitate installation and future removal of equipment.
- D. Structural Supports: Except as otherwise noted, furnish the main supporting structure and provide openings as shown on the Drawings.
 1. Provide supplemental framing, rods, supports, and hangers required to install or mount equipment indicated, and as necessary to provide a complete working system. Do not support equipment, conduit, or any other components from metal deck, or from open web framing members at any locations other than panel points.

1.05 PROJECT MEETINGS:

- A. Preconstruction Meeting: Architect will schedule a meeting after Notice of Award.
 1. Attendance Required: Owner, Architect, and Contractor.
 2. Agenda:
 - a. Execution of Owner-Contractor Agreement.
 - b. Submission of executed bonds and insurance certificates.
 - c. Distribution of Contract Documents.
 - d. Submission of list of Subcontractors, list of Products, schedule of values, and project schedule.
 - e. Designation of personnel representing the parties in Contract, and the Architect.
 - f. Procedures and processing of field decisions, submittals, substitutions, applications for payment, change procedures, and contract closeout procedures.
 - g. Use of premises by Owner and Contractor.
 - h. Construction facilities, controls, and temporary utilities provided by Owner.

- i. Security and housekeeping procedures.
 - j. Procedures for maintaining record documents.
 - k. Scheduling.
- 3. Record minutes and distribute copies within two days after meeting to Architect, Owner, participants, and those affected by decisions made.
- B. Progress Meetings: Schedule and administer meetings throughout progress of the Work at maximum monthly intervals, scheduled to coordinate with preparation of payment requests. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings. Notify parties, including Architect, at least four days in advance.
 - 1. Attendance Required: Representatives of Contractor, major Subcontractors and suppliers, as appropriate to agenda topics for each meeting.
 - 2. Agenda:
 - a. Review minutes of previous meetings.
 - b. Review of Work progress.
 - c. Field observations, problems, and decisions.
 - d. Identification of problems which impede planned progress.
 - e. Review of submittals schedule and status of submittals.
 - f. Review of off-site fabrication and delivery schedules.
 - g. Maintenance of progress schedule.
 - h. Corrective measures to regain projected schedules.
 - i. Planned progress during succeeding work period.
 - j. Coordination of projected progress.
 - k. Maintenance of quality and work standards.
 - l. Effect of proposed changes on progress schedule and coordination.
 - m. Other business relating to Work.
 - 3. Record minutes and distribute copies within two days after meeting to Architect, Owner, participants, and those affected by decisions made.
- C. Preinstallation Meetings: When required in individual specification sections, convene a preinstallation meeting prior to commencing work of the section.
 - 1. Require attendance of parties directly affecting, or affected by, work of the specific section.
 - 2. Notify Architect four days in advance of meeting date.
 - 3. Prepare agenda and preside at meeting:
 - a. Review conditions of installation, preparation and installation procedures.
 - b. Review coordination with related work.
 - 4. Record minutes and distribute copies within two days after meeting to Architect, Owner, participants, and those affected by decisions made.

1.06 ALTERATION PROJECT PROCEDURES:

- A. Existing Conditions: Existing equipment, sewers, piping, ducts, conduit, and other existing items in place shown or noted on the Drawings, may be relied upon only for general layout. Field verify all measurements, grades, relative elevations and locations, and obtain additional information as necessary to assure the proper fit and coordination of new work with existing.
- B. Where there are alterations to an existing structure, remove, reroute, or replace existing facilities and services as may be necessary to permit installation of new work or alterations to old work.
 - 1. Where building systems or utility services must be disrupted to permit connections and modifications, notify Architect in advance and coordinate scheduling with Owner to cause the least possible inconvenience and shortest delay.
 - 2. Where existing equipment, piping, or miscellaneous related items are permanently abandoned, each component exposed to view or accessible in concealed locations shall be removed completely. Concealed inaccessible piping and conduit shall be plugged or capped at a point well behind the proposed new finished closures or surfaces.
- C. Existing Hazardous Materials: If the existence of asbestos or other hazardous material in the structure or building is observed during the course of construction or work, promptly notify the Owner. The Owner will consult with their consultant regarding removal or encapsulation of the asbestos material. Do not perform any work which may affect the hazardous material prior to receipt of special instructions from the Owner.
- D. Materials: As specified in Product sections; match existing Products and work for patching and extending work.
- E. Employ skilled and experienced installer to perform cutting and patching in accordance with Section 01 7000.
- F. Close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity.
- G. Remove, cut, and patch Work in a manner to minimize damage and to provide a means of restoring Products and finishes to original or specified condition.
- H. Refinish existing visible surfaces to remain in renovated rooms and spaces, to renewed condition for each material, with a neat transition to adjacent finishes.
- I. Where new Work abuts or aligns with existing, provide a smooth and even transition. Patch Work to match existing adjacent Work in texture and appearance.
- J. When finished surfaces are cut so that a smooth transition with new Work is not possible, terminate existing surface along a straight line at a natural line of division and submit recommendation to Architect for review.

- K. Where a change of plane of $\frac{1}{4}$ inch or more occurs, submit recommendation for providing a smooth transition to Architect for review.
- L. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.
- M. Finish surfaces as specified in individual Product sections.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 3200 – CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Construction progress documentation.

1.02 CONSTRUCTION PROGRESS DOCUMENTATION:

- A. Submit initial construction schedule in triplicate within 15 days after date of Notice of Award.
- B. Revise and resubmit as required.
- C. Submit revised schedules with each Application for Payment, identifying changes since previous version.
- D. Submit a horizontal bar chart with separate line for each section of Work, identifying first work day of each week. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, critical path, float dates, and duration.
- E. Indicate estimated percentage of completion for each item of Work at each submission.
- F. Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates, including those furnished by Owner and required by Allowances.
- G. Schedule shall begin with Notice to Proceed and conclude with the date of final completion of the project. Float or slack time within the construction schedule is not for the exclusive use or benefit of either the Owner or Contractor but is a jointly owned, expiring project resource available to both parties as needed to meet contract milestones and the contract completion date.
- H. No time extensions will be granted nor delay damages paid until a delay occurs that impacts the project's critical path, consumes all available float or contingency time, and extends the work beyond the contract completion date.
 - 1. Delays arising from multiple causes which may have concurrent or interrelated effects on the progress of the Work shall be combined into a single unit for the purposes of determining the appropriate time extension, if any.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 3300 – SUBMITTAL PROCEDURES

PART 1 GENERAL

1.01 SUMMARY:

A. Section Includes:

1. General requirements for submittals.
2. List of subcontractors and products.
3. Shop drawings, product data and samples.
4. Manufacturer's installation instructions and certificates.

B. Related Sections:

1. Section 01 6000 – Product Requirements: Submittals for substitutions.
2. Section 01 7700 – Closeout Requirements: Contract warranties, operation and maintenance data, and closeout submittals.

1.02 GENERAL REQUIREMENTS FOR SUBMITTALS:

A. Electronic Submittals: Submittals (except samples, color selectors, and submittals requiring certification by a registered professional) shall be submitted in electronic format.

1. Only PDF files will be accepted, unless otherwise approved in advance.
2. For submittals to be distributed to governing authorities, electronic submittals shall be used for review by Architect. If requested, provide the number of paper submittals required for use by authorities having jurisdiction.
3. Submittals shall be accompanied by a statement from the submitter indicating approval.
4. Submittals will be returned in electronic format. Architect's notations may be included in the submittal file or in a separate document, and shall be distributed with all copies of the reviewed submittals.

B. Paper Submittals:

1. Transmit each submittal with Transmittal Letter, AIA Form G810 or equivalent. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
2. Apply Contractor's stamp, signed or initialed, indicating approval.
3. Submit three copies, unless individual specification sections require a greater number of copies. One copy will be returned to the Contractor. Additional copies will not be processed or returned.

C. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, date, and specification section number, as appropriate.

D. Use standard letter, tabloid, and architectural page sizes only. Provide space on first page for Architect, and professional subconsultant review stamps, minimum 1½ x 3 inch each space.

- E. Where items are identified in the Contract Documents by number, letter or similar mark, include the same identification on submittals. Arrange items within the submittal in the same sequence as the identification in the Contract Documents, unless another sequence is approved in advance by the Architect.
- F. By approving and submitting submittals, the Contractor represents that he has reviewed and verified field dimensions, quantities, adjacent construction Work, field construction criteria, materials, catalog numbers, specified design requirements and performance requirements, and similar data, and coordinated information in accordance with the requirements of the Work and Contract Documents.
- G. Submittals stamped “For Approval Only” or “Not For Construction” will not be accepted.
- H. Where individual specification sections require submittals to be prepared under the supervision of a Professional Engineer or other registered professional, apply the registered professional’s seal and signature to such submittals.
- I. All responsibility for the submittal shall be that of the submitter. The contractual relationship, duties, and responsibilities of the parties in Contract nor those of the Architect shall not be altered from the Contract Documents by mention or inference otherwise in any submittal.
- J. Identify deviations from Contract Documents, and Product or system limitations which may be detrimental to successful performance of the completed Work.
- K. Correct returned submittals marked “Revise and Resubmit” or “Not Approved”; identify all changes made since previous submission. Review of revised submittals will be limited to previously noted items, unless other changes are specifically called out. Direct specific attention in writing on resubmittals to revisions other than the corrections requested on previous submissions.
- L. Distribute copies of reviewed submittals as appropriate, including distribution to separate Contractors whose work connects to or interfaces with the submittal item. Instruct parties to promptly report any inability to comply with provisions.
- M. Submittals not requested will not be acknowledged or processed.
- N. Submittals for Review: Architect’s review of submittals is limited to conformance with the design concept and to compliance with requirements of the Contract Documents.
 - 1. Architect’s review of submittals is a gratuitous assistance, and the Architect’s action does not relieve the submitter of responsibility for deviations from the requirements of the Contract Documents unless the Architect has been informed in writing of the deviation at the time of submission and has given written approval to the specific deviation, nor shall the Architect’s action relieve the submitter from responsibility for errors or omissions in the submittals. Such errors, omissions, or deviations shall be made good by the submitter, irrespective

- of the receipt, checking, review, or approval of submittals by the Architect, and even though the Work is performed in accordance with approved submittals.
2. Contractor retains all responsibility for quantities, field dimensions, fabrication, installation, construction means, methods, techniques, sequences, procedures, safety precautions and programs, and coordination with Work by others. The content of the submittal and wording of the Contractor's review stamp shall not serve to limit responsibility for the above items.
 3. For submittals requiring approval by governing authorities, Architect's approval of the submittal is contingent upon and subject to approval by authorities having jurisdiction.
 4. Architect's notations and remarks added to submittals are to ensure compliance with Contract Documents and do not constitute, imply or require a contract modification.
 5. The Architect's review of an individual item does not indicate review of an assembly in which the item is included.
- O. Submittals for Information: The following categories of submittals, and additional submittals identified in individual specification sections, will not be approved by the Architect or returned to the Contractor, but will be retained for record purposes. When requested by Contractor, Architect will acknowledge receipt. Submittals may be rejected for not complying with requirements.
1. Manufacturer certificates, material certificates, material safety data sheets, and material test reports.
 2. Manufacturer's guide specifications.
 3. Installer certificates, welding certificates, and installer qualification data.
 4. Work plans, waste management plans, storm water pollution prevention plans, and similar representations of construction means, methods, sequences, and procedures.
 5. Insurance certificates and bonds.
 6. Test reports.
 7. Environmental product declarations.
 8. Engineering calculations.
 9. Installation instructions and maintenance recommendations.
 10. Manufacturer's field reports.
 11. Construction photographs.

1.03 SUBMITTAL SCHEDULE:

- A. Prepare a complete schedule of submittals within 10 days of Notice to Proceed.
1. Coordinate Submittal Schedule with the list of subcontracts, Schedule of Values, and the list of products as well as the Construction Schedule.
 2. Organize the schedule by Project Manual Contents. Provide the following information for each specification Section:
 - a. Scheduled date for the first submittal.

- b. Name of Subcontractor.
 - c. For each submittal for review, including revised submittals, allow 15 working days excluding delivery time.
- 3. Allow time for review by Architect and Architect's consultants, including delivery time. Allow time for one resubmittal after the initial submittal without delaying the Construction Schedule.
- 4. Review of submittals and resubmittals will be prioritized by date indicated on the Submittal Schedule.
- 5. Alterations or additional work required because of Contractor's failure to make timely submittals shall be corrected without additions to the Contract Sum.
- B. Prioritize the submittal of critical schedule items, long lead items, items requiring coordination between trades, and submittals that may affect final plan approval.

1.04 LIST OF SUBCONTRACTORS:

- A. Within 15 days after date of Notice to Proceed, submit list of Subcontractors proposed for use, with postal addresses, email addresses, and telephone numbers. Indicate all sections of Work to be performed by each Subcontractor.
- B. Sections of Work for which a Subcontractor is not listed will be construed to be done by the Prime Contractor.
- C. Notify the Architect in writing in advance of any proposed changes to the list of Subcontractors.

1.05 LIST OF PRODUCTS:

- A. Within 15 days after date of Notice to Proceed, submit list of major Products proposed for use, with name of manufacturer, trade name, and model number of each Product.
- B. For Products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.
- C. Notify the Architect in writing in advance of any proposed changes to the list of Products.

1.06 SHOP DRAWINGS:

- A. Prepare neat, legible, accurate drawings at scales adequate to fully illustrate all pertinent data. Where applicable, include plan, elevation, and section views complete with dimensions, notes, and other data sufficient to demonstrate compliance with requirements of Contract Documents and to show relationships and connections to adjacent materials and related work by others.
- B. Base drawings will be available from the Architect in PDF format only.

- C. Submit for review. After review, produce copies and distribute as required for fabrication and construction, and for record documents purposes as described in Section 01 7700.
- D. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- E. Structural Calculations: State specific loads on which calculations are based. References to code requirements without listing specific loads are not sufficient.
- F. Wiring Diagrams: When specified in individual specification sections, submit detailed point-to-point wiring diagrams indicating each component, locations and quantities, and interconnecting wiring between components. Manufacturer's generic system layouts are not normally sufficient without modification to indicate specific Project requirements.

1.07 PRODUCT DATA:

- A. Identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information unique to this Project.
- B. Submit for review. After review, distribute as required for fabrication and construction, and for record documents purposes as described in Section 01 7700.
- C. Indicate electrical characteristics, including voltage, amperage, and phase.
- D. Indicate special utility characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

1.08 SAMPLES:

- A. Submit samples to illustrate functional and aesthetic characteristics of the Product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work so that adjacent or coordinating materials may be reviewed together.
- B. Submit samples of the precise article proposed to be furnished.
- C. Submit samples whenever a choice of color or pattern is available in a specified material or Product. Include the full range of manufacturer's standard colors, textures, and patterns for selection.
- D. Include identification on each sample, with full Project information.
- E. Submit the number of samples specified in individual specification sections, or two samples where not otherwise specified; one of which may be retained by Architect.
- F. Reviewed samples which may be used in the Work are indicated in individual specification sections.

1.09 MANUFACTURER'S INSTALLATION INSTRUCTIONS:

- A. Maintain on site one printed or electronic copy of manufacturer's instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing.
- B. When specified in individual specification sections, or upon request, submit instructions to Architect for information.
- C. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.10 MANUFACTURER CERTIFICATES:

- A. When specified in individual specification sections, or upon request, submit certification by manufacturer to Architect.
- B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Architect.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 4000 – QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes:
 - 1. Regulatory requirements.
 - 2. References.
 - 3. Quality assurance and control.
- B. Related Requirements:
 - 1. Division 00 – Procurement and Contracting Requirements:
 - a. Instructions to Bidders: Sales and use taxes.
 - 2. Section 01 3300 – Submittal Procedures: Submittals of manufacturer's instructions and certificates.
 - 3. Section 01 6000 – Product Requirements: Requirements for material and product quality.

1.02 REGULATORY REQUIREMENTS:

- A. General Requirements:
 - 1. Perform Work in conformance with the codes and standards listed in this Section, and with the requirements of federal, state and local authorities having jurisdiction.
 - 2. Become familiar with all regulatory requirements which may affect the Work.
 - 3. Standards which apply to specific portions of the Work are listed in individual specification sections.
 - 4. Comply with regulatory requirements in effect on the date for receiving bids, or on date of Contract Documents if there were no bids, except where a specific date is established.
 - 5. In the event of conflict between regulatory requirements and the Contract Documents, comply with regulatory requirements, but not before referring the points in question to the Architect for approval.
- B. Codes and Regulations:
 - 1. Building Code: Ohio Building Code.
 - 2. Handicapped Accessibility Code: ICC A117.1.
 - 3. Mechanical Code: Ohio Mechanical Code.
 - 4. Plumbing Code: Ohio Plumbing Code.
 - 5. Electrical Code: National Electrical Code, NFPA 70.

C. Standards: Ensure products and installation are in conformance with applicable recommendations and requirements of the following:

1. Factory Mutual Engineering.
2. Owner's insurance underwriter.
3. Americans with Disabilities Act (ADA) Standards for Accessible Design.
4. National Electrical Manufacturers Association (NEMA).
5. National Fire Protection Association (NFPA).
6. Occupational Safety and Health Administration (OSHA).
7. Underwriters Laboratories (UL).
8. Local utility companies.
9. Products requiring electrical connection shall be listed and classified by Underwriters Laboratories, Inc., or other testing firm acceptable to the authority having jurisdiction, as suitable for the purpose specified and indicated.

D. Taxes:

1. Bidders and Contractors shall be responsible for informing themselves of tax laws, requirements, regulations, and interpretations as they apply to this project.
2. Contractor shall pay all income taxes and payroll taxes required by local jurisdictions.

E. Permits and Fees:

1. The Architect will apply for Building Plan Approval from the Ohio Department of Commerce, including General and Electrical work. Contractor will not be responsible for initial filing fees.
 - a. All communications related to plan approval, including shop drawing submittals, are required to be made through the Architect.
 - b. Coordinate shop drawing submittals and correction letter responses with the project schedule, planned not to exceed the allowable number of resubmittals. Fees for additional resubmittals resulting from delinquent, incomplete, or incorrect information will be the responsibility of the Contractor.
2. Prior to beginning work, Contractor shall conduct a meeting with the building inspector, fire chief, and Owner to develop an approved egress plan for existing building exits affected by construction. Include costs for temporary construction necessary to implement the plan.
3. Except as noted above, each Contractor shall procure from the proper authorities and pay all fees for permits, taps, licenses, inspections, and other charges applicable to their Work, as required by state laws, city and county ordinances, and regulations pertaining to the work.
 - a. All costs shall be borne by the Contractor responsible for the work.

- b. Arrange for inspections to be performed, giving notice to inspecting authorities in ample time so that work can be inspected and approved as it progresses.
- c. Do not cover or conceal work requiring inspection until inspection has been performed.
- d. At the conclusion of the installation, secure a certificate of final inspection and approval by enforcement authorities.

1.03 REFERENCES:

- A. For Products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except where more rigid requirements are indicated in the Contract Documents or are required by applicable codes.
- B. Conform to edition of reference standard current on date of Contract Documents, except where a specific edition is established by code.
- C. Obtain copies of standards where required by product specification sections.
- D. Submit one copy of any referenced standard when requested by Architect.
- E. The contractual relationship, duties, and responsibilities of the parties in Contract nor those of the Architect shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.04 QUALITY ASSURANCE AND CONTROL:

A. General Requirements:

- 1. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.
- 2. Comply with manufacturer's instructions, including each step in sequence.
- 3. If manufacturer's instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- 4. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- 5. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.
- 6. Coordinate with Owner for procedures to mitigate risk of infectious diseases according to current regulatory requirements, and recommendations of the Centers for Disease Control and Prevention.

B. Personnel:

- 1. Perform work by persons qualified to produce workmanship of specified quality.

2. The Owner may direct the removal and replacement of personnel for the following:
 - a. Consistently poor workmanship or production of low quality work.
 - b. Failure to actively cooperate with the Owner, Architect, or other Contractors in the construction effort.
 - c. Theft, vandalism or fraudulent acts.
 - d. Dangerous or unsafe practices.
 - e. Use of alcohol or drugs; possession or sale of illegal substance of any kind.
 - f. Any activity in, on, or about the premises, or in connection with the work, that violates any ordinance, statute, or other regulation of any governmental body having jurisdiction over the premises.
3. Upon receipt of a written directive from the Owner requiring removal of an employee for one of the above causes, immediately remove the employee from the Project. The removal or replacement of an employee for the above causes shall not be cause for additional compensation. Any such dismissed worker shall not be reemployed in any other capacity for work on the Project.

C. Tolerances:

1. Monitor tolerance control of installed Products to produce acceptable Work. Do not permit tolerances to accumulate.
2. Comply with manufacturer's tolerances. Should manufacturer's tolerances conflict with Contract Documents, request clarification from Architect before proceeding.
3. Adjust Products to appropriate dimensions; position before securing Products in place.

D. Manufacturers' Field Services and Reports:

1. When specified in individual specification sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, adjustment and balancing of equipment, as applicable, and to initiate instructions when necessary.
2. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
3. Submit report in duplicate within 30 days of observation to Architect for information.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 4210 – ABBREVIATIONS

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Definition of abbreviations used in the Contract Documents.

1.02 ABBREVIATIONS – TERMS:

- A. Listed below are terms and abbreviations which may be found in the Contract Documents. Common English language terms have not been included. Refer also to Drawings and individual specification Sections for terms and abbreviations specific to those documents. Acronyms used to refer to associations and organizations are listed separately below. Where multiple definitions are listed for an abbreviation, refer to the context for the intended meaning. For abbreviations not listed, and where the intended meaning is not obvious, request interpretation from the Architect.

AC	air conditioning; alternating current	BSMT.	basement
A.B.	anchor bolt	BTU	British thermal unit
ACC.	accessible	BTUH	British thermal unit per hour
ACOUST.	Acoustical	C	Celsius; channel
ADA	Americans with Disabilities Act, Standards for Accessible Design	CAB.	cabinet
ADJ.	adjacent; adjustable	CAP.	capacity
A.F.F.	above finished floor	CAT.	catalog
A.F.G.	above finished grade	CATV	community antenna (cable) television
AFUE	annual fuel utilization efficiency	CAV.	cavity
AHU	air handling unit	CB	catch basin; cementitious (backer) board
ALT.	alternate	CCF	hundred cubic feet
ALUM.	aluminum	CFM	cubic feet per minute
AMP	ampere	CHW	chilled water; circulating hot water
ANOD.	anodized	CI	cast iron; curb inlet
APPROX.	approximate	CJ	construction joint; control joint
ARCH.	Architect	CKT.	circuit
ASSY.	assembly	CL	center line; class
ATTN.	attention	CLG.	ceiling; cooling
AUTO.	automatic	CLOS.	closet; closure
AUX.	auxiliary	CMU	concrete masonry unit
AWG	American wire gauge	CO	cased opening; cleanout; company
B&B	balled and burlapped	COEFF.	coefficient
BD.	board	COL.	column
B.F.F.	below finished floor	CONC.	concrete; concentric
BHP	brake horsepower	COND.	condenser; condensate
BLDG.	building	CONF.	conference
BLKG.	blocking	CONN.	connection
BLKHD.	bulkhead	CONT.	continue; continuous
BM	beam; benchmark	CONTR.	contract; contractor
BN	bullnose	CONV.	convert; conventional
BOT.	bottom	COORD.	coordinate
BRG.	bearing	CORR.	corridor; correct

CPT	carpet	EXH.	exhaust; exhibit
CPVC	chlorinated polyvinyl chloride	EXIST.	existing
CT	ceramic tile; countertop; current transformer	EXP.	expansion; exposed
CTR.	center	EXT.	exterior; extinguisher
CU	cubic; copper; coefficient of utilization	F	Fahrenheit; female
CUH	cabinet unit heater	FACP	fire alarm control panel
CW	cold water	FC	footcandle
CYL.	cylinder	FCO	floor cleanout
D	deep; depth; penny (nail)	FD	floor drain
DAT.	datum	FDN.	foundation
DB	decibel; dry bulb	FE	fire extinguisher
DBL.	double	FFE	finish floor elevation
DC	direct current	FH	fire hydrant
DDC	direct digital control	FHMS	flat head metal screw
DEG.	degree	FIG.	figure
DEL.	delete; deliver	FIN.	finish
DEPT.	department	FIXT.	fixture
DET.	detail	FL	flow line
DF	drinking fountain	FLA	full load amps
DI	ductile iron	FLG.	flange; flashing
DIA.	diameter	FLR.	floor
DIAG.	diagonal; diagram	FLUOR.	fluorescent
DIFF.	difference; diffuser	FOUND.	foundation
DIM.	dimension	FP	fire protection
DISC.	disconnect	FR	fire rating
DISP.	dispenser; disposal	FRP	fiber reinforced polyester
DIST.	distance; district; distribution	FRTW	fire retardant treated wood
DL	dead load	FS	Federal Specification
DOC.	document	FT	feet; foot
D.P.	down pipe	FTG.	footing
DR.	door	FURN.	furnace; furnish; furniture
DW	dishwasher	FXT.	fixture
DWG.	drawing	GA	gage
DWV	drain, waste and vent	GAL.	gallons
EA.	each	GALV.	Galvanized
E.C.	Electrical Contractor	GBF	granular backfill
EIFS	exterior insulation and finish system	G.C.	General Contractor
EJ	expansion joint	GCO	grade cleanout
EL.	elevation	GF	gas furnace
ELEC.	electric	GFCI	ground fault circuit interrupter
ELEV.	elevator	GL	glass
EP	edge of paving; electrical panel	GLULAM	glued laminated wood
EPDM	ethylene propylene diene monomer	GPM	gallons per minute
EPS	expanded polystyrene	GYP.	gypsum
EQUIP.	equipment	H	height
EQUIV.	equivalent	HB	hose bibb
ESMT.	easement	HC	HVAC Contractor; hollow core
ESP	external static pressure	HDO	high density overlay
EST.	estimate	HDW.	hardware
EW	each way	HID	high intensity discharge
EWC	electric water cooler	HM	hollow metal
		HORIZ.	horizontal
		HP	high pressure; horsepower

HPS	high pressure sodium	MISC.	miscellaneous
HT.	height	MLDG.	molding
HVAC	heating, ventilating and air conditioning	M.O.	masonry opening; motor operated
HW	hot water	MOD	motor operated damper
ID	inside diameter; identification	MON.	monument
IN.	inches	MSB	mop service basin
INCAND.	incandescent	MT.	mount
INCL.	included	MTD.	mounted
INSUL.	insulation	MTG.	mounting
INT.	interior	MTL.	metal
INV.	invert	NC	noise criteria; normally closed
IPS	international pipe standard; iron pipe size	NEC	National Electrical Code (NFPA 70)
IR	infrared	NIC	not in contract; noise isolation class
JAN.	janitor	NO	number; normally open
JST.	joist	NOC	notice of commencement
JT	joint	NRC	noise reduction coefficient
KD	kiln dried; knocked down	N.T.S.	not to scale
KIT.	kitchen	OA	outside air; overall
KO	knockout	OAI	outside air intake
KSF	thousand square feet	OC	on center
KVA	kilovolt amperes	OCC.	occupant
KW	kilowatt	OD	outside diameter
L	angle; liter	OH	overhead
LAM.	laminate	OPG.	opening
LAV	lavatory	OPP.	opposite
LB	pound; load bearing	OPT.	optional; optimum
LDG.	landing; loading	OZ.	ounce
LED	light emitting diode	P	pole
LF	linear feet (foot)	PART.	partial
LH	left hand	PC	Plumbing Contractor; point of curve
LL	live load; lead lined	PEND.	pendant
LLH	long leg horizontal	PERF.	perforated
LLV	long leg vertical	PERIM.	perimeter
LONG.	longitudinal	PERM.	permanent
LPG	liquid petroleum gas	PERP.	perpendicular
LRA	locked rotor amps	PH	phase
LTWT	lightweight	PI	point of intersection
LTG.	lighting	PIV	post indicator valve
MAINT.	maintenance	PKG	package; parking
MAN.	manual	PL	plate; property line
MATL.	material	P. LAM.	plastic laminate
MAX.	maximum	PLBG.	plumbing
MBH	thousand BTU per hour	PLYWD.	plywood
M.C.	HVAC Contractor; moisture content	PNL.	panel
MCA	minimum circuit amps	PORC.	porcelain
MDO	medium density overlay	PORT.	portable
MECH.	mechanical	POS	positive; position
MED.	medium; medical	PREF.	preference
MFR.	manufacturer	PREFAB.	prefabricated
MH	manhole	PREFIN.	prefinished
MIN.	minimum; minute	PRELIM.	preliminary
		PREV.	previous
		PROJ.	project

PSF	pounds per square foot	SV	sheet vinyl
PT	preservative treated	SW	switch
PVC	polyvinyl chloride	SWR.	sewer
QT	quarry tile	SYM.	symbol; symmetrical
QTY.	quantity	SYS.	system
R	radius; thermal resistance	T&G	tongue and groove
RA	return air	TAN.	tangent
RCB	rubber cove base	TB	through bolt; test boring
RD	roof drain	TC	top of curb
REBAR	reinforcing steel bars	TEL.	telephone
RECIRC.	recirculation	TEMP.	temporary; temperature; tempered
RECEPT.	reception; receptacle	TERM.	terminal
RECT.	rectangular	THK.	thickness
REF.	reference; refrigerator	TOIL.	toilet
REFL.	reflected	TP	top of pavement; telephone pole; toilet paper
REINF.	reinforcing; reinforced	TRANS.	transparent; transverse; transom
REQD.	required	TS	tube steel
RESIL.	resilient	TYP.	typical
REV.	revision	U	heat transfer coefficient
RH	right hand; relative humidity	UC	under cabinet
RM.	room	UG	underground
R.O.	rough opening	UH	unit heater
RPM	revolutions per minute	UNO	unless noted otherwise
RS	rough sawn; rapid start	UR.	urinal
RSB	rubber straight base	UTIL.	utility
RTU	rooftop unit	UV	unit ventilator; ultraviolet
R/W	right of way	V	volt
S4S	surfaced four sides	V.B.	vapor barrier
SA	supply air	VCT	vinyl composition tile
SAN.	sanitary	VERT.	vertical
SAT	suspended acoustical tile	VFY.	verify
SC	Site Contractor; solid core; shading coefficient	VNR	veneer
SCHED.	schedule	VOC	volatile organic compound
SCWD	solid core wood	VOL.	volume
SENS	sensible	VTR	vent through roof
SF	square feet (foot)	VWC	vinyl wall covering
SGFT	structural glazed facing tile	W	watt; width; west; wall
SHT.	sheet	W/	with
SIM.	similar	W/O	without
SM.	small	WC	water closet; water column
SP	static pressure	WCO	wall cleanout
SPKR.	speaker	WD	wood
SQ.	square	WDW.	window
SS	service sink; stainless steel	WH	wall hydrant; water heater
ST	storm	WOLM.	preservative treated
STC	sound transmission class	WT	weight
STD.	standard	WWF	welded wire fabric
STL.	steel	XFMR	transformer
STOR.	storage	XFR	transfer
STRUCT.	structural	XPS	extruded polystyrene
SURF.	surface	YD	yard
SUSP.	suspended		

1.03 ABBREVIATIONS – ASSOCIATIONS AND ORGANIZATIONS:

AAMA	American Architectural Manufacturers Association
AASHTO	American Association of State Highway and Transportation Officials
ABAA	Air Barrier Association of America
ACI	American Concrete Institute
ADC	Air Diffusion Council
AFPA	American Forest and Paper Association
AGA	American Gas Association
AHA	American Hardboard Association
AHRI	Air Conditioning, Heating, and Refrigeration Institute
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ALA	American Laminators Association
ALSC	American Lumber Standards Committee
ANSI	American National Standards Institute
APA	The Engineered Wood Association
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASSE	American Society of Sanitary Engineering
ASTM	American Society for Testing and Materials
AWI	Architectural Woodwork Institute
AWPA	American Wood Protection Association
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builder's Hardware Manufacturer's Association
BIA	Brick Institute of America
BICSI	Building Industry Consulting Service International
CDHS	California Department of Health Services
CISCA	Ceilings and Interior Systems Contractors Association
CISPI	Cast Iron Soil Pipe Institute
CPSC	Consumer Products Safety Commission
CRSI	Concrete Reinforcing Steel Institute
CSI	Construction Specifications Institute
DHI	Door Hardware Institute
DIN	Deutsches Institut für Normung
DOC	Department of Commerce
ECIA	Electronic Components Industry Association
EPA	Environmental Protection Agency
FCC	Federal Communications Commission
FM	Factory Mutual Engineering Corporation
FSC	Forest Stewardship Council
GA	Gypsum Association
HMMA	Hollow Metal Manufacturers Association
HPVA	Hardwood Plywood and Veneer Association
IAPMO	International Association of Plumbing and Mechanical Officials
ICC	International Code Council
ICC-ES	International Code Council Evaluation Service
ICEA	Insulated Cable Engineers Association
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IETF	Internet Engineering Task Force

ISO	International Organization for Standardization
MBMA	Metal Building Manufacturers Association
MIC	Masonry Industry Council
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NAAMM	National Association of Architectural Metal Manufacturers
NCMA	National Concrete Masonry Association
NCPWB	National Certified Pipe Welding Bureau
NECA	National Electrical Contractors Association
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NFRC	National Fenestration Rating Council
NFSHSA	National Federation of State High School Associations
NHLA	National Hardwood Lumber Association
NJATC	National Joint Apprenticeship and Training Committee for the Electrical Industry
NLGA	National Lumber Grades Authority
NRCA	National Roofing Contractors Association
NSF	National Sanitation Foundation
NSI	Natural Stone Institute
NTMA	National Terrazzo & Mosaic Association
NWWDA	National Wood Window and Door Association
OBC	Ohio Building Code
ODOT	Ohio Department of Transportation
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PDI	Plumbing and Drainage Institute
PS	Product Standards
RFCI	Resilient Floor Covering Institute
SDI	Steel Deck Institute
SDI	Steel Door Institute
SJI	Steel Joist Institute
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SPIB	Southern Pine Inspection Bureau
SPRI	Single Ply Roofing Industry
SSPC	Society for Protective Coatings
TCNA	Tile Council of North America
TIA	Telecommunications Industry Association
TPS	Technical Preservation Services, National Park Service
UBC	Uniform Building Code
UL	Underwriters Laboratories
USC	University of Southern California
USGBC	U. S. Green Building Council
WDMA	Window and Door Manufacturers Association

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 4520 – TESTING AND INSPECTING SERVICES

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Testing and inspecting services.

1.02 TESTING AND INSPECTING SERVICES:

- A. Coordinate inspection and testing work with independent testing firm employed by Owner. The testing firm will perform inspections, tests, and other services scheduled in this Section and as required by the Architect.
 - 1. At Owner's option, more than one firm may be employed.
 - 2. Testing required by individual specification Sections and not scheduled below, shall be performed at the Contractor's expense by a qualified independent testing firm acceptable to Architect and Owner.
- B. Inspecting, testing, and source quality control may occur on or off the project site. Perform off-site inspecting or testing as required by the Architect.
- C. The testing firm shall promptly submit reports indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
 - 1. Non-compliance of any portion of Work with Contract Document requirements shall be cause for rejection of that portion of Work.
 - 2. Retesting required because of non-conformance to specified requirements shall be performed by the same testing firm at Contractor's expense on instructions from the Architect.
 - 3. The testing firm is not authorized to revoke, alter, relax, enlarge, or release any requirement of the Contract Documents.
- D. Cooperate with testing firm; furnish samples of materials, design mix, manufacturer or supplier certifications, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
 - 1. Notify Architect and testing firm 48 hours prior to expected time for operations requiring services.
 - 2. Make arrangements with testing firm and pay for additional samples and tests required for Contractor's use.
- E. Testing or inspecting does not relieve Contractor from performing work in full compliance with Contract Documents.

1.03 SUBMITTALS:

- A. The testing firm shall distribute copies of each test report to the Architect and Contractor.

- B. The first copy of each type of report, and all test reports indicating non-compliance with specified requirements, shall be submitted promptly, but not more than 72 hours after test results are available.
- C. Remaining test reports shall be submitted at maximum monthly intervals.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.01 SCHEDULE OF TESTING AND INSPECTING SERVICES:

- A. Except for code required special inspections, scope of testing work is subject to modification at the discretion of the Owner. Provide periodic special inspections except where continuous special inspection is specifically indicated or required by code.
- B. Earthwork Testing: Excavating and Backfilling.
 - 1. Testing firm shall employ a full-time Soils Engineer and Soils Laboratory qualified in soils testing and evaluation to observe site grading, excavation and backfill, and placement of fill, and perform the activities scheduled below.
 - 2. Analyze native and imported fill and backfill material and top soil proposed for use to determine suitability for use and compliance with Contract Documents.
 - a. Test fill and backfill material to determine soil classification, plasticity index, optimum moisture content, and dry density.
 - 3. Field test natural grades to be retained, areas of cut, and areas of controlled fill and backfill to determine moisture content, percent of compaction and compliance with specified values. Provide minimum one test, and additional tests at the discretion of the Soils Engineer.
 - a. General Site Areas: One test for every 2000 cubic yards of fill and backfill, or in areas of natural grade or cut one test for every acre, located to give equal coverage to all earthwork areas.
 - b. Exterior Slabs and Walks: One test for each slab location, and one test for every 50 lineal feet of walk.
 - 4. Observe excavation and subgrade preparation; confirm size, depth, and suitability of the excavated areas; test soil bearing capacity to verify compliance with specified values; test porous fill to determine soil classification, depth, and percent of compaction.

C. Concrete Testing:

1. Testing firm shall test all Portland Cement concrete. The firm's personnel shall obtain samples and adequately protect all samples during storage and transporting.
 - a. Check batching and mixing operation periodically for compliance with the Contract Documents.
 - b. Review the manufacturer's mill test certificate for each shipment of cement and reinforcing steel, or conduct laboratory tests or spot checks of these materials as received.
 - c. Mold and test concrete field cylinders as scheduled.
2. Observe placement of reinforcing bars and mesh; verify size, spacing, lap dimensions, chairs and supports, concrete cover and surface condition of reinforcing is as specified; verify adequacy of formwork and ties to prevent movement during concrete placement.
3. Test concrete materials as follows:
 - a. Aggregate: ASTM C33.
 - b. Cement: ASTM C150; accompany all cement used on the job with a testing agency certificate indicating compliance of cement with all tests.
4. Test concrete for slump and strength as follows:
 - a. Secure composite samples in accordance with ASTM C172 from each mix design placed in any one day, or from each 100 cubic yards of concrete placed in continuous pours, whichever is less.
 - b. Cast cylinder specimens from each sample; cure cylinders in accordance with ASTM C39. Test cylinders for 7-day and 28-day strength. Test reports shall include temperature of air and concrete at site, mix proportions and all data necessary to determine compliance with Contract Documents.
 - c. Determine slump of the concrete for each sample and whenever consistency of concrete appears to vary; test in accordance with ASTM C143.
 - d. Test a portion of the air-entrained concrete samples to determine the amount of entrained air, in accordance with either ASTM C231 or ASTM C173.
 - (1) If these tests indicate at any time that air content is not within specified limits, the Contractor at his expense shall modify the materials as necessary to achieve compliance.
5. If the average strength of test cylinders for any portion of the structure constitutes a failure as defined in ACI 318, or if slump is beyond tolerances, the Architect may require changes in the concrete mix proportions at the Contractor's expense, may require additional testing in accordance with ASTM C42, or may declare all concrete work, of which the non-complying cylinders are representative samples, in violation of the Contract Documents.
6. If the work is in violation of the Contract Documents, or if there is a likelihood of the concrete having been frozen, the Contractor shall make loading tests at his

expense, if so directed by the Architect. If the unit area or member under consideration fails to pass the loading test or shows evident signs of failure, the Contractor shall remove and rebuild the defective construction at his expense, or shall provide at his expense such additional construction as the Architect considers necessary to make the structure sound.

- a. Conduct loading tests in the presence of representatives of the Owner and Architect in accordance with Chapter 20 of ACI 318.

END OF SECTION

SECTION 01 5000 – TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SUMMARY:

A. Section Includes:

1. Temporary Utilities: Electricity; lighting; heat and ventilation; telephone and internet; water.
2. Construction Facilities: Temporary buildings; sanitary facilities.
3. Access facilities.
4. Temporary barriers, enclosures, fencing, and security.
5. Temporary Controls: Fire protection; snow removal; water control.

B. Related Sections:

1. Section 01 7000 – Execution Requirements: Progress cleaning, waste management and disposal; protecting installed construction.
2. Section 01 7700 – Closeout Requirements: Final cleaning.

1.02 REGULATORY REQUIREMENTS:

A. Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:

1. Building code requirements.
2. Health and safety regulations.
3. Utility company regulations.
4. Police, fire department, and rescue squad rules.
5. Environmental protection regulations.

B. Engage the appropriate local utility company to install temporary service or connect to existing service. Where utility company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with utility company recommendations.

1. Arrange with company and existing users for a time when service can be interrupted.
2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked in services.

C. Provide plan approvals and permits for temporary buildings, where required by authorities having jurisdiction.

D. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.03 PROJECT CONDITIONS:

- A. Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on site.
- B. Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of permanent service.

1.04 TEMPORARY ELECTRICITY:

- A. Connect to Owner's existing power service. Do not disrupt Owner's need for continuous service. Exercise measures to conserve energy.
- B. Provide grounding and ground fault circuit protection as required.
- C. Provide adequate distribution equipment, wiring, and outlets to provide circuits for power and lighting.
 - 1. Provide 20 ampere duplex outlets on single phase branch circuits for power tools and fractional horsepower motors for every 2500 sq ft of active work area, located so that extension cords need not exceed 100 feet. Install outlets in outlet boxes with cover plates.
 - 2. Provide 20 ampere single phase branch circuits for lighting.
 - 3. Provide temporary service to field offices.
- D. Use of temporary electrical power system for welding operations is prohibited.
- E. Electrical Power Cords: Grounded extension cords; hard service type where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length voltage ratio.

1.05 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES:

- A. Provide and maintain lighting for construction operations to achieve a minimum lighting level of 5 footcandles. Provide additional lighting for performance of tasks.
- B. Provide and maintain lighting to exterior staging and storage areas after dark for security purposes to achieve a minimum lighting level of 1 footcandle.
- C. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.
- D. Provide guard cages or tempered glass enclosures where exposed to breakage. Provide wet location rated fixtures where exposed to moisture.
- E. Maintain lighting and provide routine repairs. Relocate temporary lighting as required during progress of the work.

1.06 TEMPORARY HEAT AND VENTILATION:

- A. Provide and pay for equipment as needed to maintain specified conditions for construction operations.
- B. Maintain temperature and humidity as required by specific construction activities, as specified in individual specification sections.
- C. Ventilate enclosed areas to assist curing of materials, to dissipate humidity, to attain and maintain specified moisture levels, to prevent accumulation of dust, fumes, vapors, or gases, and to prevent temperatures of enclosed areas from exceeding ambient outdoor temperatures by more than 10 degrees F when ambient outdoor temperatures are above 70 degrees F.
 - 1. Extend and supplement equipment with temporary fan units as required to maintain clean air for construction operations.
- D. Provide temporary heat where needed for performance of the work, for curing or drying of recently installed work, and for protection of work in place from adverse effects of low temperatures or high humidity.
 - 1. Provide heating for materials to prevent damage from frost or freezing and to permit construction to continue and progress uninterrupted.
 - 2. Provide, maintain, and supervise the operation of UL approved portable direct fired heaters, fired with LP gas, kerosene, #1, or #2 fuel oil. Salamanders and electric heaters will not be permitted. Observe necessary safety precautions; do not use LP gas fired heaters in low places of construction, such as pits, tunnels, etc., which can collect heavier than air gas or fumes.
 - 3. Do not use equipment producing carbon monoxide where fumes can contact freshly placed concrete or mortar.
- E. Temporary Dehumidification: Provide temporary dehumidification equipment where equipment used for temporary heat and ventilation is not adequate to maintain specified humidity. Provide, maintain, and supervise the operation of portable dessicant dehumidifiers, mechanical dehumidifiers, or similar equipment; equip with high volume blowers and inflatable plastic ducts. Adjust equipment and duct locations daily to assure even dehumidification.

1.07 TEMPORARY TELEPHONE AND INTERNET SERVICE:

- A. Provide, maintain, and pay for telephone service where required in connection with the work. Use of Owner's existing telephone service is not permitted. Use of cellular mobile phone system is acceptable, if adequate reception can be maintained.
- B. Provide, maintain, and pay for internet service where required in connection with the work. Use of Owner's internet service is not permitted. Use of cellular data system is acceptable, if adequate reception can be maintained.
- C. Post a list of emergency telephone numbers at a clearly marked location accessible to all construction personnel, including but not limited to fire, police, ambulance, poison control, and each utility company providing service to the site.

- D. Contractor and each subcontractor shall provide cell phone service with minimum one phone for the on-site superintendent.

1.08 TEMPORARY WATER SERVICE:

- A. Provide and maintain suitable quality water service for construction operations, temporary toilets, wash facilities, and drinking water. Connect to Owner's existing water system. Owner will pay cost of water used. Exercise measures to conserve water.
- B. Provide temporary piping system of sufficient capacity to meet needs of construction operations, with minimum 1 inch piping and vacuum breakers. Comply with local utility regulations. Sterilize temporary water piping prior to use.
- C. Extend branch piping with outlets located so water is available in areas where work is in progress, using maximum 100 ft hoses with threaded connections.
- D. Water Hoses: Minimum $\frac{3}{4}$ inch, heavy duty, abrasion resistant, flexible rubber hoses 100 feet long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.
- E. Provide temporary pipe insulation to prevent freezing. Replace piping and hoses damaged by freezing or other causes.

1.09 TEMPORARY BUILDINGS:

- A. Temporary buildings, where provided, shall meet the following requirements.
- B. Offices: Prefabricated mobile units; weather tight, with lighting, electrical outlets, heating and cooling equipment, equipped with sturdy furniture, drawing rack, shelving, bulletin board, and drawing display table with minimum 36 x 48 inch top. Provide space for project meetings with table and chairs to accommodate minimum one representative of the Architect, Owner, Contractor, and each major Subcontractor. Provide first aid kit and portable fire extinguisher.
- C. Sheds: Weather tight, substantial, of sufficient size to hold on-site materials which are subject to weather damage. Raise floors minimum 6 inches above ground on heavy joists or sleepers.
- D. Locate temporary buildings in approved locations, a minimum distance of 30 ft from existing and new structures.
- E. Provide walks for access to office from parking areas and from building.

1.10 TEMPORARY SANITARY FACILITIES:

- A. Provide and maintain temporary toilets in quantity and location required by applicable codes and regulations.
- B. Existing facility use is not permitted.
- C. Maintain facilities daily in clean and sanitary condition. Provide toiletry supplies.

1.11 ACCESS FACILITIES:

- A. Construct and maintain culverts, ramps, steps, platforms, scaffolds, and other means of access so that no portion of the Work is delayed or handicapped due to a lack of such facilities.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Where traffic must cross open trenches, provide steel plates of suitable strength, thickness and anchorage to permit traffic to cross trench. Shore and brace trench to prevent damage to traffic and utilities installed in trench.
- D. Vehicular Access and Parking:
 - 1. Limit construction traffic on existing on-site roads to designated routes.
 - 2. Limit parking for private vehicles of Contractor and Subcontractor personnel to designated areas.
 - 3. When site space is not adequate, provide additional off-site parking.

1.12 TEMPORARY BARRIERS:

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and public walkways required by governing authorities for public rights-of-way and for public access to existing buildings.
- C. Provide protection for plant life designated to remain. Replace damaged plant life.
- D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.
- E. Provide and maintain barrels with reflective tape and battery operated flashers to direct vehicular traffic away from work areas.
- F. Provide barriers as required by applicable regulations at edges of openings and other hazards, painted with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against.

1.13 EXTERIOR ENCLOSURES:

- A. Provide temporary insulated weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.
- B. Close openings of 25 square feet or less with plywood or similar materials. Close larger openings with plywood or fire retardant reinforced polyethylene securely attached to fire retardant treated wood framing.

- C. Close openings through floors, roofs, and horizontal surfaces with load bearing, wood framed construction.
- D. Maintain required exits for protection of life and property.

1.14 TEMPORARY FENCING:

- A. Construction: Commercial grade chain link fence.
- B. Provide 6 ft high fence around construction area and material storage areas; equip with vehicular and pedestrian gates with locks.
- C. Where required due to construction operations and sequence, relocate or remove and reinstall temporary fencing. Repair damaged fencing.
- D. Where construction sequence requires multiple relocations of temporary fencing, relocatable sections of fencing in maximum 12 foot lengths may be used, subject to approval.

1.15 SECURITY:

- A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.
- B. Limit entry into construction areas to the following:
 - 1. Contractor, including employees and Subcontractors.
 - 2. Architect, Owner, and persons authorized by them.
 - 3. Regulatory agency personnel legally entitled to inspect the project.
- C. Limit construction personnel to designated construction areas and access routes.
 - 1. Limit construction activities to Owner's property, street and highway rights-of-way, and permanent easements.
 - 2. Do not enter on or occupy with workers, tools, equipment, or material any ground outside the designated construction areas without written consent of the Owner of such property.
 - 3. Provide approved temporary signage as required to provide directional information to construction personnel and visitors.

1.16 TEMPORARY FIRE PROTECTION:

- A. Provide and maintain portable fire extinguishers, readily accessible throughout areas where work is in progress, in accordance with applicable fire code and local fire department regulations. At minimum, provide one 20 lb. ABC extinguisher.
- B. Locate fire extinguishers where convenient and effective for their intended purpose. Provide additional extinguishers at locations where hazardous work is in progress, including but not limited to painting, welding, or using torches or open flames for heating or cutting.
- C. Store combustible materials in containers in fire safe locations.

- D. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways, and access routes for fighting fires.
- E. Prohibit smoking in hazardous fire exposure areas.
- F. Provide supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition.

1.17 SNOW REMOVAL:

- A. Owner will provide snow removal from Owner occupied roads, parking areas and building entrances.
- B. Remove snow from construction roads and parking areas, work areas, material storage areas and field offices as required.

1.18 WATER CONTROL:

- A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment. Architect reserves the right to require additional pumping equipment without adjustment of Contract Sum.
- B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion. Provide temporary soil erosion and sediment control in accordance with ODOT SS 832.
- C. Control surface drainage at all areas to limit runoff onto adjacent properties to existing locations and quantities.

1.19 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS:

- A. Maintain temporary utilities, equipment, and facilities as long as needed for safe and proper completion of the Work.
- B. Relocate temporary utilities, equipment, and facilities as necessary to correct interference with permanent construction or to facilitate operations of other trades.
- C. Remove temporary utilities, equipment, facilities, and materials as rapidly as progress of the Work allows. Perform final removal prior to Final Application for Payment.
- D. Remove underground installations to a minimum depth of 3 ft. Grade site as indicated.
- E. Clean and repair damage caused by installation or use of temporary work.
- F. Restore existing facilities to original condition. Restore permanent facilities used during construction to specified condition. Repair damage to existing pavement and roads caused by construction operations.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 6000 – PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes:
 - 1. Basic product requirements.
 - 2. Product options.
 - 3. Substitution procedures.
 - 4. Product delivery requirements.
 - 5. Product storage and handling requirements.
- B. Related Requirements:
 - 1. Division 00 – Procurement and Contracting Requirements:
 - a. Instructions to Bidders: Substitution procedures.
 - b. Substitution Request form.

1.02 BASIC PRODUCT REQUIREMENTS:

- A. Provide new equipment and materials meeting quality standards of the manufacturer. Defective, damaged, reconditioned, or substandard equipment and materials are not acceptable. Remove unacceptable materials incorporated in the Work, replace with sound materials meeting specified criteria, and perform related corrective work to meet approval of Architect.
- B. Provide all equipment and materials required for complete assemblies and systems. Omissions of specific reference to incidental parts or accessories required does not constitute a release from furnishing such items.
- C. Products of the same type shall be provided by the same manufacturer unless specifically approved by the Architect.
- D. Products requiring electrical connection shall be listed and classified by Underwriters Laboratories, Inc., or other testing firm acceptable to the authority having jurisdiction, as suitable for the purpose specified and indicated.
- E. Do not use materials containing asbestos.
- F. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- G. Provide interchangeable components of the same manufacture, for components being replaced.
- H. Finishes:
 - 1. Where multiple colors, patterns, or finishes are available, selection will be made from manufacturer's standard range unless specifically indicated otherwise. Submit samples for selection under the provisions of Section 01 3300.

2. If not otherwise specified, provide equipment with manufacturer's standard baked enamel finish or equal. Do not field paint equipment unless specifically noted in the Contract Documents.

1.03 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, Fabricators, or Installers: Products of manufacturers, fabricators, or installers named and meeting specified criteria, standards and description. Submit a request for substitution in accordance with the following article for any manufacturer, fabricator, or installer not named.
 1. Where a manufacturer is listed by name only without model numbers or specific product reference, a request for substitution is not required. Where products of another manufacturer are listed by model number, provide the closest equivalent product meeting the specified requirements.
 2. All Products must meet specified criteria, standards and descriptions. For manufacturers listed by name only without model numbers or specific product reference, standard products may require modifications and accessories, which shall be included.
 3. Drawings and details incorporate design parameters specific to the products of manufacturers listed by model number in the specifications and schedules. Where equivalent products of other listed manufacturers are provided, coordinate related work and the work of other trades with the requirements of the products provided. Items requiring coordination include, but are not limited to, unit dimensions and clearances, roof openings and curbs, unit weight and structural supports, housekeeping pad dimensions, piping, venting, electrical requirements, controls, panelboard and light fixture dimensions and clearances, motor controls and connections, and equipment connections.
 4. Where a product listed by model number or specific product reference has been superseded or replaced by a different Product from the same manufacturer, provide the replacement Product, but not before submitting product data in accordance with Section 013300 for approval, specifically indicating all differences between the specified Product and the replacement Product.
- C. The phrase "or equal" or similar language does not exempt substitutions from compliance with the following Substitution Procedures. No substitutions are permitted unless specifically approved in writing for this Work by the Architect.

1.04 SUBSTITUTION PROCEDURES:

- A. Architect will consider requests for Substitutions in accordance with the Instructions to Bidders.

- B. Substitutions requested after award of contract may be considered or rejected without consideration, at the discretion of the Architect, and are limited to the following circumstances:
 - 1. Specified Products become unavailable through no fault of the Contractor. Such Substitutions shall not result in additions to the Contract Sum or Contract Time.
 - 2. The Substitution offers the Owner a substantial advantage in initial cost, life cycle cost, time, energy conservation, sustainable design, or other considerations, after deducting costs for redesign and coordination. Requests for such Substitutions shall include detailed information on the changes to the Contract Sum and Contract Time, including that of separate Contractors.
 - 3. None of the specified Products can meet the requirements of the Contract Documents, or receive necessary approval by a governing authority, and the Contractor certifies that the Substitution will meet the requirements. Such Substitutions shall not result in additions to the Contract Sum or Contract Time, except to the extent caused by regulatory requirements enacted or modified after the bid date.
- C. 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.
- D. Substitutions will be reviewed for general conformance with the intent of the Contract Documents but not for detailed compliance with all specified requirements. Approval of substitutions does not relieve the Contractor of the responsibility to comply with the Contract Documents, unless the variation is specifically identified in the substitution request.
- E. Substitutions incorporated in the Work without Architect's approval shall be removed and replaced with specified Products without additions to the Contract Sum or Contract Time.

1.05 PRODUCT DELIVERY REQUIREMENTS:

- A. Schedule deliveries to coordinate with installation schedule, to minimize long term storage at site and to minimize possibility of damage, deterioration, theft and other losses.
- B. Transport and handle Products in accordance with manufacturer's instructions.
- C. Accept Products at site, including unloading and uncrating. Promptly inspect shipments to ensure that Products comply with requirements, quantities are correct, and Products are undamaged.

1.06 PRODUCT STORAGE AND HANDLING REQUIREMENTS:

- A. Store and protect Products in accordance with manufacturer's instructions, with seals and labels intact and legible.

- B. Store sensitive Products in weather tight, climate controlled enclosures.
- C. For exterior storage of fabricated Products, place on sloped supports, above ground.
- D. Provide off-site storage and protection when site does not permit on-site storage or protection.
- E. Cover Products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation or potential degradation of Product.
- F. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- G. Provide equipment and personnel to store and handle Products by methods to prevent soiling, disfigurement, or damage.
- H. Arrange storage of Products to prevent overcrowding and to permit access for inspection. Periodically inspect to verify Products are undamaged and are maintained in acceptable condition.
- I. Do not exceed manufacturer's shelf life limitations. Discard and replace Products not installed prior to stated expiration date.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 7000 – EXECUTION REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY:

A. Section Includes:

1. Examination.
2. Preparation.
3. Field engineering.
4. Execution.
5. Progress cleaning.
6. Construction waste management and disposal.
7. Protecting installed construction.

B. Related Sections:

1. Section 01 7700 – Closeout Requirements: Final cleaning.
2. Section 02 4119 – Selective Demolition.

1.02 SUBMITTALS FOR INFORMATION: In accordance with Section 01 3300.

A. Construction Waste Management Plan: Identify material types and estimated quantities for recycling, reuse, or sorting. Describe separation requirements, on-site storage requirements, destinations and transportation methods for each type of material. For waste that cannot be recycled, identify disposal locations and methods.

1. Provide copy of construction waste management plan to each worker, subcontractor, and supplier when they first begin work on site. Provide periodic training and enforcement as necessary.

1.03 EXAMINATION:

- A. Verify that existing site conditions, field measurements, and substrate surfaces are acceptable for subsequent Work. Beginning new Work indicates acceptance of existing conditions.**
- B. Verify that existing substrate is capable of structural attachment of new Work being applied or attached.**
- C. Examine and verify specific conditions described in individual specification sections.**
- D. Verify that utility services are available, of the correct characteristics, and in the correct location.**

1.04 PREPARATION:

- A. Clean substrate surfaces prior to applying next material or substance.**
- B. Seal cracks or openings of substrate prior to applying next material or substance.**

- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

1.05 FIELD ENGINEERING:

- A. Locate and preserve survey control and reference points, and establish elevations, lines and levels, under the supervision of experienced engineering and surveying personnel utilizing recognized engineering survey practices.
- B. Arrange for replacement of dislocated or destroyed survey control points, or relocation required by changes in grade or other reasons, based on original survey control. Permanent points removed or destroyed during progress of the Work shall be reinstalled at the expense of the party responsible for their removal.
- C. Verify setbacks and easements; confirm Drawing dimensions and elevations.

1.06 EXECUTION:

- A. Install, erect, and apply Products in accordance with manufacturer's instructions and recommendations. In the event of conflict with requirements of the Contract Documents, request resolution in accordance with Section 01 3100.
- B. Cutting and Patching:
 - 1. New Construction: Provide chases, openings, and recesses in new construction, where required by the work of each trade; provide and set in place all boxes, sleeves, inserts, and similar components.
 - 2. Existing Walls, Floors and Ceilings: Work shall be done by persons skilled and experienced in the applicable trade. Finish work shall match material and quality of adjacent construction to the approval of the Architect.
 - 3. Slabs, Walks, and Pavements: Saw cut existing materials to provide a neat joint at removal limits, except where removal terminates at an existing joint. Pin new concrete to existing with #5 bars, minimum 24 inches long, spaced at 18 inches o.c. and embedded minimum 12 inches into existing concrete.
 - 4. Submit written request in advance of cutting or altering elements which may affect:
 - a. Structural integrity of element.
 - b. Integrity of weather-exposed or moisture-resistant elements.
 - c. Efficiency, performance, maintenance, useful life, or safety of element.
 - d. Visual qualities of elements exposed to view.
 - e. Work of Owner or separate Contractor.
 - 5. Execute cutting, fitting, and patching, including excavation and fill, to complete Work, and to:
 - a. Fit the several parts together, to integrate with other Work.
 - b. Uncover work to install or correct ill-timed Work.
 - c. Remove and replace defective and non-conforming Work.
 - d. Remove samples of installed Work for testing.

- e. Provide openings in elements of Work for penetrations of mechanical and electrical Work.
 - 6. Execute work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
 - 7. Cut masonry and concrete materials using masonry saw or core drill.
 - 8. Do not cut, notch, or bore holes in metal framing members without approval; utilize factory punch-outs or holes where present. Do not cut or notch flanges.
 - 9. Restore Work with new Products in accordance with requirements of Contract Documents.
 - 10. Refinish surfaces to match adjacent finishes in all respects, including color, size and texture. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit.
 - 11. Identify hazardous substances and conditions exposed during the Work to the Architect for decision or remedy.
- C. Above-Ceiling Work: Where work is required above existing suspended ceilings scheduled to remain, remove and protect ceiling panels as required for access to work areas. Use caution to avoid damage to ceiling grid. Reinstall ceiling panels when work is complete and tested. Coordinate and pay for repair or replacement of grid, panels, and related components damaged during performance of the work.
- D. Items Removed for Reinstallation:
- 1. Items removed which are to be relocated, reused, or reinstalled in existing locations, shall be stored on site in approved locations until progress of the work permits reinstallation.
 - 2. Contractor removing the items shall be responsible for their storage and protection.
- 1.07 PROGRESS CLEANING:
- A. Maintain areas free of waste materials, debris, packaging materials, and rubbish. Maintain site in clean and orderly condition.
 - B. Clean dirt, debris, and mud from on-site locations as directed. Clean and wash down construction vehicles prior to leaving the site as required to minimize tracking of dirt, debris, and mud onto public roads. Clean dirt, debris, and mud from public roads as directed.
 - C. Remove debris and rubbish from pipe chases, plenums, and other limited access or remote spaces, prior to enclosing the space.
 - D. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust. Clean surfaces of installed products in accordance with manufacturer's instructions.

- E. Collect non-hazardous waste materials, debris, packaging materials, and rubbish daily and place in dumpsters or approved locations for recycling or salvage.
- F. Clean and organize work areas daily. Maintain cleanliness in all work areas to assist other Contractors, suppliers, and the Owner in the timely installation of equipment and implementation and completion of concurrent responsibilities.

1.08 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL:

- A. Provide and maintain containers of adequate size to receive scrap construction materials, packaging and debris generated by performance of the work.
 - 1. Do not dispose of construction waste materials in trash receptacles or recycling containers designated for Owner's use.
 - 2. Do not allow waste materials to accumulate on site. Change out loaded containers for empty containers as demand requires.
 - 3. Remove and promptly dispose of contaminated or vermin infested materials.
 - 4. Post approved temporary signage at waste collection areas to assist workers in achieving waste management goals.
- B. Recyclable and Recoverable Material: Materials may be separated, stored, protected, and handled at the project site, or transported off-site for separation. Arrange for regular collection, transport, and delivery to respective approved recycling centers to keep site clear and prevent contamination of materials.
- C. Salvaged Materials: Temporarily store on site in approved locations, neatly stacked and arranged; remove from the Owner's property promptly. Salvaged material shall not be sold on site.
- D. Hazardous Substances: Collect and remove from site daily, and dispose of off-site in a legal location and manner, all hazardous substances in aerosol cans, tubes, pails, buckets, barrels, canisters or other factory packaged containers. Do not dispose of hazardous substances on-site or in containers for materials to be recycled, salvaged, or disposed of in landfills.

1.09 PROTECTING INSTALLED CONSTRUCTION:

- A. Protect equipment and materials from damage during installation. Replace or repair equipment, material or facilities damaged by the Contractor during, or due to, or in the performance of the Work, as directed by the Architect.
- B. Protect installed Work; provide special protection where specified in individual specification sections.
 - 1. Provide temporary and removable protection for installed Products. Control activity in immediate work area to prevent damage.
 - 2. At the end of each work day, protect all work likely to be damaged from weather, rain, wind, storms, frost, heat, and other causes of injury or damage.
 - 3. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

4. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
 5. Upon installation of finish materials and construction exposed to view, and where existing work and finish materials are not indicated to be removed or modified by the work of this project, protect such construction against damage or injury, using materials that may be easily removed without leaving residue or permanent stains.
 6. During construction, cap, plug, or cover open ends of ducts, piping, and conduit, and equipment openings, to prevent entry of foreign material.
- C. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, follow recommendations for protection from waterproofing or roofing material manufacturer.
- D. Prohibit traffic from landscaped areas.
- E. Properly and carefully repair materials and finishes which are cut, damaged, disturbed or interfered with to match adjacent and surrounding surfaces, to the approval of the Architect. If repairs cannot be made satisfactorily, replace or refinish with new materials.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 01 7700 – CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes:
 - 1. Final cleaning.
 - 2. Closeout procedures.
 - 3. Project record documents.
 - 4. Operation and maintenance data.
 - 5. Warranties.
 - 6. Spare parts and maintenance materials.
- B. Related Requirements:
 - 1. Division 00 – Procurement and Contracting Requirements:
 - a. Certificate of Substantial Completion form.
 - b. Waiver & Release Affidavit forms.
 - 2. Section 01 2900 – Payment Procedures.
 - 3. Section 01 3100 – Project Management and Coordination.
 - 4. Section 01 7000 – Execution Requirements: Progress cleaning.

1.02 FINAL CLEANING:

- A. Execute final cleaning prior to final project assessment. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit of work to the condition expected from a commercial cleaning and maintenance program. Comply with manufacturer's instructions.
- B. Upon completion of the work, remove debris, tools, machines, construction equipment, and other items pertaining to the work.
- C. The following are examples, but not by way of limitation, of cleaning levels required.
 - 1. Remove labels not required as permanent labels.
 - 2. Clean exposed hard-surfaced materials to a dirt-free condition, free of dust, stains, films, and noticeable distracting substances.
 - 3. Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces.
 - 4. Wipe surfaces of mechanical and electrical equipment clean; remove excess lubrication and other substances.
 - 5. Remove spatters or other deposits of paint, concrete, adhesives, soil, oil, or any other material foreign to the surface involved.
 - 6. Clean concrete surfaces broom clean.
 - 7. Clean site, including landscaped and developed areas, free from litter and foreign substances; sweep paved areas broom clean, remove stains, petrochemical spills,

- and other foreign deposits; rake clean ground surfaces not landscaped or paved, to a smooth, even textured surface.
8. Remove waste and surplus materials, rubbish, and construction facilities from the site; dispose of lawfully.
- D. Removal of Protection: Remove temporary protection and facilities installed during construction to protect previously completed installations during the remainder of the construction period.
 - E. Comply with governing regulations and safety standards for cleaning operations.
 - F. Additional cleaning required after final cleaning due to punch list work and warranty repairs shall be performed by the Contractor responsible for the additional work.

1.03 CLOSEOUT PROCEDURES:

- A. At Substantial Completion, submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents (except for punch list items attached to certification) and ready for Architect's review.
- B. Submit the following to Architect. Final Application for Payment will not be processed until all submittals are received.
 1. Closeout Submittals in accordance with this Section, including project record documents, operation and maintenance data, and warranties.
 2. Receipt signed by Owner, acknowledging delivery of spare parts and maintenance materials. List specific items and quantities.
 3. Copy of Certificate of Plan Approval, Certificate of Occupancy, and other required regulatory approvals, with signatures of all inspectors. Originals shall remain on site; obtain receipt from Owner.
 4. Consent of Surety to Final Payment (AIA Document G707).
 5. Final Waiver & Release Affidavits for Contractor and each subcontractor and supplier.
 6. Certificates of Insurance for Contractor and each subcontractor.
 7. Prevailing Wage Affidavit of Compliance.
- C. Submit final Application for Payment in accordance with Section 01 2900.

1.04 PROJECT RECORD DOCUMENTS:

- A. Maintain one set of the following record documents on site; record actual revisions to the Work:
 1. Drawings.
 2. Specifications.
 3. Addenda.
 4. Change Orders and other modifications to the Contract.
 5. Reviewed submittals including shop drawings and product data.
 6. Manufacturer's instructions for assembly, installation, and adjusting.

- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction. Label each document "Project Record Documents" in stamped or printed letters, on front cover or other conspicuous place.
- D. Record information concurrent with construction progress, before internal or hidden construction is concealed.
- E. Make documents available to Architect at all times.
- F. Record Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
 - 1. Manufacturer's name, product model and number, and supplier.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
- G. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured depths of foundations in relation to finish floor datum.
 - 2. Measured horizontal and vertical location of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - 4. Changes made by Addenda and modifications.
 - 5. Field changes of dimension and detail.
 - 6. Details not on original Contract drawings.
- H. Record Submittals: Approved product data and manufacturer's installation instructions, marked to record field changes.
- I. Remove Architect title block and seal from all documents.
- J. Submit to Architect prior to or together with final Application for Payment.

1.05 OPERATION AND MAINTENANCE DATA:

- A. General Requirements:
 - 1. Submit to Architect for review; allow sufficient time for review and revision prior to final Application for Payment. Upon approval, submit final copies to Owner and Architect.
 - 2. Submittals to Architect and Owner shall be in electronic format. At Owner's option, also submit up to two hard copy sets.
 - 3. Electronic Submittals: Data submitted in electronic format shall be limited to PDF files on DVD or USB drive, unless otherwise approved in advance by Architect.

4. Hard Copy Submittals:
 - a. Submit data bound in 8½ x 11 inch format, organized in three-ring binders with durable rigid covers. Provide multiple volumes where appropriate; organized and labeled in a coordinated set with matching appearance.
 - b. Prepare binder cover with printed title of manual and title of project. Identify subject matter of binder on cover and spine.
 - c. Include a Table of Contents for each volume.
 - d. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titles clearly printed under reinforced plastic tabs.

B. Operation and Maintenance Manuals:

1. Directory: List names, addresses, and telephone numbers of Architect, Contractor, Subcontractors, suppliers, and maintenance providers.
2. Operation and Maintenance Instructions: Arrange by system and subdivide by specification section. For each category, identify the following as applicable to the Product or system:
 - a. Significant design criteria.
 - b. List of products, clearly identifying specific product or part installed, with options and accessory items indicated.
 - c. Schematic drawings and wiring diagrams for each system, with parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 - f. Maintenance instructions for equipment and systems, including recommended service intervals and troubleshooting procedures.
 - g. Information required for reordering specially manufactured products.
3. Project Documents and Certificates: Include the following:
 - a. Test reports for each item with specified field or laboratory testing.
 - b. Warranty documents in accordance with this Section. Indicate names, addresses, telephone numbers, and procedures for filing a claim and obtaining warranty services.

1.06 WARRANTIES:

A. General Requirements:

1. Execute and assemble transferable warranty documents from subcontractors, suppliers, and manufacturers. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of warranty on Work that incorporates products.
2. Include in Operation and Maintenance Manuals.

3. For items of Work delayed beyond date of Substantial Completion, provide updated submittal prior to or together with final Application for Payment, listing date of actual completion as start of warranty period.
 4. Written warranties made to Owner are in addition to contractual, implied, and expressed warranties, and shall not limit duties, obligations, rights and remedies otherwise required by Contract Documents and available under law.
 5. Warranty claims shall be resolved in the same venue and using the same dispute resolution method as provided for the Prime Contract.
- B. Contractor's Warranty: Contractor shall provide warranties, and shall correct nonconforming Work, in accordance with the Agreement between Owner and Contractor.
- C. Specific Warranties: Provide written documentation for each warranty specified in individual specification sections.
1. At the time of shop drawing and product data submittal, submit a preliminary copy of each specific warranty for review in accordance with Section 01 3300.
 2. Provide full warranty for parts and labor, without dollar amount limitation or proration based on period of use, unless specifically indicated in individual specification sections.
 3. Warranty periods begin on the Date of Substantial Completion, unless specifically indicated in individual specification sections. Where manufacturer warranties begin at an earlier date, such as the date of shipment or installation, coordinate procurement and scheduling so that specified warranty periods are not compromised. Provide extended warranty coverage where necessary.
 - a. In the event that items of Work covered by a warranty have punch list work remaining on the Date of Substantial Completion, the warranty period shall not begin until all such work is complete.
 4. Where Warranties from Subcontractors, suppliers or manufacturers are limited to material only, Contractor shall include warranty coverage for labor, shipping, equipment, and other costs required to remove defective Work and install replacement materials.
 5. Warranty provisions requiring Owner to provide notice to manufacturer shall allow a minimum time period of 30 days for such notice.
 6. If the terms of a warranty require Owner signature, registration, or other action prior to commencement of warranty coverage, Contractor shall take all necessary steps to ensure validity of the warranty, and shall indemnify Owner for loss of warranty coverage caused by failure to do so.
- D. Manufacturer Warranties: Where a manufacturer provides a standard product warranty that exceeds the duration of the Contractor's warranty or a Specific Warranty, Contractor shall take all necessary actions to ensure that the manufacturer warranty remains in effect beyond the expiration of the shorter warranty periods.

1.07 SPARE PARTS AND MAINTENANCE MATERIALS:

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification sections.
- B. Extra materials shall be from the same lot as installed materials.
- C. Provide protective covering for storage; identify with appropriate labels.
- D. Deliver to project site and place in location as directed.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION

SECTION 02 4119 – SELECTIVE DEMOLITION

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes: Minor demolition and removal for remodeling.
- B. Related Sections:
 - 1. Section 01 3100 – Project Management and Coordination: Alteration project procedures.
 - 2. Section 01 5000 – Temporary Facilities and Controls: Temporary enclosures.
 - 3. Section 01 7000 – Execution Requirements: Cutting and patching; items removed for reinstallation; progress cleaning; construction waste management and disposal.

1.02 REGULATORY REQUIREMENTS:

- A. Comply with all applicable codes and regulations in addition to being responsible for the prevention of any damage to the adjoining materials and site.
- B. Permits: Secure and pay for all necessary permits required for this portion of the work.
- C. Do not close or obstruct egress width to any building or site exit unless approved in writing.
- D. Do not disable or disrupt building fire or life safety systems without 3 days prior written notice to Owner.
- E. Comply with requirements of Ohio Environmental Protection Agency and U.S. EPA.
 - 1. If notification of demolition or renovation is required, provide all required documentation to the appropriate agency.
 - 2. If testing, inspection, or analysis of potential asbestos-containing material is required, employ a certified Asbestos Hazard Evaluation Specialist to perform such work.
 - a. This Contractor's bid shall be submitted on the basis that the amount of regulated asbestos-containing material (RACM) to be removed or disturbed, if any, will be less than the quantity regulated by the National Emission Standards for asbestos.
 - b. If testing, inspection, or analysis reveals quantities of RACM sufficient to subject the project to the requirements of the National Emission Standards for asbestos, promptly notify the Architect and the Owner, and do not disturb any materials identified as RACM. The Owner will issue special instructions relating to the disposition of such material. The Owner reserves the right to contract independently for the removal of any or all hazardous materials.

3. If required to do so, employ an individual trained in the provisions of the National Emission Standards for asbestos. This individual shall be on site at all times during the removal of RACM.

1.03 PROJECT CONDITIONS:

- A. Provide labor, materials, equipment, insurance and services necessary for the proper and entire completion of the demolition work required for the project.
- B. Visit the site prior to bidding and ascertain pertinent local conditions such as location, accessibility and general character of the site, the character and extent of the existing work within or adjacent to the site, and any other work being performed thereon at the time.
- C. Include the removal and disposition (or the incorporation in the new work, as the case may be) of all existing portions of the work which are indicated as being removed, or when it becomes necessary to remove such in order to properly complete the new work as shown.
- D. Maintain adequate safety measures at all times to protect the existing building, adjacent buildings, their occupants, employees, pedestrians and anyone who may have occasion to frequent the premises in the course of maintaining normal operations. There shall be complete cooperation among Architect, Owner and Contractors to see that all safety requirements are carried out.
- E. Where adjoining construction or site improvements are in a condition that might be misconstrued as damage caused by demolition operations, prepare photographs or video of sufficient detail to document existing conditions; deliver to Architect prior to beginning demolition.
- F. Furnish all necessary shoring, signs, barricades, dust curtains, etc., to ensure the safety of persons in adjacent areas and other workers in same area.
- G. During working hours the Contractor shall be on the job personally or shall be represented by a competent superintendent. The Contractor shall coordinate all trades and subcontractors and provide adequate labor, equipment and materials as needed.
- H. Conduct demolition to minimize interference with occupied building areas.
- I. Cease operations immediately if structure appears to be in danger; notify Architect. Do not resume operations until directed.
- J. Ownership of Removed Materials:
 1. Salvageable and reusable equipment and materials removed are the property of Owner, and shall be delivered to the locations directed by Owner.
 2. Removed materials that are obviously not reusable shall be removed from the site and disposed of.
 3. Items in question shall be brought to the attention of the Owner's representative, who shall determine whether they are to be salvaged or removed from the site and disposed of.

1.04 SEQUENCING AND SCHEDULING:

- A. Perform and complete demolition work in a timely manner so as not to disrupt adjacent activities any longer than necessary.
- B. Coordinate scheduling of noisy, odor-producing and dusty work with Owner to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. Provide labor, materials, tools, and equipment as necessary to complete demolition work.

PART 3 EXECUTION

3.01 PREPARATION:

- A. Protect existing materials and surfaces which are not to be demolished.
- B. Prevent movement of structure; provide bracing and shoring.
- C. Notify affected utility companies and utilities protection services at least two full working days before starting work; comply with their requirements. Mark site to indicate proposed excavation area.
- D. Mark location and termination of utilities.
- E. Provide appropriate temporary signage including signage for exit or building egress.

3.02 DEMOLITION:

- A. Disconnect, remove, cap and identify designated utilities within demolition areas.
- B. Demolish in an orderly and careful manner. Protect existing supporting structural members.
- C. Removal of Site Construction: ODOT 202.
- D. Removal of Slabs, Walks, and Pavements: Saw cut existing materials to provide a neat joint at removal limits, except where removal terminates at an existing joint.
- E. Disposal: Remove demolished materials from site except items to be retained by Owner or reinstalled in the work, or as specifically noted otherwise. Do not burn or bury materials on site. Pay fees for transportation and disposal of removed materials.
 - 1. Dispose of materials removed from the site in a legal location and manner.
 - 2. Remove and dispose of mercury-containing switches and thermostats in accordance with EPA regulations. Transport in accordance with ODOT regulations.
 - 3. Do not dispose of demolished materials, excavated materials, trees, brush, or other debris in wetlands, flood plains, stream corridors, environmentally sensitive areas, surface waters or storm sewers, even with the permission of the property owner.

4. Do not engage in open burning of debris removed from the project, except in compliance with the regulations of all authorities having jurisdiction, and with all required permits.
- F. Remove materials as work progresses. Upon completion of work, leave areas in clean condition.
- G. Remove temporary work.

3.03 MINOR ELECTRICAL DEMOLITION FOR REMODELING:

- A. Examination:
 1. Verify field measurements and circuiting arrangements are as shown on Drawings.
 2. Verify that abandoned wiring and equipment serve only abandoned facilities.
 3. Demolition drawings are based on superficial field observation and existing record documents, where available. Report discrepancies to Architect before disturbing existing installation.
 4. Beginning of demolition means installer accepts existing conditions.
- B. Preparation:
 1. Disconnect electrical systems in walls, floors and ceilings scheduled for removal.
 2. Coordinate utility service outages with Utility Company and Owner.
 3. Provide temporary wiring and connections to maintain existing systems in service during construction.
- C. Demolition:
 1. Remove, reroute, or replace existing facilities and services as required to permit installation of new work or alterations to old work.
 2. Remove abandoned wiring to source of supply.
 3. Remove exposed abandoned conduit, including abandoned conduit above accessible ceilings. Plug or cap conduit at a point well behind the proposed new finished closures or surfaces.
 4. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned or removed. Provide blank cover for abandoned boxes which are not removed.
 5. Where devices, luminaires, or equipment are removed, reconnect existing loads not removed, if any, to existing circuit; verify circuit integrity and operation.
 6. Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.
 7. Repair adjacent construction and finishes damaged during demolition work.
 8. Maintain access to existing electrical installations which remain active. Modify installation or provide access panel as appropriate.
- D. Clean and repair existing materials and equipment which remain or are to be reused.
 1. Panelboards: Clean exposed surfaces and check tightness of electrical connections. Replace damaged circuit breakers and provide closure plates for vacant positions. Provide typed circuit directory showing revised circuiting arrangement.

3.04 PROTECTION:

- A. Exercise caution to avoid damage to existing surrounding materials and structures which are to remain.
- B. Protect path of travel from demolition areas to waste collection areas to prevent damage to floor and wall finishes and other existing construction to remain.
- C. Prevent damage to adjoining properties, existing buildings, pavement, sidewalks, landscaping, and similar features. Make all necessary repairs where required and do all patching to meet existing conditions.

END OF SECTION

SECTION 03 0100 – MAINTENANCE OF CONCRETE

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes: Preparation of concrete and application of resurfacing materials.
- B. Related Sections:
 - 1. Section 03 3000 – Cast-in-Place Concrete.

1.02 SUBMITTALS: In accordance with Section 01 3300.

- A. Product Data: Indicate product standards, physical and chemical characteristics, technical specifications, limitations, maintenance instructions, and general recommendations regarding each material.

1.03 QUALITY ASSURANCE:

- A. Materials Manufacturer: Company specializing in manufacturing the products specified in this Section with minimum three years documented experience.
- B. Applicator: Company specializing in concrete repair with minimum three years documented experience, approved by manufacturer.

1.04 DELIVERY, STORAGE, AND HANDLING: In accordance with Section 01 6000.

- A. Comply with instructions for storage, shelf life limitations, and handling.

1.05 ENVIRONMENTAL REQUIREMENTS:

- A. Do not apply material if it is raining or snowing or if such precipitation appears to be imminent.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. Polymer-Modified Portland Cement Resurfacer: Fast setting type; abrasion resistant; freeze/thaw resistant; vapor permeable.
 - 1. Manufacturers: In accordance with Section 01 6000.
 - a. Sika Corp.; SikaQuick Concrete Resurfacer.
 - 2. Compressive Strength: ASTM C109; 3500 psi at 28 days.

2.02 MIXING:

- A. When available from the manufacturer, use pre-proportioned, pre-mixed materials.

- B. Field mix in accordance with manufacturer's instructions, using clean equipment and containers.
 - 1. Mix only that quantity of material that can be used within its pot life.

PART 3 EXECUTION

3.01 EXAMINATION:

- A. Verify that surfaces are ready to receive work.
- B. Beginning of installation indicates acceptance of existing surfaces and substrates.

3.02 PREPARATION:

- A. Clean and mechanically prepare concrete surfaces to provide a clean and sound substrate. Remove dust, laitance, grease, curing compounds, waxes, impregnations, foreign particles, coatings, efflorescence, corrosion and disintegrated materials. Wire brush using water; rinse surface and allow to dry.
- B. Flush out cracks and voids by sandblasting or high-pressure water blasting, as approved.
- C. Verify that adjacent surfaces are clean and sound, free of standing water and frost.
- D. Extend existing control and expansion joints through patch or overlay.

3.03 APPLICATION:

- A. Dampen surface with clean water. Substrate should be saturated surface dry with no standing water during application.
- B. Apply resurfacer in accordance with manufacturer's instructions, in one pass to nominal ¼ inch and maximum ½ inch thickness. Trowel surface smooth.
- C. Moist cure with water or wet burlap. Protect against direct sunlight, wind, rain, or frost until fully cured.

3.04 CLEANING:

- A. Leave finished work and work areas in a neat, clean condition without evidence of spillovers onto adjacent areas.

3.05 PROTECTION:

- A. Take precautions to avoid damage to any surface near the work areas due to mixing and handling of the products.

END OF SECTION

SECTION 03 1000 – CONCRETE FORMING

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes: Concrete forming and accessories.
- B. Related Sections:
 - 1. Section 03 3000 – Cast-in-Place Concrete.

1.02 QUALITY ASSURANCE:

- A. Perform concrete work in accordance with ACI 301. Maintain one copy on site.
- B. Perform formwork in accordance with ACI 347.

PART 2 PRODUCTS

2.01 FORMING MATERIALS:

- A. Wood Form Materials:
 - 1. Plywood for Surfaces Exposed to View: APA High Density Overlay Plyform Class I Exterior, thickness in accordance with APA V345; sound undamaged sheets with clean, true edges.
 - 2. Plywood for Surfaces Not Exposed to View: APA B-B Plyform Class I Exterior, thickness in accordance with APA V345; sound undamaged sheets with clean, true edges.
 - 3. Lumber: Kiln dried softwood; grade as required for loading conditions.
- B. Prefabricated Forms: Preformed steel or glass fiber reinforced plastic; matched, tight fitting, stiffened to support weight of concrete without deflection detrimental to tolerances and appearance of finished surfaces.

2.02 FORMING ACCESSORIES:

- A. Form Ties: Metal snap-off type, free of defects that could leave holes larger than 1 inch in concrete surface.
- B. Form Release Agent: Colorless mineral oil which will not stain concrete, absorb moisture, or impair natural bonding or color characteristics of coating intended for use on concrete.
 - 1. Manufacturers: In accordance with Section 01 6000.
 - a. Euclid Chemical Company; Eucoslip VOX.
 - b. Laticrete International; Debond Form Coating.
 - c. Sonneborn Building Products; Cast-Off WB.
 - 2. VOC Content: Maximum 340 gm/liter.

- C. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Sized as required, of sufficient strength and character to maintain formwork in place while placing concrete.

PART 3 EXECUTION

3.01 EXAMINATION:

- A. Verify lines, levels, and centers before proceeding with formwork. Ensure that dimensions agree with drawings.

3.02 PREPARATION:

- A. Coordinate the placement of joint devices with erection of concrete formwork and placement of form accessories.

3.03 FORMING:

- A. Formwork Erection: Erect formwork, shoring and bracing to achieve design requirements, in accordance with requirements of ACI 301.
 - 1. Earth forms are permitted only at footings and grade beams excavated from undisturbed soil, where soil conditions are sufficiently stable to eliminate the possibility of slide-in. Hand trim sides and bottom of earth forms. Remove loose soil prior to placing concrete.
 - 2. Construct formwork so that concrete members are of the correct size, shape, alignment, elevation, and position.
 - 3. Provide bracing to ensure stability of formwork. Shore or strengthen formwork subject to overstressing by construction loads.
 - 4. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.
 - 5. Align joints and make watertight. Keep form joints to a minimum.
 - 6. Obtain approval before framing openings not indicated on Drawings.
 - 7. Coordinate formwork erection with work of other sections requiring attachment of components to formwork.
 - 8. If formwork is placed after reinforcement resulting in insufficient concrete cover over reinforcement, request instructions from Architect before proceeding.
- B. Application of Form Release Agent:
 - 1. Apply form release agent on formwork in accordance with manufacturer's recommendations.
 - 2. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items.
 - 3. Do not apply form release agent where concrete surfaces will receive special finishes or applied coverings which are affected by agent. Soak inside surfaces of untreated forms with clean water. Keep surfaces coated prior to placement of concrete.

C. Inserts, Embedded Parts, and Openings:

1. Provide formed openings where required for items to be embedded in or passing through concrete work.
2. Locate and set in place items which will be cast directly into concrete.
3. Coordinate with work of other sections in forming and placing openings, slots, reglets, recesses, sleeves, bolts, anchors, raceways, conduits, ducts, other inserts, and components of other Work.
4. Install accessories in accordance with manufacturer's instructions, straight, level, and plumb. Ensure items are not disturbed during concrete placement.
5. Provide temporary ports or openings in formwork where required to facilitate cleaning and inspection. Locate openings at bottom of forms to allow drainage.
6. Close temporary openings with tight fitting panels, flush with inside face of forms, and neatly fitted to joints which will not be apparent in exposed concrete surfaces.

D. Form Cleaning:

1. Clean forms as erection proceeds, to remove foreign matter within forms.
2. Clean formed cavities of debris prior to placing concrete.
3. Flush with water or use compressed air to remove remaining foreign matter. Ensure that water and debris drain to exterior through clean-out ports.
4. During cold weather, remove ice and snow from within forms. Do not use de-icing salts. Do not use water to clean out forms, unless formwork and concrete construction proceed within heated enclosure. Use compressed air or other means to remove foreign matter.

E. Formwork Tolerances: ACI 301.

F. Form Removal:

1. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads.
2. Loosen forms carefully. Do not wedge pry bars, hammers, or tools against finish concrete surfaces scheduled for exposure to view.
3. Store removed forms in manner that surfaces to be in contact with fresh concrete will not be damaged. Discard damaged forms.

3.04 FIELD QUALITY CONTROL:

- A. Inspect erected formwork, shoring, and bracing to ensure that work is in accordance with formwork design, and that supports, fastenings, wedges, ties, and items are secure.

END OF SECTION

SECTION 03 3000 – CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes:
 - 1. Cast-in-place concrete construction:
 - a. Stairs.
 - b. Sidewalks.
 - c. Control, expansion, and contraction joint devices associated with concrete work, including joint sealants.
 - 2. Concrete reinforcing.
 - 3. Concrete curing.
 - 4. Concrete finishing.
- B. Products Installed But Not Furnished Under This Section:
 - 1. Section 05 5200 – Metal Railings: Metal anchors.
- C. Related Sections:
 - 1. Section 01 4520 – Testing and Inspecting Services.
 - 2. Section 03 1000 – Concrete Forming.
 - 3. Section 03 3500 – Concrete Finishing.
 - 4. Section 07 1400 – Fluid Applied Waterproofing.

1.02 SUBMITTALS: In accordance with Section 01 3300.

- A. Shop Drawings:
 - 1. Reinforcing: Indicate bar sizes, spacings, locations, and quantities of reinforcing steel and wire fabric, bending and cutting schedules, and supporting and spacing devices.
 - 2. Joint Layout: Indicate layouts and joint locations for slabs and sidewalks. Indicate locations of construction joints.
- B. Product Data: Provide data on concrete mix designs, joint devices, attachment accessories, and admixtures.

1.03 QUALITY ASSURANCE:

- A. Perform concrete work in accordance with ACI 301.
- B. Perform steel reinforcement in accordance with ACI SP-66 and CRSI 63, 65, and Manual of Practice.
- C. Acquire cement and aggregate from same source for all work.

- 1.04 DELIVERY, STORAGE AND HANDLING: In accordance with Section 01 6000.
- A. Deliver packaged materials in manufacturer's packaging including application instructions.
- 1.05 ENVIRONMENTAL REQUIREMENTS:
- A. Conform to ACI 305R when concreting during hot weather. Provide precautions against plastic shrinkage where indicated by air temperature, relative humidity, concrete temperature, and wind velocity.
 - B. Conform to ACI 306R when concreting during cold weather.

PART 2 PRODUCTS

2.01 REINFORCING:

- A. Reinforcing Steel: ASTM A615, 60 ksi yield grade; deformed billet steel bars, unfinished.
- B. Welded Steel Wire Fabric: ASTM A1064, Plain Type; in flat sheets; unfinished.

2.02 REINFORCING ACCESSORIES:

- A. Tie Wire: Minimum 16 gauge annealed type.
- B. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for strength and support of reinforcement during concrete placement conditions, including load bearing pad on bottom to prevent vapor retarder puncture. Metal accessories shall be galvanized.
- C. Special Chairs, Bolsters, Bar Supports, Spacers Adjacent to Weather Exposed Concrete Surfaces: Plastic coated steel type; size and shape as required.

2.03 REINFORCING FABRICATION:

- A. Fabricate concrete reinforcing in accordance with ASTM A184, CRSI Manual of Practice, and ACI SP-66.
- B. Locate reinforcing splices not indicated on drawings, at point of minimum stress.
- C. Remove rust scale and coatings which may reduce bond from reinforcing prior to fabrication.
- D. Cold bend reinforcing bars to minimum bend diameters in accordance with ACI 301.
- E. Extend horizontal bars in walls and footings minimum 30 bar diameters or 18 inches around corners.

2.04 CONCRETE MATERIALS:

- A. Cementitious Materials:
 - 1. Portland Cement: ASTM C150, Type I – Normal.

2. Fly Ash: ASTM C618; Type C or Type F.
 - a. Fly ash may be substituted for up to 25 percent of the cement content for each concrete mix.
 3. Ground Granulated Blast Furnace Slag (GGBFS): ASTM C989, Grade 100 minimum. GGBFS may be substituted for up to 35 percent of the cement content for each concrete mix.
- B. Fine and Coarse Aggregates: ASTM C33.
- C. Water: ASTM C1602; clean, potable and not detrimental to concrete.

2.05 ADMIXTURES:

- A. Manufacturers: In accordance with Section 01 6000. Admixtures shall be the products of a single manufacturer.
1. GCP Applied Technologies.
 2. Master Builders Solutions.
 3. Premiere Concrete Admixtures.
 4. Sika Corporation.
- B. Air Entrainment: ASTM C260, neutralized vinsol resin.
- C. Chemical: ASTM C494.
1. Type A – Water Reducing.
 2. Type B – Retarding.
 3. Type C – Accelerating.
 4. Type D – Water Reducing and Retarding.
 5. Type E – Water Reducing and Accelerating.
- D. Plasticizing: ASTM C1017.
- E. Admixtures containing more than 0.1 percent chloride ions are not approved.

2.06 ACCESSORIES:

- A. Non-Shrink Grout for Dowels to Existing Concrete: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 2400 psi in 48 hours and 7000 psi in 28 days.
1. Manufacturers: In accordance with Section 01 6000.
 - a. Master Builders; Set Grout.
 - b. Sonneborn Building Products; SonogROUT.
 - c. Sika Corporation; Sika Grout 212.
- B. Bonding Agent: Polymer resin emulsion.
1. Manufacturers: In accordance with Section 01 6000.
 - a. GCP Applied Technologies; Daraweld-C.
 - b. Master Builders Solutions; MasterEmaco A660.

- c. Sika Corporation; Sika Bond.

2.07 JOINT DEVICES AND FILLER MATERIALS:

- A. Joint Filler: One of the following at Contractor's option; ½ inch thick.
 - 1. ASTM D994 or ASTM D1751; asphalt impregnated fiberboard or felt.
 - 2. ASTM D4819; closed cell polyethylene.
 - 3. ASTM D8139; closed cell polypropylene.
- B. Bond Breaker: No. 15 asphalt saturated felt.
- C. Construction Joint Devices: Galvanized steel with mill finish, minimum 20 gauge; 8 inch thick, formed to tongue and groove profile, knockout holes spaced at 6 inches, ribbed steel spikes with tongue to fit top screed edge.
 - 1. Manufacturers: In accordance with Section 01 6000.
 - a. Heckmann Building Products, No. 95.
- D. Joint Sealant: ASTM C920 Type M, Grade P, Class 25, Use T; cold applied two part polyurethane, self leveling; with corresponding primer.
 - 1. Manufacturers: In accordance with Section 01 6000.
 - a. Master Builders Solutions; MasterSeal SL 2.
 - b. Quaker Sealants & Coatings Company; QSC-231.
 - c. Sika Corporation; Sikaflex-2c SL.
 - d. Tremco, Inc.; THC 901.

2.08 CONCRETE MIXES:

- A. Mix concrete in accordance with ACI 304. Deliver concrete in accordance with ASTM C94. Do not mix concrete more than 90 minutes.
- B. Select proportions for normal weight concrete in accordance with ACI 301 Method 1.
- C. Provide concrete to the following criteria:
 - 1. Exterior Concrete, and Concrete Exposed to Weather:
 - a. Compressive Strength (28 day): Minimum 4500 psi.
 - b. Air Entrained: In accordance with ACI 301.
 - c. Slump (plus or minus 1 inch): 3 inches.
 - 2. Concrete Fill for Overexcavated Areas:
 - a. Compressive Strength (28 day): Minimum 1500 psi.
 - b. Aggregate Size (maximum): ½ inch.
 - c. Slump (maximum): 6 inches.
 - 3. Concrete Work Not Otherwise Scheduled:
 - a. Compressive Strength (28 day): 3500 psi.
 - b. Aggregate Size (maximum): 1 inch.
 - c. Slump (plus or minus 1 inch): 3 inches.

- D. Maximum Size of Coarse Aggregate: In accordance with ACI 301 unless noted otherwise.
- E. Use accelerating admixtures in cold weather only when approved by Architect. Use of admixtures will not relax cold weather placement requirements.
- F. The use of calcium chloride is not permitted.
- G. Use set retarding admixtures during hot weather only when approved by Architect.
- H. Add air entraining agent to normal weight concrete mix for work exposed to exterior.

2.09 CURING MATERIALS:

- A. Liquid Membrane Curing Compound: ASTM C309, Type I, Class B; dissipating type.
 - 1. Manufacturers: In accordance with Section 01 6000.
 - a. Euclid Chemical Co.; Kurez DR VOX.
 - b. Laticrete International.
 - c. Tamms Industries.
 - d. W. R. Meadows, Inc.
- B. Absorptive Mats: ASTM C171, burlap-polyethylene, minimum 8 oz/sq yd, or reinforced water-resistant laminated paper, bonded to prevent separation during handling and placing.
- C. Water: Potable, not detrimental to concrete.

2.10 FINISHING MATERIALS:

- A. Abrasive Aggregate: 95 percent minimum fused homogeneous aluminum oxide.
 - 1. Manufacturers: In accordance with Section 01 6000.
 - a. Master Builders Solutions, MasterTop 120SR.
 - b. Laticrete International, Inc.; Grip It AO.

PART 3 EXECUTION

3.01 EXAMINATION:

- A. Verify that anchors, seats, plates, reinforcement, and other items to be cast into concrete are accurately placed, positioned securely, and will not cause hardship in placing concrete.
- B. Verify that underslab construction, including mechanical and electrical work, is installed complete, backfilled, inspected, and approved.

3.02 PREPARATION:

- A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions.

- B. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels, and pack solid with non-shrink grout.
- C. Coordinate the placement of joint devices with erection of concrete formwork and placement of form accessories.

3.03 PLACING REINFORCING:

- A. Verify that reinforcing is free of dirt and form release agents.
- B. Place, support, and secure reinforcement against displacement. Do not deviate from required position.
- C. Splice reinforcing bars minimum 12 inches and 36 bar diameters.
- D. Place welded wire fabric in maximum lengths. Lap adjacent sheets minimum 6 inches; secure lapped edges together at maximum 48 inches o.c. Hold fabric back minimum 2 inches from construction joints and expansion joints.
- E. Accommodate placement of formed openings.
- F. Maintain concrete cover around reinforcing in accordance with ACI 318.
- G. Maintain clear distance between reinforcing bars, minimum 1 inch and 1-1/3 times the maximum coarse aggregate size.
- H. Tolerances: In accordance with ACI 301.

3.04 PLACING CONCRETE:

- A. Place concrete in accordance with ACI 301.
- B. Notify Architect minimum 48 hours prior to commencement of operations.
- C. Ensure reinforcement, inserts, embedded parts, and joint devices are not disturbed during concrete placement.
- D. Place slabs on grade and sidewalks in pattern indicated and as approved by Architect.
 - 1. Separate slabs from vertical surfaces with ½ inch thick joint filler.
 - a. Place joint filler in slab pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.
 - b. Extend joint filler from bottom of slab to within ½ inch of finished slab surface.
 - 2. Provide expansion joints with ½ inch thick joint filler at maximum 20 ft o.c. both ways in exterior sidewalks. Align joints with joints in adjacent curbs.
 - a. Place joint filler in slab pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.
 - b. Extend joint filler from bottom of slab to within ½ inch of finished slab surface.

3. Provide control joints in slabs at maximum 20 ft o.c. unless noted otherwise, and in exterior sidewalks to subdivide concrete into areas of minimum 16 sq ft and maximum 36 sq ft, or as detailed.
 - a. Control joints may be tooled or saw cut at Contractor's option.
4. Install construction joint devices in coordination with slab pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete. Thicken slab to full depth of construction joint device.
- E. Place concrete continuously between predetermined expansion and construction joints.
- F. Do not interrupt successive placement. Do not permit cold joints to occur. Do not permit horizontal joints in walls or piers.
- G. Saw cut joints within 24 hours after placing. Use 3/16 inch thick blade, cut into 1/4 depth of slab thickness.
- H. Apply sealant to exposed joints in accordance with manufacturer's instructions.
- I. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
- J. Provide mechanical equipment for conveying concrete to assure a continuous flow of concrete at the delivery end. Provide runways for wheeled concrete conveying equipment from the concrete delivery point to the locations of final deposit. Keep interior surfaces of conveying equipment, including chutes, free of hardened concrete, debris, water, snow, ice, and other deleterious materials.
- K. Cold Weather Placing: Do not use frozen materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials. Ascertain that forms, reinforcing steel, and adjacent concrete surfaces are entirely free of frost, snow, and ice before placing concrete.
- L. Remove excess and unsuitable concrete from project site and dispose of in an acceptable location.

3.05 CURING AND PROTECTION:

- A. Cure concrete surfaces in accordance with ACI 308.
- B. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, excessive temperature changes, and mechanical injury.
- C. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
- D. Schedule of Curing Methods:
 1. Cure horizontal surfaces by ponding, spraying, absorptive mat, or membrane curing compound.
 2. Cure vertical surfaces by spraying or membrane curing compound.

- E. Concrete Curing:
 - 1. Ponding: Maintain 100 percent coverage of water over floor slab areas continuously for 4 days.
 - 2. Spraying: Spray water over surfaces and maintain wet for 7 days.
 - 3. Absorptive Mat: Saturate material and place over floor slab areas, lapping ends and sides; maintain in place for 7 days.
 - 4. Membrane Curing Compound: Apply curing compound in accordance with manufacturer's instructions in two coats with second coat applied at right angles to first.
- F. Protect finished concrete surfaces from damage by subsequent construction operations.
- G. Do not permit traffic over unprotected surfaces.

3.06 CONCRETE FINISHING:

- A. Provide concrete surfaces with finishes in accordance with the definitions in ACI 301. Finish concrete flatwork surfaces in accordance with ACI 301 and ACI 302.
 - 1. Concealed Formed Concrete: Rough form finish.
 - 2. Exposed Formed Concrete: Smooth rubbed finish.
 - 3. Exterior Slabs and Sidewalks: Broom finish.
 - 4. Exterior Stairs and Landings: Nonslip finish with dry shake application of abrasive aggregate.
- B. Tool exposed slab edges, expansion joints, and tooled control joints with ¼ inch radius edging tool.
- C. Maximum Variation of Surface Flatness: ¼ inch in 10 ft, ACI 301 Class B.

3.07 FIELD QUALITY CONTROL:

- A. Testing firm will perform concrete testing in accordance with Section 01 4520.
 - 1. Provide free access to Work and cooperate with testing firm.
 - 2. Submit proposed mix design of each class of concrete to testing firm for review prior to commencement of Work.
 - 3. Tests of cement and aggregates may be performed to ensure conformance with specified requirements.
- B. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances, or specified requirements. Repair or replacement of defective concrete will be determined by the Architect.

3.08 PATCHING:

- A. Allow Architect to inspect concrete surfaces upon removal of forms.
- B. Excessive honeycomb, voids over ½ inch diameter, or embedded debris in concrete is not acceptable. Notify Architect upon discovery.
- C. Patch imperfections and tie holes in concealed surfaces in accordance with ACI 301.

- D. Patch, fill, touch-up, and repair surface defects as directed by Architect for each individual area.
1. Repair exposed concrete surfaces containing defects which adversely affect the appearance of the finish. Remove and replace the concrete having defective surfaces if the defects cannot be repaired to the satisfaction of the Architect. Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycomb, rock pockets, holes left by tie rods and bolts, fins and other projections on the surface, stains, and other discolorations that cannot be removed by cleaning.
 2. Repair concrete surfaces containing defects which may adversely affect the durability of the concrete. Remove and replace the concrete having defective surfaces if the defects cannot be repaired to the satisfaction of the Architect. Surface defects include cracks in excess of 0.01 inch wide, cracks of any width and other surface deficiencies which penetrate to the reinforcement or completely through non-reinforced sections, crazing, honeycomb, rock pockets, and spalls, except minor breakage at corners.

END OF SECTION

SECTION 03 6200 – NON-SHRINK GROUTING

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Non-shrink grout for setting metal fabrications.

1.02 DELIVERY, STORAGE, AND HANDLING: In accordance with Section 01 6000.

- A. Maintain packaged materials clean, dry, and protected against dampness, freezing, and foreign matter.

1.03 ENVIRONMENTAL REQUIREMENTS:

- A. Conform to ACI 305R when performing work during hot weather.
- B. Conform to ACI 306R when performing work during cold weather.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. Non-Shrink Grout: ASTM C1107, Class B; non-catalyzed, multipurpose construction type containing mineral aggregate; Portland Cement-based; minimum compressive strength 9000 psi at 28 days; flowable, stiff, or plastic consistency.
 - 1. Manufacturers: In accordance with Section 01 6000.
 - a. Euclid Chemical Co., Hi-Mod Grout.
 - b. Master Builders, Set Grout.
 - c. Sika Corp.; SikaGrout 212.
 - 2. Mix in accordance with manufacturer's instructions.

PART 3 EXECUTION

3.01 INSTALLATION:

- A. Surface Preparation: Clean areas to be grouted and keep free of oil, grease, dirt, and contaminants. Remove loose materials. Provide relief openings where required to avoid entrapment of air. Metal components in contact with grout shall be de-rusted and free of paint or oils. Concrete in contact with grout shall be thoroughly saturated with water a minimum of 12 hours prior to grout placement. Remove excess water from holes and voids just prior to grout placement.
- B. Forming: Follow forming procedures which allow for complete filling of the space to be grouted and venting to avoid air entrapment. Anchor support elements to prevent movement. Remove support only after grout has hardened sufficiently. Pre-treat

wood surfaces with form oil. Cut back edges of concrete which are less than one inch thick to form a uniform unit.

- C. Place grout mixture into prepared areas from one side to the other, rapidly and continuously. Trowel grouted surface smooth, splay neatly to 45 degrees.
- D. Curing: Wet cure exposed shoulders for minimum 72 hours.

END OF SECTION

SECTION 05 5000 – METAL FABRICATIONS

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes: Shop fabricated steel and aluminum items.
- B. Related Sections:
 - 1. Section 03 3000 – Cast-In-Place Concrete: Placement of metal fabrications in concrete.
 - 2. Section 05 5200 – Metal Railings.

1.02 PERFORMANCE REQUIREMENTS:

- A. Conform to applicable building code for applicable loads.

1.03 SUBMITTALS: In accordance with Section 01 3300.

- A. Shop Drawings: Indicate materials, finishes, profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.
 - 1. Indicate welded connections using standard AWS welding symbols. Indicate net weld lengths.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. Steel Sheet: ASTM A653, galvanized to G90 designation.
- B. Aluminum Extrusions: ASTM B221.
- C. Bolts, Nuts, and Washers: ASTM A307, galvanized to ASTM A153 for galvanized components.
- D. Welding Materials: AWS D1.1; type required for materials being welded.
 - 1. Welding Electrodes: E70XX.
- E. Shop and Touch-Up Primer: SSPC 15, Type 1, red oxide.
- F. Touch-Up Primer for Galvanized Surfaces: SSPC 20.
- G. All materials shall be new and free from rust.

2.02 FABRICATION:

- A. Fit and shop assemble items in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured. Miter members at changes of direction, except where specifically noted otherwise.

- C. Continuously seal joined members by continuous welds or by intermittent welds and plastic filler.
- D. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- E. Exposed Mechanical Fastenings: Flush countersink screws or bolts, unobtrusively located, consistent with design of component, except where specifically noted otherwise.
- F. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.
- G. Drill or punch all holes required for the attachment of work of other trades.

2.03 FABRICATION TOLERANCES:

- A. Maximum Misalignment of Adjacent Members: 1/16 inch.
- B. Maximum Bow: 1/8 inch in 48 inches.
- C. Maximum Deviation From Plane: 1/16 inch in 48 inches.

2.04 FINISHES:

- A. Surfaces to be Primed: Prepare in accordance with SSPC procedures.
 - 1. Do not prime surfaces that will be embedded in concrete or grout, or connections that will be field welded.
 - 2. Prime paint items with one coat.
- B. Surfaces to be Galvanized: Apply galvanized coating after fabrication to ASTM A123, minimum 1.25 oz/sq ft.

PART 3 EXECUTION

3.01 EXAMINATION:

- A. Verify that field conditions are acceptable and are ready to receive work.

3.02 PREPARATION:

- A. Clean and strip primed steel items to bare metal where site welding is required.
- B. Supply items required to be cast into concrete with setting templates. Coordinate work with installer.

3.03 INSTALLATION:

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

- C. Field weld components indicated on shop drawings. Perform field welding in accordance with AWS D1.1.
- D. Obtain approval prior to site cutting or making adjustments not scheduled.
- E. After erection, prime welds, abrasions, and surfaces not shop primed or galvanized, except surfaces to be in contact with concrete.

3.04 SCHEDULE:

- A. The following Schedule is a list of principal items only. Refer to Drawing details for items not specifically scheduled.
- B. Supplemental Support Framing: Light gauge galvanized steel channel framing systems.
 - 1. Manufacturers: In accordance with Section 01 6000.
 - a. Tyco Electrical & Metal Products; Unistrut.
 - b. Cooper B-Line, Inc.; 4Dimension.
 - c. Thomas & Betts; Superstrut.
- C. Abrasive Tread Nosings: Extruded aluminum with aluminum oxide/silicon carbide abrasive anti-slip filler; tread and nosing configuration as detailed; with integral anchors.
 - 1. Manufacturer: In accordance with Section 01 6000.
 - a. Wooster Products, Inc.; Supergrit Type 241BF.
 - b. American Safety Tread Co., Inc.
 - c. Balco, Inc.
 - d. Barry Pattern & Foundry.
 - 2. Abrasive Color: As selected.

END OF SECTION

SECTION 05 5200 – METAL RAILINGS

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes: Steel railings, balusters, and fittings.
- B. Related Sections:
 - 1. Section 03 3000 – Cast-In-Place Concrete: Placement of metal anchors in concrete.
 - 2. Section 09 9000 – Painting and Coating.

1.02 DESIGN REQUIREMENTS:

- A. Fabricate railing assembly and attachments to resist a concentrated load of 200 lbs applied in any direction at any point, and a uniform load of 50 lb/ft applied in any direction, without damage or permanent set.

1.03 SUBMITTALS: In accordance with Section 01 3300.

- A. Shop Drawings: Indicate profiles, sizes, connection attachments, anchorage, size and type of fasteners, and accessories.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. Steel Pipe: ASTM A53, Grade B, Schedule 40.
- B. Steel Tubing: ASTM A513; minimum 1/8 inch wall thickness, or as required for application.
- C. Steel Bars: ASTM A36.
- D. Stainless Steel: ASTM A167, Type 304 or 316.
- E. Stainless Steel Tubing: ASTM A269, Type 304.
- F. Welding Materials: AWS D1.1; type required for materials being welded.
- G. Welding Electrodes: E70XX.
- H. Shop and Touch-Up Primer: SSPC 15, Type 1, red oxide.
- I. Touch-Up Primer for Galvanized Surfaces: SSPC 20.
- J. All materials shall be new and free from rust.

2.02 STEEL RAILING SYSTEMS:

- A. Rails and Posts: 1¼ inch nominal diameter steel pipe or 1½ inch outside diameter steel tubing; welded joints.
- B. Balusters: ½ inch diameter steel bars, spaced at maximum 4 inches o.c.
- C. Fittings: Elbows, T-shapes, brackets, end caps, escutcheons; cast steel.
- D. Mounting: Adjustable brackets and flanges, with inserts for casting in concrete.
- E. Exposed Fasteners: Flush countersunk screws or bolts; consistent with design of railing; ASTM B633, Class Fe/Zn 25 zinc plated.
- F. Splice Connectors: Steel welding collars.

2.03 FABRICATION:

- A. Fit and shop assemble items in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured. Provide hardware and reinforcement to accommodate site assembly and installation.
- C. Provide anchors and other components required for connecting railings to structure.
- D. Continuously seal joined members by continuous welds or by intermittent welds and plastic filler. Drill condensate drainage holes at bottom of members at locations that will not encourage water intrusion.
- E. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- F. Exposed Mechanical Fastenings: Flush countersink screws or bolts, unobtrusively located, consistent with design of component, except where specifically noted otherwise.
- G. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.
- H. Accurately form components to suit stairs and landings, to each other and to building structure.
- I. Accommodate expansion and contraction of members and building movement without damage to connections or members.

2.04 FINISHES:

- A. Steel: Galvanized to ASTM A123, minimum 2.0 oz/sq ft galvanized coating.
 - 1. Base Bid: Prime painted; field paint in accordance with Section 09 9000.
 - 2. Alternate 1A: Shop prefinished with powder coating to color as selected.
- B. Stainless Steel:
 - 1. Alternate 1B: No. 4 satin finish.

2. Alternate 1C: Shop prefinished with powder coating to color as selected.

PART 3 EXECUTION

3.01 EXAMINATION:

- A. Verify that field conditions are acceptable and are ready to receive work.
- B. Verify field dimensions prior to fabrication.

3.02 PREPARATION:

- A. Clean and strip items to bare metal where site welding is required.
- B. Supply setting templates for items required to be cast into concrete. Coordinate work with installer.

3.03 INSTALLATION:

- A. Install components plumb and level, accurately fitted, free from distortion or defects.
- B. Anchor railings to structure to achieve required structural capacity.
- C. Provide anchors, plates, angles, hangers, and struts required for connecting railings.
- D. Field weld components indicated on shop drawings. Perform field welding in accordance with AWS D1.1.
- E. Field bolt and weld to match shop bolting and welding. Conceal bolts and screws whenever possible. Where not concealed, use flush countersunk fastenings.
- F. Mechanically fasten joints butted tight, flush, and hairline. Grind welds smooth and flush.
- G. After erection, prime welds, abrasions, and surfaces not shop primed, galvanized, or prefinished, except surfaces to be in contact with concrete.

3.04 ERECTION TOLERANCES:

- A. Maximum Variation from Plumb: $\frac{1}{4}$ inch.
- B. Maximum Offset from True Alignment: $\frac{1}{4}$ inch.

END OF SECTION

SECTION 07 1400 – FLUID APPLIED WATERPROOFING

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes: Fluid applied asphalt emulsion membrane.
- B. Related Sections:
 - 1. Section 03 3000 – Cast-in-Place Concrete: Concrete foundation substrate.
 - 2. Section 31 2000 – Earth Moving: Backfilling.

1.02 SUBMITTALS: In accordance with Section 01 3300.

- A. Shop Drawings: Indicate required flashings, sealing at openings, projections, penetrations, reglets, sealants, and waterproofing of holes, slots, sleeves, and accessories.
- B. Product Data: Provide product criteria, characteristics, and accessories.

1.03 QUALITY ASSURANCE:

- A. Perform Work in accordance with NRCA Waterproofing Manual.
- B. Installer: Company specializing in performing the work of this section with minimum five years documented experience; approved by manufacturer.

1.04 ENVIRONMENTAL REQUIREMENTS:

- A. Follow manufacturer's recommendations for cold weather application (below 40 degrees F). Maintain ambient temperatures above 20 degrees F for 24 hours before and during application.
- B. Install subsequent construction, backfill, or temporary protection within 30 days after waterproofing application.

1.05 WARRANTY: In accordance with Section 01 7700.

- A. Correct defective Work pursuant to the Agreement between the Owner and Contractor.

PART 2 PRODUCTS

2.01 MANUFACTURERS: In accordance with Section 01 6000.

- A. Tremco, Inc.; Tremproof 260.

2.02 MATERIALS:

- A. Waterproofing: Polymer modified asphalt emulsion membrane.
 - 1. Density: 8.3 lb/gal.
 - 2. Elongation: ASTM D412; minimum 800 percent.
 - 3. Water Vapor Permeance: ASTM E96; 0.07 perms for 60 mil coating.

PART 3 EXECUTION

3.01 EXAMINATION:

- A. Verify existing conditions before starting work.
- B. Verify substrate surfaces are smooth and durable; free of matter detrimental to application of waterproofing system.
- C. Verify items which penetrate surfaces to receive waterproofing are securely installed.

3.02 PREPARATION:

- A. Clean and prepare surfaces to receive waterproofing in accordance with manufacturer's instructions.
- B. Remove concrete fins, projections, form ties, and high spots greater than 1/8 inch in height.
- C. Patch surface irregularities and voids greater than 1/2 inch in depth.
- D. Seal construction joints, hairline cracks, corners, through wall projections, and penetrations with joint seal.

3.03 APPLICATION:

- A. Apply waterproofing in accordance with manufacturer's instructions, using airless spray at recommended application rate, to form a continuous, uniform membrane with a minimum thickness of 0.060 inch. Seal all projections, penetrations, and interruptions.

END OF SECTION

SECTION 07 9200 – JOINT SEALANTS

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes: Sealing of interior and exterior joints.
- B. Related Sections:
 - 1. Caulking and sealant work performed under other Sections shall be performed in accordance with the provisions of this Section.
 - 2. Section 03 3000 – Cast-in-Place Concrete: Joint fillers and sealants for sidewalks and pavements.

1.02 SUBMITTALS: In accordance with Section 01 3300.

- A. Product Data: Provide manufacturer's standard details and installation instructions; identify substrates requiring primers, type of primer recommended by manufacturer, and surface preparation required.
- B. Samples: Submit full range of colors for selection.

1.03 QUALITY ASSURANCE:

- A. Installer Qualifications: Firm regularly engaged in installation of sealers of the type specified for not less than 5 years; all work performed by workers thoroughly skilled and specially trained in the techniques required.

1.04 DELIVERY, STORAGE AND HANDLING: In accordance with Section 01 6000.

- A. Store materials between 40 and 90 degrees F, and under conditions and for a period of time not longer than that recommended by manufacturer.

1.05 ENVIRONMENTAL REQUIREMENTS:

- A. Install sealants when air and substrate temperatures are over 40 degrees F and rising, but less than 100 degrees F, unless specific installation instructions are obtained from manufacturer.

PART 2 PRODUCTS

2.01 JOINT SEALERS:

- A. Manufacturers: In accordance with Section 01 6000.
 - 1. Tremco, Inc.
 - 2. Master Builders Solutions.
 - 3. Pecora Corporation.
 - 4. Sherwin-Williams Co.
 - 5. Sika Corporation.

- B. Polyurethane Sealants: ASTM C920.
 - 1. One-Part Modified Polyurethane: Type S, Grade NS, Class 35, Use NT, M, A, and O; paintable. (Tremco Dymonic FC; MasterSeal NP1)
 - 2. Multi-Component Polyurethane: Type M, Grade NS, Class 50, Use T, I, M, A, and O. (Tremco Dymeric 240FC; Sikaflex 2c NS)
- C. Acrylic Latex Caulk: ASTM C834; paintable. (Tremco Tremflex 834; Sherwin-Williams Magnum XL; Pecora AC-20)
- D. Colors: As selected from manufacturer's standard colors.

2.02 ACCESSORIES:

- A. Primers: As recommended by sealant manufacturer. Provide primers where indicated, where recommended by manufacturer, and also where preconstruction tests indicate the need for primers to obtain optimum adhesion.
- B. Backer Rod: ASTM C1330; round, flexible, closed cell polyethylene, or as recommended by sealant manufacturer; chemically inert, solvent resistant.
 - 1. Size: Diameter 15% greater than joint width, continuous lengths.

PART 3 EXECUTION

3.01 EXAMINATION:

- A. Verify that dimensions are correct and substrate is in proper condition for installation. Do not proceed with installation until unsatisfactory conditions have been corrected.
- B. Do not begin installation until substrates are clean, dry, and free of loose aggregate, laitance, paint, corrosion, oil, grease, tar, asphalt, mastic compounds, wax, waterproofing agents, release agents, and other deleterious substances.

3.02 PREPARATION:

- A. Preconstruction Field Adhesion Testing: ASTM C1193.
 - 1. Conduct field tests for adhesion of joint sealants to actual substrates using proposed joint preparation methods, for each type of sealant and substrate, prior to general installation.
 - 2. Alteration and Repair Projects: Include areas typical of those requiring removal of existing sealants.
 - 3. Use manufacturer's standard field adhesion test methods and joint preparation methods to verify proper priming and preparation techniques required to obtain optimum adhesion of sealants to substrate.
 - 4. Repeat testing until satisfactory adhesion is achieved. Evaluate and report results.
 - 5. Approved results shall become the standard of acceptability for the project.

- B. Remove foreign substances from substrate. Clean substrate in accordance with manufacturer's instructions and the following general methods:
 - 1. Porous Surfaces:
 - a. Remove laitance by acid washing, grinding or mechanical abrading.
 - b. Remove form oils by sandblasting.
 - c. Vacuum or blow out joints with oil-free compressed air to remove loose particles.
 - 2. Non-Porous Surfaces:
 - a. Remove protective coatings using solvent recommended by sealant manufacturer.
 - b. If surface has been treated or coated with a special coating, contact sealant manufacturer for recommendations.
- C. Mask adjacent finished surfaces and adjacent porous surfaces that would be damaged by primer, sealant, or cleaning agents.
- D. Prime surfaces to receive sealant in accordance with manufacturer's instructions, and allow to dry before installing sealant. Do not apply primer to surfaces outside of joint. Prime surfaces prior to installing backer rod or bond-breaker tape.
- E. Install joint backing. Do not puncture, twist, compress less than 25 percent or more than 50 percent, or stretch backer during installation.
 - 1. Install joint backing to control joint depth as indicated and to prevent 3-sided bond.
 - 2. Install to control depth at midpoint of sealant as follows, unless otherwise indicated. Do not exceed sealant manufacturer's recommended maximum width.
 - a. Joint Width $\frac{1}{4}$ to $\frac{1}{2}$ Inch: Depth equal to width.
 - b. Joint Width Greater Than $\frac{1}{2}$ Inch: $\frac{1}{2}$ inch depth.

3.03 APPLICATION:

- A. Install sealants in accordance with manufacturer's instructions and ASTM C1193.
- B. Gun Grade Sealants: Extrude sealant to completely fill joint using proper gun and nozzle. Tool to compress sealant against sides of joint and eliminate air bubbles. Leave a neat, slightly recessed concave surface, unless otherwise indicated.
- C. Self Leveling Sealants: Pour sealant to fill joint, slightly recessed below adjacent surfaces.
- D. Curing:
 - 1. Cure sealants in compliance with manufacturer's instructions to obtain high early bond strength, internal cohesive strength, and surface durability.
 - 2. Where joints are scheduled to be painted, allow sealant to cure before painting over joint.

3. Advise the General Contractor of procedures required for curing and protection during the construction period, to prevent deterioration or damage (other than normal wear and weathering) at Substantial Completion.

3.04 CLEANING:

- A. Clean primer and sealant from adjacent surfaces. Wipe fresh sealant immediately from adjacent surfaces. Do not use cleaning agents which may damage finishes.
- B. Remove masking tape from completed joints.

3.05 SCHEDULE:

- A. General Purpose Interior and Exterior Applications: Multi-component polyurethane.
 1. Around both exterior and interior surfaces of penetrations in exterior walls.
 2. Wherever necessary to prevent infiltration of water or air into or through exterior building enclosure.
- B. Other Exterior Applications: One-part modified polyurethane.
 1. Joints between new and existing exterior construction.
- C. Other Interior Applications: Acrylic latex caulk.
 1. Penetrations and other exposed and concealed locations within partitions to seal against passage of air.

END OF SECTION

SECTION 09 9000 – PAINTING AND COATING

PART 1 GENERAL

1.01 SUMMARY:

A. Section Includes:

1. Exterior painting.
2. Interior painting.

B. Related Sections:

1. Shop Priming: Unless otherwise specified, shop priming of ferrous metal items is included under other sections.
2. Section 05 5200 – Metal Railings.
3. Section 07 9200 – Joints Sealants.
4. Division 26 – Electrical.
5. Examine the above sections and all other sections of this specification and become familiar with their provisions regarding painting. All surfaces left unfinished by the requirements of other sections shall be painted or finished as part of this work, except as specifically indicated.

1.02 SYSTEM DESCRIPTION:

- A. Paint all primed surfaces, and all surfaces not prefinished. The following categories of work are not included as part of field-applied finish work unless specifically indicated:**
1. Prefinished and factory finished items, or where installer finishing is specified.
 2. Concealed surfaces in generally inaccessible areas.
 3. Materials or areas scheduled or indicated as unfinished.
 4. Finished metal surfaces, including anodized and fluoropolymer finishes, and non-ferrous metals unless otherwise indicated.
 5. Concrete flatwork.

1.03 SUBMITTALS: In accordance with Section 01 3300.

- A. Do not begin work or deliver products to project site prior to approval of submittals.**
- B. Product Data:** Indicate product characteristics, surface preparation, compatible primers and topcoats, recommended wet and dry film thickness, storage and handling requirements and recommendations, application methods, and cautions.
- C. Color Selections:** Obtain color schedule from Architect. If proposed manufacturer is different from that identified on color schedule, prepare and submit two samples 6 inches square of each color and sheen required on properly prepared and identified paint-out cards or hardboard.

1.04 CLOSEOUT SUBMITTALS: In accordance with Section 01 7700.

- A. Project Record Documents: Include schedule of each product, sheen, color, and location.

1.05 QUALITY ASSURANCE:

- A. Single Source Responsibility: Provide primers and other undercoat paint produced by same manufacturer as finish coats.
- B. Material Quality: Provide best quality grade of specified types of coatings as regularly produced by approved manufacturers. Claims relating to unsuitability of specified products, or inability to produce first-class work with specified products, must be submitted to Architect in writing.

1.06 DELIVERY, STORAGE AND HANDLING: In accordance with Section 01 6000.

- A. Deliver products to the project site in original, unopened containers with all labels intact and legible at time of use.
- B. Store materials at minimum ambient temperature of 45 degrees F in well ventilated area. Follow manufacturer's requirements for maximum temperatures.

1.07 ENVIRONMENTAL REQUIREMENTS:

- A. VOC Content: ASTM D3960; comply with the most restrictive of the following requirements:
 - 1. Ozone Transport Commission (OTC) Model Rule.
 - 2. Applicable federal, state and local regulations.
- B. Protect materials from freezing before, during, and after application.
- C. Apply water-based paints only when temperatures of surfaces to be painted and ambient temperatures are between 50 degrees F and 90 degrees F.
- D. Apply solvent-thinned paints only when temperature of surfaces to be painted and ambient temperatures are between 45 degrees F and 95 degrees F.
- E. Do not apply paint in snow, rain, fog or mist, or when relative humidity exceeds 80%, or to damp or wet surfaces.
- F. Apply interior finish painting only when ambient temperature is above 60 degrees F; after painting, maintain ambient temperature above 60 degrees F to prevent condensation.
- G. Provide adequate continuous ventilation to maintain humidity below dew point of coldest surface.

PART 2 PRODUCTS

2.01 PAINT AND STAIN MATERIALS:

- A. Manufacturers: In accordance with Section 01 6000.
 - 1. Sherwin-Williams Co.
 - 2. ICI Paints.
 - 3. Benjamin Moore & Co.
 - 4. PPG Architectural Finishes, Inc.
 - 5. Pratt & Lambert.
 - 6. Tnemec Co., Inc.
- B. Materials scheduled below are products of Sherwin-Williams Co. (abbreviated S-W) unless noted otherwise. Proprietary names used to designate materials are not intended to imply that products of named manufacturers are required to the exclusion of others. Equivalent products of other manufacturers listed above are also acceptable.
- C. Provide primers and compatible finish coats by the same manufacturer.
- D. Color Pigments: Pure, non-fading, applicable types to suit substrates and applications indicated.
- E. Primers:
 - 1. Acrylic Primer: S-W Pro-Cryl Universal (B66-310).
 - 2. Industrial Primer: S-W DTM Acrylic Primer/Finish (B66W1).
 - 3. Metal Primer:
 - a. Aluminum and Galvanized:
 - (1) Gloss Finishes: S-W DTM Wash Primer (B71Y1).
 - (2) Other Finishes: S-W Pro-Cryl Universal Primer (B66-310).
 - b. Non-Galvanized Ferrous Metals: S-W Pro-Cryl Universal Primer (B66-310).
- F. Finish Coats:
 - 1. Acrylic Gloss Coating: S-W DTM Acrylic Gloss Coating (B66-100).
 - 2. Alkyd Gloss Enamel: S-W Waterbased Industrial Enamel (B53-300).
 - 3. Catalyzed Polyurethane: S-W Pro Industrial Pre-Catalyzed Waterbased Urethane (B65-1100).

PART 3 EXECUTION

3.01 EXAMINATION:

- A. Verify that the work of all other trades is correct and complete so that paint application may properly commence.
- B. Verify substrate conditions are acceptable for product application in accordance with manufacturer's instructions.
- C. Painting of surface indicates Contractor's acceptance of surface and responsibility for paint failure.

3.02 PREPARATION:

- A. Protection:
 - 1. Remove electrical plates, hardware, light fixture trim, fittings, and similar items not scheduled to receive paint, prior to surface preparation or finishing. Mask in place items that cannot be removed.
 - 2. Spot prime exposed metals such as bolts, nails, and welds which are to receive paint. Clean all metal work, smooth and prime if necessary where rusting or scaling occurs.
 - 3. Remove dirt, dust, grease, mildew and other contaminants from all surfaces scheduled to be painted or finished.
- B. Surface Preparation: In addition to the following general requirements, follow specific recommendations of the manufacturer for each finish system and substrate application.
 - 1. Steel: Remove mill scale, rust, grease, dirt and dust, by hand scraping, wire brushing, power tool scraping, or sandblasting.
 - 2. Shop Primed Steel: Sand and scrape to remove loose primer and rust. Sand and feather edges to smooth surface. Clean areas with solvent; spot prime bare metal areas.
 - 3. Galvanized Surfaces: Acid etch or clean thoroughly with a grease cutting solvent such as mineral spirits.
 - 4. Previously Painted Surfaces: Remove all blistered, peeling and scaling paint to a sound substrate. Remove heavy chalk by scrubbing with soap and water. Sand glossy areas and dust clean. Clean and spot prime failed areas. Use soap and water on protected areas such as eaves and ceilings to remove invisible residues. Rinse clean and let dry. Remove and kill existing surface mildew before applying paint.
 - a. Test sample area for compatibility, adhesion and film integrity; report in writing conditions that may affect proper application, appearance or performance.

3.03 PAINT APPLICATION:

- A. Apply paint using spray, roller or brush unless otherwise specified or restricted. Method selected must be in accordance with manufacturer's recommendations, suitable for intended surface and finish.
- B. Do not open containers until required for use. Stir materials thoroughly and keep at uniform consistency during application.
- C. Apply minimum two finish coats, unless otherwise indicated, in addition to field or shop applied prime coat.
 - 1. Allow sufficient drying time between coats in accordance with manufacturer's recommendations.
 - 2. Thinning: In accordance with the manufacturer's recommendations; adhere strictly to manufacturer's recommended spreading rate and dry or wet mil thickness per coat.
 - 3. Apply each coat to uniform finish without runs, sags, brush or roller marks, skips, ropiness or other defects.
 - 4. Tint primer and undercoats of paint approximately $\frac{1}{2}$ to $\frac{3}{4}$ depth of final color.
 - 5. Sand and dust lightly between coats to achieve smooth finish.
 - 6. Clean surfaces free of loose particles. Use tack cloth just prior to applying next coat.
 - 7. Touch-up suction spots between coats.
 - 8. Refinish surfaces affected by refitting work.
 - 9. Apply additional coat wherever there are voids, imperfections or lap marks.
- D. Exposed Mechanical and Electrical Equipment: Paint same color as used on adjacent surfaces. Do not paint equipment or materials in unfinished areas.
 - 1. Prime and paint exposed covers, conduit, boxes, hangers, brackets and collars, except where items are plated or prefinished.
 - 2. Do not paint over name plates or joints in moving parts of equipment.

3.04 TOUCH-UP:

- A. Do all touch-up work that may be required throughout the project.
- B. Apply materials in accordance with manufacturer's recommendations for adequate coverage, waterproofing, and weather resistance. If the specified number of coats do not achieve adequate coverage, waterproofing, and weather resistance, apply additional coats at no additional cost until acceptable performance and finish are obtained.

3.05 CLEANING:

- A. Perform progress cleaning in accordance with Section 01 7000. Remove discarded paint materials, rubbish, cans, and soiled or used rags from the project site at the end of each work day. Use every precaution to avoid the danger of fire.

- B. At completion of painting work, remove surplus paint materials and debris from the project site, and leave work areas in a clean and finished condition.
- C. Perform final cleaning in accordance with Section 017700. Clean paint-spattered surfaces by approved methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.

3.06 PROTECTION:

- A. Protect surfaces and objects inside and outside the building, including lawns, shrubbery, and adjacent properties against damage; repair damage to adjacent surfaces.
- B. Protect work of other trades, whether to be painted or not, against damage by painting and finishing work. Correct damage by cleaning, repairing, or replacing as required to match existing.
- C. Exercise care and provide protection for adjacent prefinished or unfinished items, moving parts or assemblies, and related items. Provide all required covering, masking tape, and other protective materials.
- D. Provide "wet paint" signs as required to protect newly painted finishes.
- E. Following completion of painting in each area, promptly reinstall all items removed for protection.
- F. After completion of painting operations, remove temporary protective materials, including those provided by others for protection of their work.

3.07 SCHEDULE:

- A. Items scheduled herein to be painted are not intended to be all inclusive and are listed only as a guide to material type and exposure. Additional items indicated on the Drawings or in the Specifications shall receive applicable finishes, unless otherwise noted.
- B. Exterior Metals: Exposed structural and miscellaneous galvanized and non-galvanized ferrous metal and aluminum items; railings, conduit, electrical boxes, and related items.
 - 1. Factory Primed Surfaces: Clean, sand, and touch-up with compatible primer wherever necessary before applying finish coats.
 - 2. Railings Embedded in Concrete:
 - a. Apply one coat acrylic primer (10.0 mils wet, 4.0 mils dry).
 - b. Apply two finish coats catalyzed polyurethane (12.0 mils wet, 4.4 mils dry).
 - 3. General Locations:
 - a. Unprimed Non-Galvanized Ferrous Metal Surfaces: Apply one coat industrial primer (6.0 mils wet, 3.0 mils dry).

- b. Apply two finish coats acrylic gloss coating (8.0 mils wet, 3.0 mils dry per coat).
- C. Interior Metals: Exposed conduit, electrical panel covers, and related items.
 - 1. Clean, sand, and touch-up factory primed surfaces with compatible primer wherever necessary before applying finish coats.
 - 2. Apply one coat metal primer (7.5 mils wet, 3.0 mils dry).
 - 3. Apply two finish coats alkyd gloss enamel (4.5 mils wet, 1.6 mils dry per coat).

END OF SECTION

SECTION 26 0500 – COMMON WORK RESULTS FOR ELECTRICAL

PART 1 GENERAL

1.01 SUMMARY:

A. Section Includes:

1. Materials and installation methods applicable to all Sections of Division 26.
2. Identification.
3. Painting.
4. Testing.

B. Related Sections:

1. Section 01 5000 – Temporary Facilities and Controls: Temporary lighting and power.
2. Section 05 5000 – Metal Fabrications: Supplemental support framing.
3. Section 07 9200 – Joint Sealants.
4. Section 09 9000 – Painting and Coating.
5. Section 26 0526 – Grounding and Bonding.

1.02 CLOSEOUT SUBMITTALS: In accordance with Section 01 7700.

- ##### **A. Project Record Documents:** Record actual locations of components and circuits; indicate routing of conduits, locations and elevations of outlets, circuit numbers of all circuits, panel schedules, grounding system components, and other pertinent information.

1.03 QUALITY ASSURANCE:

- ##### **A. Regulatory Requirements and Reference Standards:** Comply with applicable requirements of ANSI, ASTM, AWS, FM, NEMA, NFPA, OSHA, UL, in addition to specific applications listed in individual Sections.
- ##### **B. All electrical materials shall be UL listed for the use intended and shall bear the label of approval.**

PART 2 PRODUCTS

2.01 MATERIALS:

- ##### **A. Identification Nameplates:** Laminated phenolic with white engraved letters on black background; 1 x 3 x 1/16 inch thick minimum size. Use 1/16 inch thick material for plates up to 2 x 4 inch size; for larger sizes use 1/8 inch thick material.
1. Copy: Include name of equipment, the specific unit number, and reference to “ON,” “OFF,” or other instructions as applicable.

2. Lettering: Condensed Gothic; minimum size $\frac{1}{4}$ inch high, 4 letters per inch; increase letter size to $\frac{3}{4}$ inch high on largest plates. The space between lines shall be equal to the width of the letters.
- B. Identification Labels: Plastic stick-on adhesive type.
1. Arc Flash Hazard Labels: Minimum $3\frac{1}{2}$ x 5 inch.
 2. Where surface contaminants or other conditions make permanent adhesion unlikely, apply label to $\frac{1}{8}$ inch thick clear plastic back plate installed to the mounting surface with permanent fasteners.

PART 3 EXECUTION

3.01 EXAMINATION:

- A. Verify that field conditions are as indicated.
- B. Examine work of other trades which comes in contact with or is covered by electrical work. Do not attach to, cover up, or finish against defective work.

3.02 INSTALLATION:

- A. Furnish and install fixtures and equipment to make a complete and working system as indicated in the Contract Documents. This includes wiring requirements from the service entrance to and including final outlets, fixtures, and equipment.
- B. Electrical work shall be installed by journeyman electricians under the direct supervision of a competent supervisor. At no time shall electrical work be without the immediate on-the-job supervision of a journeyman electrician.
- C. Lay out and arrange system components to provide ease of maintenance and replacement without major disassembly of adjacent components.
- D. Properly attend the electrical work during the progress of adjacent construction to prevent misalignments or damage to the electrical work.
- E. Furnish all material and labor to install and accomplish excavation, backfill, tamping, compaction, bases, concrete work, supports, braces, steel, inserts, anchors, chases, sleeves, holes, and other work required to accomplish the Electrical Work in accordance with the requirements of the applicable Sections, without relying upon other trades or inferring anything that is mentioned in other Divisions, unless it is specifically noted in the Contract Documents to be furnished or provided by others.
- F. Perform cutting and patching, including concrete cutting and patching, required for proper and complete installation of the electrical work, in accordance with Section 01 7000.
- G. Rough-in and provide final electrical connections for all equipment indicated on the Drawings. Electrical outlets and approximate loads for the various items of equipment are noted on the Drawings. Verify exact locations of outlets serving

various equipment units, and verify the equipment manufacturer's required circuit termination methods (e.g., blank box, plug-in, receptacles, etc.) to best suit requirements for each equipment item.

1. Motors for building utility equipment furnished and installed by other trades shall be connected by the Electrical installer.
 2. If a specific item is indicated on both Electrical Drawings and other Drawings, request clarification in accordance with the Instructions to Bidders and Section 013100.
- H. Seal penetrations with waterproof sealant in accordance with Section 079200.
- I. Furnish and install appropriate sleeves and hangers required for the electrical work.
1. Do not attach conduits, cables, boxes, devices, or other components, to wires that support ceiling suspension system.
- J. Check and tighten all plates, covers, doors, and trims used in conjunction with electrical equipment. All outlet openings not receiving a device shall be provided with a blank plate. There shall be no "open" boxes.
- K. Balance load on feeders and main switch to within 10% under maximum load conditions.

3.03 IDENTIFICATION:

- A. Equipment and Controls: Identify electrical equipment, switches, pull boxes, junction boxes, and associated items with nameplates securely fastened with screws.
1. Junction boxes, pull boxes, and future use raceways in unfinished areas may be hand lettered with marking pen; indicate circuit or other identification.
- B. Panelboards: Provide typewritten directory indicating location, service and purpose of each switch or breaker. Install directory in durable framed enclosure and mount in location directed by Owner.
- C. Arc Flash Hazard Labels: Install permanent arc flash hazard labels at each electrical distribution point, located to be clearly visible to qualified persons before examination, adjustment, servicing or maintenance of equipment. Required locations include all panelboards, enclosures, disconnects, and other locations identified in NFPA 70.

3.04 PAINTING:

- A. Prepare exposed fittings, boxes, supports, and panelboards for painting by removing oil, grease and dirt. Prevent scratching or defacing of electrical apparatus and devices.
- B. Refinish electrical equipment damaged during shipping or installation. Remove rust, prime, and paint per manufacturer's recommendations for finish equal to original.
- C. Finish painting of electrical equipment and exposed conduit, unless otherwise indicated, shall be done under Section 099000. Exposed conduit installed after finish

painting is complete shall be painted to match adjacent finish by the painter at the expense of the Electrical Contractor.

- D. In the event of damage to finish painting caused by the work of this Contractor, the necessary repainting shall be done by the painter at this Contractor's expense.
- E. Coordinate with Section 099000 for installation of cover plates and other items installed adjacent to painted surfaces. Do not install such items until painting and finishing work in the room or space is complete.

3.05 TESTING:

- A. Refer to individual Sections for specific tests required for each system.
- B. Pay for all required tests and inspections. Furnish labor, materials, and instruments; bear other costs in connection with all tests.
- C. Notice of Tests: Give written notice in ample time to all concerned of date when tests will be conducted.
- D. Prior Tests: Concealed work shall remain uncovered until required tests have been completed, but if construction schedule requires it, arrange for prior tests on parts of system as approved by the Architect.
- E. Acceptance Testing: Demonstrate the compliance of the installation with the Contract Documents, NEC, and specified standards. Tests shall include operation of lights and equipment, continuity of the conduit system, grounding resistance and insulation resistance measurements on not more than ten representative circuits and any other circuits for which a justifiable reason exists for such tests. Furnish all labor and testing equipment for the performance of these tests.
 - 1. Inspect and test in accordance with International Electrical Testing Association (NETA) Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems (ATS), except Section 4.
 - 2. Perform inspections and tests listed in NETA ATS, Section 7.3.1.
 - 3. Adjust all equipment to proper operating condition.
 - 4. All wiring shall be tested and approved free of defective insulation and unintentional grounds.
 - 5. All system, equipment and other intentional grounds shall be proved to have sufficiently low resistance for proper service.
 - 6. Megger Test: Test all wiring and connections for continuity and grounds. If the insulation resistance test indicates the possibility of faulty insulation, locate the conductor containing such faulty insulation, replace same with new, and demonstrate by further test the elimination of such fault.
 - 7. Record feeder load currents and line voltages measured at each transformer, switchboard, and panelboard. Adjust single phase load connections to balance feeder loads. Provide the Owner with a complete copy of all load and voltage records.

8. Prior to substantial completion, turn on all equipment in the building including lighting, and using an amprobe, read the current drawn on each hot leg of feeder supplying each distribution panel. If the current in any one leg varies more than 5 percent plus or minus, from the arithmetic average of the current in all the hot legs, reconnect the branch circuits to obtain a balanced loading.
- F. Adjustments, Repairs, and Retests:
1. Make adjustments, repairs, and alterations as required to meet specified test results.
 2. Correct defects disclosed by tests or inspection, and replace defective parts when directed.
 3. In replacing defective parts, use only new materials.
 4. Repeat tests after defects have been corrected and parts replaced, as directed and until pronounced satisfactory.
- G. Responsibility for Damage: Bear the cost of repairs and restoration of the work of other Contractors damaged by the tests or cutting required in connection with the tests.

END OF SECTION

SECTION 260519 – CONDUCTORS

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes: Building wire and cable, 600 Volts or less.
- B. Related Sections:
 - 1. Section 260500 – Common Work Results for Electrical.
 - 2. Section 260533 – Raceway and Boxes.

1.02 QUALITY ASSURANCE:

- A. Comply with applicable requirements of ASTM B1, B2, B3, B8, and D4247; FS A-A-59544; IEEE 82 and 241; NEMA WC 70; UL 83 and 486A.
- B. Provide products which are ETL listed and labeled.

PART 2 PRODUCTS

2.01 BUILDING WIRE AND CABLE:

- A. Manufacturers: In accordance with Section 01 6000.
 - 1. Aetna Insulated Wire, LLC.
 - 2. Encore Wire.
 - 3. Prysmian Group.
 - 4. Southwire Co.
- B. Conductors: Copper, 600 Volt rated; minimum size 12 AWG for power and lighting circuits, and 14 AWG for control circuits.
 - 1. Sizes 10 AWG to 14 AWG: Type THHN/THWN, solid or stranded, with color impregnated insulation.
 - 2. Sizes 8 AWG and Larger: Type XHHW, stranded.
 - a. Provide color impregnated insulation, or tape conductor ends with solid color electrical tape for minimum 3 inches at terminations and boxes.
- C. Metal-Clad Cable: Type MC; insulated copper conductors, minimum size 12 AWG for power and lighting circuits, and 14 AWG for control circuits.
- D. Provide wire and cable in full factory lengths of minimum 500 feet, on original reels or in boxes, new and unused.

2.02 ACCESSORIES:

- A. Manufacturers: In accordance with Section 01 6000.
 - 1. 3M Electrical Products.
 - 2. Buchanan Construction Products, Inc.
 - 3. Ideal Industries, Inc.

- 4. Thomas & Betts Corp.
- B. Joint Connectors: UL listed; preinsulated locking type; suitable for insulation temperature rating provided. (3M Scotchlok)
 - 1. Wet Locations and Exterior Junction Boxes: Twist and seal water resistant connectors. (Ideal Twister DB Plus or Buchanan BTS)
- C. Terminal Connections: Solderless pressure type lugs and connectors. (Thomas & Betts Sta-Kon or 3M Scotchlok)
 - 1. At distribution equipment containing aluminum bus bars, use aluminum-copper connections rated and approved for the application.
- D. Identification Tape: Epoxy film. (3M Scotchcode Epoxy)
- E. Wire Pulling Lubricant: UL listed.

PART 3 EXECUTION

3.01 EXAMINATION:

- A. Verify that work likely to damage installation has been completed.
- B. Verify that raceway installation is complete and supported before installing wire and cable.

3.02 INSTALLATION:

- A. Install cable in accordance with NECA Standard of Installation.
- B. Where wire and cable destination is indicated and routing is not shown, determine exact routing and lengths required.
- C. Branch Circuits Longer Than 75 Feet: Adjust conductor size in accordance with NFPA 70 requirements for voltage drop calculations.
- D. Installation in Conduit and Raceway: Pull all conductors into raceway at same time. Do not injure insulation or conductor. Examine insulation during installation; discard sections of wire and cable with damaged insulation.
 - 1. Swab conduits free of moisture, dirt, and foreign materials before pulling wire. Replace damaged conduit.
- E. Joints and Splices:
 - 1. Do not splice conductors except where indicated on the Drawings or specifically approved.
 - 2. Make joints and splices only at boxes and enclosures in accessible locations.
 - 3. Clean conductor surfaces before installing lugs and connectors.
 - 4. Make splices, taps and terminations to carry full ampacity of conductors with no perceptible temperature rise.

- F. Neatly train and lace wiring inside boxes, equipment, and panelboards.
 - 1. Protect free ends and loops of wire at boxes and enclosures by blank covers or other approved means until the interior painting and finishing work is complete.
 - 2. Coil service loops and additional cable lengths at 200 percent of the minimum bend radius; secure coil with cable ties and attach to nearby support.
 - 3. Test and permanently tag by circuit number each end of each control wire and circuit wire, except neutrals, using numbered identification tape.
- G. Color code multi-wire branch circuits in accordance with NFPA 70.
 - 1. Phase Conductors: Black, red, and blue.
 - 2. Neutral: White.
 - 3. Ground: Green.
 - 4. The identified neutral shall be insulated throughout and grounded only at the service entrance equipment (not individual panels).
 - 5. Arrange phase conductors at equipment connections in sequence from front to rear, top to bottom, or left to right when facing established front of equipment.
- H. Install a green ground wire, sized in accordance with NEC, in all flexible conduit, isolated from the neutral wire.
- I. Branch circuits shall be installed with a dedicated neutral wire from the circuit source to the load connection.

END OF SECTION

SECTION 260526 – GROUNDING AND BONDING

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes: Grounding for electrical systems.
- B. Related Sections:
 - 1. Section 033000 – Cast-in-Place Concrete.
 - 2. Section 260500 – Common Work Results for Electrical.
 - 3. Section 260519 – Conductors.

1.02 QUALITY ASSURANCE:

- A. Manufacturer Qualifications: Companies regularly engaged in manufacture of electrical connectors, terminals and fittings, of types and ratings required, and ancillary grounding materials, including stranded cable, copper braid and bus, ground rods and plate electrodes, whose products have been in satisfactory use in similar service for minimum three years.
- B. Regulatory Requirements and Reference Standards: Comply with applicable requirements of NFPA 70, UL 467 and 869, and IEEE 142 and 241.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. Provide cables, wires, connectors, terminals (solderless lugs), grounding rods/electrodes and plate electrodes, bonding jumper braid, surge arresters, and additional accessories needed for a complete installation. Where materials or components are not indicated, provide products complying with NEC, UL, IEEE, and established industry standards for applications indicated.
- B. Grounding Conductors: Insulated copper, size to meet NFPA 70 requirements.
- C. Splices and Terminations:
 - 1. Clamps and Pressure Connectors: In accordance with Section 260519.
 - 2. Welded Connections: Exothermic type.

PART 3 EXECUTION

3.01 INSTALLATION:

- A. Install grounding and bonding system to meet regulatory requirements.
- B. Solidly ground all conduit systems, cabinets, fixtures, and all other permanently installed equipment in accordance with NFPA 70 to form a continuous, permanent

and effective grounding system. Expansion joints and metal raceway sections shall be bonded. Provide grounding conductors.

- C. Install an insulated ground wire, sized in accordance with NEC Article 250, in all branch circuit raceways.
- D. Install separate ground wire, isolated from neutral, in all flexible conduits; sized in accordance with NEC Table 250.122, minimum size No. 12 AWG.
- E. Install a green bonding jumper between the outlet box and the receptacle grounding terminal on flush mounted receptacles.
- F. Utilize grounding bushings on each conduit which is not bonded to a grounded enclosure by means of properly installed conduit nuts, one on each side of the enclosure panel, properly tightened to cut through the panel paint and make bare metal-to-metal contact.
- G. Install grounding bonding jumpers across building expansion joints, conduit, and busway expansion fittings.

3.02 FIELD QUALITY CONTROL:

- A. Demonstrate by testing that the electrical service grounding system to earth resistance value is 10 Ohms or less, utilizing a clamp-on or 3 point fall of potential tester.
- B. Demonstrate by testing that the electrical service grounding system resistance from any grounded non-current-carrying conductor in the system to the electrical service entrance neutral/ground bonding conductor is less than 0.1 Ohms.

END OF SECTION

SECTION 260533 – RACEWAY AND BOXES

PART 1 GENERAL

1.01 SUMMARY:

A. Section Includes:

1. Conduit and fittings.
2. Surface mounted raceway and wireway.
3. Boxes and enclosures.

B. Related Sections:

1. Section 079200 – Joint Sealants.
2. Section 099000 – Painting and Coating.
3. Section 260500 – Common Work Results for Electrical.
4. Section 312000 – Earth Moving: Excavation and backfilling.

1.02 SUBMITTALS: In accordance with Section 013300.

- A. Product Data:** Provide for surface mounted raceway.

1.03 DELIVERY, STORAGE AND HANDLING: In accordance with Section 016000.

- A.** Provide temporary end caps and closures on conduit and fittings. Maintain in place until installation.
- B.** Protect conduit and raceway systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

PART 2 PRODUCTS

2.01 CONDUIT AND FITTINGS:

- A. Rigid Steel Conduit:** ANSI C80.5; UL 6; hot-dipped galvanized or electro-galvanized, inside and outside; bichromate finish; with zinc coated threads.
1. Fittings, Couplings and Bushings: Threaded type.
- B. Intermediate Metal Conduit (IMC):** UL 1242; hot-dipped galvanized.
1. Fittings, Couplings and Bushings: Split type, compression type, or set-screw type; concrete-tight.
- C. Electrical Metallic Tubing (EMT):** ANSI C80.3; UL 797; electro-galvanized; smooth aluminum lacquer or enamel interior coating; threadless.
1. Fittings, Couplings and Bushings: Compression type or set-screw type; concrete-tight; indenter type devices are not acceptable.
- D. Rigid Nonmetallic Conduit:** NEMA TC 2; Schedule 40 PVC.
1. Fittings, Couplings and Bushings: NEMA TC 9; solvent-cemented watertight joints.

2.02 SURFACE MOUNTED RACEWAY AND WIREWAY:

- A. Manufacturers: In accordance with Section 01 6000.
 - 1. Legrand; Wiremold.
 - 2. Panduit Corp.
 - 3. Square D.
- B. Surface Mounted Metal Raceway: UL 5; galvanized steel with baked enamel finish, color as selected; minimum 5 foot lengths. (Wiremold 200, 500 and 700 series)
 - 1. Fittings and Accessories: TIA 569; sized to maintain minimum wiring space and cable bend radius requirements. Provide end caps, brackets, connectors, and other components supplied by raceway manufacturer, as required for a complete installation.
 - 2. Fasteners and Anchors: Pan head wood screws for attachment to wood; screws and metal anchors, or approved metallic anchoring system, for attachment to concrete or masonry. Mushroom headed nail anchors may be used where recommended by manufacturer. Plastic anchors are not acceptable.

2.03 BOXES:

- A. Concealed Boxes: Galvanized steel, with cover as required; with knockouts.
 - 1. Size:
 - a. Conduit Size to $\frac{3}{4}$ Inch: 4 inch square.
 - b. Conduit Size 1 Inch and Larger: 4-11/16 inch square.
 - 2. Depth: As required by code for number of conductors.
- B. Exposed Boxes: Type FS, with matching galvanized steel plates.
 - 1. Exterior and Wet Locations: Type FD.
- C. Pull Boxes: Galvanized steel, size to suit application; with cover secured by corrosion resistant screws; with knockouts.
 - 1. Sizes 4½ inches Square and Smaller: Blank covers to match switch plates.
 - 2. Sizes 5 Inches Square and Larger: Baked enamel finish to match electrical panel fronts.

2.04 ENCLOSURES:

- A. Outdoor Locations: NEMA 250, Type 3R.
- B. Indoor Locations: NEMA 250, Type 1.

2.05 ACCESSORIES:

- A. Anchors and Fasteners:
 - 1. Cast-in-place inserts or expansion anchors in concrete.
 - 2. Beam clamps or welded fasteners on steel structural elements.
 - 3. Toggle bolts in hollow masonry, plaster and gypsum board partitions.

- 4. Expansion anchors in solid masonry walls.
- 5. Sheet metal screws in sheet metal and wood screws in wood elements.
- B. Sleeves: Schedule 40 galvanized steel pipe.
- C. Conduit Straps for Surface Mounted Conduit: One-hole malleable type with clamp backs.
- D. Underground Warning Tape: Six inch wide polyethylene tape permanently colored yellow for electric and green for telephone, with wording indicating type of service and "CAUTION".

PART 3 EXECUTION

3.01 EXCAVATION AND BACKFILL:

- A. Perform excavation and backfill in accordance with Section 31 2000.
- B. Excavate as necessary to install below grade conduit at indicated or required elevations. Maintain excavations free of water. Excavate trenches to uniform widths to allow minimum 12 inch working clearance on each side of conduit. Trim floor of excavation true, with uniform grade.
- C. Bed conduit and structures on 6 inch thick layer of compacted granular material. If unsatisfactory soil conditions are discovered, the Architect will inspect the excavation and determine the necessary additional support required.
- D. Maintain a minimum depth of 36 inches between top of largest conduit or duct and finish grade outside the building, unless noted otherwise.
- E. Apply two coats of bituminous paint to uncoated metallic conduit installed below grade. Touch up voids and pinholes prior to backfilling.
- F. Provide underground warning tape 12 inches below grade, directly above, and continuous with, all underground cable or conduit.
- G. Perform testing and obtain required approvals after conduit embedment and before backfilling.
- H. Backfill by hand and manually compact initial backfill, using approved fill material free of particles larger than 1 inch, in 6 inch layers until 8 inches of cover is provided over top of conduit, cable or duct.
- I. Place final backfill of approved fill material in maximum 8 inch layers to final subgrade. Compact each layer to ASTM D1557, 95 percent maximum dry density.
- J. Exercise caution during backfilling and compaction to prevent damage or displacement of buried components.
- K. Replace existing surface improvements such as pavement, curbs, sidewalks, landscaping, etc., removed or damaged in the course of the work unless such

improvements are to be reconstructed as part of this project. Make all necessary arrangements to perform such repairs and pay all costs in connection therewith.

3.02 INSTALLATION:

- A. Size conduits in accordance with NFPA 70 for the number and size of conductors to be run in the conduit.
- B. Minimum Conduit Size:
 - 1. EMT Conduit: $\frac{1}{2}$ inch; do not fill more than 25 percent.
 - 2. Surface Mounted Metal Raceway: $\frac{1}{2}$ inch.
 - 3. Conduit Below Grade: 1 inch.
 - 4. Other Conduit Types: $\frac{3}{4}$ inch.
- C. Verify conduit is round and straight prior to installation. Prevent deformation during cutting and threading. Do not permit tool marks on exposed conduit in finished areas.
- D. Ream conduit ends. Remove burrs.
- E. Completely and thoroughly swab raceway before installing wire.
- F. Conduit Locations and Routing:
 - 1. Route conduit in orderly manner, plumb and parallel to building structure.
 - 2. Install conduit to conserve building space, to not interfere with use of space and other work, and to maintain required headroom and clearances for equipment, door and window swings, and related conditions. Do not run conduit on or directly in front of access doors, removable panels, or equipment.
 - 3. Place conduit in concealed spaces above finished ceilings. In areas without finish ceilings, route conduit through spaces in open web joists, trusses, or girders, supported against the underside of the top chord.
 - 4. Conceal vertical conduit in stud wall cavities, furred wall spaces, pipe chases, and masonry cores where possible. Except in unfinished spaces, obtain approval prior to installing exposed conduit.
 - 5. Group conduit whenever practical at common elevations. When installing conduit in parallel, leave sufficient space to facilitate future work on any conduit.
 - 6. Do not group conduit with plumbing, HVAC, or other piping systems. Locate conduit above piping where possible.
 - 7. Maintain minimum 6 inch clearance from hot piping and surfaces including domestic hot water lines.
 - 8. Do not mount conduit on equipment except where necessary to connect electrical devices mounted on the equipment.
 - 9. Do not penetrate building structural members unless indicated.
- G. Hangers and Supports:
 - 1. Secure conduit to building structure at maximum 8 foot intervals.
 - 2. Support surface mounted conduit runs with galvanized pipe straps. Fasten pipe straps to masonry surfaces with self-drilling anchors or toggle bolts. Fasten pipe straps to wood or sheet metal surfaces with pan head sheet metal screws.

3. Support suspended conduit runs with minimum $\frac{1}{4}$ inch threaded rod and galvanized conduit hangers. Attach hanger rod to concrete structural members with malleable iron inserts, to existing concrete structural members with self-drilling anchors, to structural steel with steel C-clamps, and to wood with suitable sized lag screws and angles. Multiple parallel conduit runs may be supported on trapeze hangers constructed of steel rod hangers and structural channel. Threaded rod hangers shall include 3 nuts jam-locked to rigidly support the conduit. DO NOT suspend conduit, light fixtures, or devices from metal deck.
- H. Sleeves: Provide sleeves and escutcheons when penetrating foundations, floors, walls and partitions. Cut escutcheons as necessary to fit in close quarters.
1. Size sleeves to provide minimum $\frac{3}{4}$ inch clearance around all sides of conduits.
 2. Maintain sleeves plumb, level, and in proper position throughout construction. Inspect sleeves in cast-in-place concrete during and after concrete pour and correct any deviation from proper position.
 3. Seal conduit and sleeve penetrations with waterproof sealant in accordance with Section 079200.
 4. Exterior Wall Sleeves: Install sleeves reamed with welded flanged ends flush with wall.
- I. Boxes and Enclosures:
1. Mount outlet boxes in exposed masonry walls with top and one side of box on mortar joints. Wall outlets shall be plumb and accurately aligned in rows. Mount ceiling boxes symmetrical with walls, beams or tiles. Coordinate outlet box locations with paneling, trim, equipment and other exposed or existing features.
 2. Close openings in outlet boxes during concrete work with plain paper or slip on plastic or metal plates. Do not use newspaper.
 3. Provide pull boxes and junction boxes where required, located to be accessible after completion of the project. Do not locate pull boxes in finished spaces without the specific approval of the Architect.
 4. Secure conduit to boxes with double locknuts and bushings.
- J. Surface Mounted Raceway: Install in accordance with UL requirements and manufacturer's instructions; provide bonding jumpers where required.
1. Run raceway perpendicular or parallel to walls and floors, neatly cut and trimmed, with mitered corners. No rough or exposed edges will be permitted. No exposed cables will be permitted.
 2. Securely anchor raceway to studs, blocking, concrete, or masonry, using approved fasteners spaced at maximum 16 inches o.c., minimum 2 anchors per section, located within 6 inches of end of section.
- K. Prime coat and prepare for finish painting exposed conduit, fittings, supports, and accessories scheduled for field painting. Refer to Section 099000. Components located in pipe shafts and suspended ceiling spaces are not considered exposed. Where support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc rich primer to weld.

- L. When installing more than one conduit system material, ensure system components are compatible and joined to ensure the integrity of the system. Provide necessary joining fittings.
- M. Seal around and within conduits where they pass through exterior walls and where they enter exterior fixtures.
- N. Install 1/8 inch diameter nylon pull rope in all empty conduits.

3.03 CONDUIT LOCATION SCHEDULE:

- A. Below Grade or Below Slab: Rigid nonmetallic conduit with insulated grounding conductor sized in accordance with NFPA 70, or rigid steel conduit.
 - 1. Elbows and stub-ups shall be rigid steel conduit.
 - 2. Conduit sleeved through footings and foundation walls shall be rigid steel conduit for minimum 10 feet on both sides of penetration.
- B. Branch Circuits Above Grade:
 - 1. Exposed Locations:
 - a. Exterior: Rigid steel conduit.
 - b. Locations Subject to Physical Damage: Rigid steel conduit or IMC. This category includes unfinished areas, mechanical and electrical equipment rooms, chases, and all locations within 8 feet above floor.
 - c. Above Bottom Chord of Joists: EMT.
 - d. Finished Areas in Existing Construction: Surface mounted metal raceway; obtain Architect's approval of raceway location and routing prior to installation.
 - 2. Concealed Locations:
 - a. Exterior Masonry Walls: Rigid steel conduit.
 - b. Stud Walls and Interior Masonry Walls: EMT.
 - c. Above Ceilings: EMT.
 - 3. Rigid steel conduit or IMC may be used at locations scheduled for EMT.

END OF SECTION

SECTION 26 2800 – CIRCUIT PROTECTIVE DEVICES

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes: Circuit breakers for existing panelboards.
- B. Related Sections:
 - 1. Section 26 0500 – Common Work Results for Electrical.
 - 2. Section 26 0533 – Raceway and Boxes.

1.02 SUBMITTALS: In accordance with Section 01 3300.

- A. Product Data: Indicate application conditions and limitations of use stipulated by product testing agency.

1.03 CLOSEOUT SUBMITTALS: In accordance with Section 01 7700.

- A. Project Record Documents: Record actual locations of components, and other pertinent information.

PART 2 PRODUCTS

2.01 CIRCUIT BREAKERS:

- A. Circuit Breakers: UL 489, NEMA AB1; snap-in type; molded case, non-adjustable, thermal-magnetic type; quick-make, quick-break circuit breakers; 20 amp minimum; sized per NFPA 70 for connected load. Provide multi-pole breakers where required; handle ties are not acceptable.
 - 1. Provide circuit breakers physically and electrically compatible with existing panelboards, by the panelboard manufacturer.
 - 2. Short Circuit Current Rating: 10,000 amps RMS symmetrical at rated voltage.

PART 3 EXECUTION

3.01 INSTALLATION:

- A. Install Products in accordance with manufacturer's instructions and NFPA 70.
- B. Install circuit breakers in existing panelboards. Update circuit directory on interior of panel door. Where no directory exists, determine the loads served by each existing and new circuit, and provide new typed directory.

END OF SECTION

SECTION 31 2000 – EARTH MOVING

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes:
 - 1. Excavation and fill.
 - 2. Compaction.
 - 3. Rough grading and finish grading.
- B. Related Sections:
 - 1. Section 01 4520 – Testing and Inspecting Services.
 - 2. Section 01 7000 – Execution Requirements: Field engineering.
 - 3. Section 03 3000 – Cast-In-Place Concrete: Concrete fill for overexcavated areas.
 - 4. Division 26 – Electrical: Earthwork for underground electrical work.

1.02 SUBMITTALS: In accordance with Section 01 3300.

- A. Fill material shall be approved by the Architect and testing firm's Soils Engineer prior to delivery.

1.03 QUALITY ASSURANCE:

- A. Excavator Qualifications: Trained in underground utility protection.

1.04 PROJECT CONDITIONS:

- A. Safety: For the security or safety of persons in and adjacent to trenches or construction operations, the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America and the safety regulations of the Division of Industrial Compliance of the State of Ohio shall be followed when specifically applicable, or by similarity of operation or as necessary for adequate protection.
- B. Maintain in place adequate structures, barricades, guards, warning lights, and other protection required by OSHA and other public authorities at cutting and filling and excavation and hazards created by this work, including shoring, bracing, planking, fences and forming as required.
- C. Exercise due care and diligence in all cutting, digging, and backfilling operations. Protect from damage overhead and underground site features that are to remain, including utility piping, trees, buildings, fences and property. Bear responsibility for, and replacement costs of, all damage arising from all operations connected with this work.
- D. Protection of Trees: Protect existing trees and vegetation indicated to remain against unnecessary cutting, breaking or skinning of roots, skinning or bruising of bark, smothering of trees by stockpiling construction materials or excavated materials

within drip line, excess foot or vehicular traffic, or parking of vehicles within drip line. Provide temporary guards as required.

1. Water trees and other vegetation to remain within limits of contract work as required to maintain their health during construction operations.
 2. Protect roots over 1½ inch diameter that are cut during construction operations; coat with emulsified asphalt or other acceptable coating formulated for damaged plant tissues.
 3. Temporarily cover exposed roots with wet burlap to prevent drying out; cover with earth as soon as possible.
 4. Protect tree root systems from damage due to noxious materials caused by run-off or spillage while mixing, placing, or storing construction materials; and from flooding, eroding, or excessive wetting caused by dewatering operations.
- E. Carefully maintain benchmarks and other reference points; if disturbed or destroyed, replace as directed.

1.05 WARRANTY:

- A. The Contractor shall be responsible for the condition of all trenches pursuant to the Agreement between the Owner and Contractor.

PART 2 PRODUCTS

2.01 FILL MATERIAL:

- A. Granular Fill: ODOT 304; crushed stone or gravel.
- B. Soil Materials: ASTM D2487, soil classification groups CL, GW, GP, GM, SW, SP, and SM.
1. Material shall be free of trash, refuse, waste, mulch, brush, leaves, grass and weeds, cinders, ashes, vegetable or organic matter, shale, large stones or masonry, frozen material, earth with an exceptionally high void content, deleterious matter, lumber or other debris. Fill material shall have a laboratory dry density of minimum 100 lbs/cu ft and shall contain no material larger than 6 inches in any dimension, and no rock or gravel larger than 2 inches in any dimension.
 2. On-Site Soil Materials: Fill and backfill material for areas not otherwise indicated shall be material excavated in connection with the work, insofar as sufficient quantities of material of satisfactory character are available. Where excavated material is insufficient, provide off-site soil material.
- C. Topsoil: ODOT 653 and ASTM D5268; fertile, friable, surface soil containing natural loam; organic content ranging between 5% and 20%; free of stones larger than ½ inch in any dimension; free of extraneous or toxic matter harmful to plant growth; obtained from well-drained sites where soil occurs in depth of 4 inches or more.

PART 3 EXECUTION

3.01 EXAMINATION:

- A. Prior to the work of this Section, inspect the site and become familiar with all portions of the work within this section.
- B. Where existing ground elevations or existing utility locations are indicated, these are believed to be reasonably correct, but do not purport to be absolutely so, and are presented only as an approximation.
- C. Site Conditions: If suitable bearing for foundation is not encountered at the depth indicated on the Drawings, immediately notify the Architect and do not proceed further until instructions are given.

3.02 PREPARATION:

- A. Notification: Notify Owner and applicable utilities and utilities protection services at least two full working days prior to commencing work. Mark site to indicate proposed excavation area.
- B. Protection of Utilities: Preserve in operating condition all active utilities traversing the site unless specifically indicated to be removed.
- C. Provide construction layout staking in accordance with Section 01 7000 and ODOT 623.
- D. Place stakes or other approved markers for visual indication of construction limits and site disturbance boundaries.
- E. Where removal or abandonment of utilities is indicated or required, disconnect, remove, cap and plug utility services. Notify affected utility companies in advance and obtain approval before starting this work.
- F. Place markers to indicated location of disconnected services. Identify service lines and capping locations on Project Record Documents.

3.03 EXCAVATING:

- A. Excavate as required for the dimensions and elevations indicated. Excavation shall extend a sufficient distance to allow for placing and removal of forms, inspections, installation of services and related construction activities. Excavations carried below indicated depths will not be permitted except when authorized by the Architect.
- B. Stockpile excavated material in approved locations that will not endanger the work or obstruct traffic or drainage flow.
- C. Unless indicated otherwise, remove existing foundation walls, footings, and concrete floor slabs to minimum 12 inches below subgrade. Remove all other obstructions as required within the developed areas.

D. Remove vegetation and topsoil, including surface fill with high organic and debris content, from the proposed developed areas.

E. Excavating for Footings:

1. Cut footing excavations to a flat bottom comprised of firm soil undisturbed by the method of excavating. Sides of the excavation may be used to form footing concrete; perform final trimming and cleaning of bottoms and sides of excavations immediately prior to placing concrete.
2. Where excavation is required within tree drip lines, hand excavate using narrow-tine spading forks; comb soil to expose roots and minimize damage to root systems.
3. Unauthorized excavation below bottom of footing elevations given shall be filled with lean concrete in accordance with Section 03 3000.
4. Do not permit a new footing to bear directly on an old existing footing or other rigid body when the new footing is otherwise soil supported.
5. Do not permit soil from footing excavations to be wasted and loosely spread in areas of floor slab or pavement support.
6. Footings shall be founded in the undisturbed virgin soils or engineered fill unless otherwise approved.

F. Trench Excavation: Cut trenches near to exact grade, minimum width to permit installation; scooped out for pipe hubs, with backfill bed laid to ensure complete support of underground piping.

1. Where trenching is required within tree drip lines, tunnel under or around roots by drilling, auger boring, pipe jacking, or digging by hand.
2. Length of Open Trench:
 - a. Minimize amount of trench opened in advance of completed work; further limitations may be directed by Architect where deemed necessary.
 - b. In general, begin backfilling and restoration of surfaces as soon as the constructed work is in approved condition to receive it; complete as rapidly as possible.
 - c. Do not perform new trenching when earlier trenches need backfilling or labor is needed to restore surfaces of streets or other areas to safe and proper conditions.
3. Test Pits: Dig exploratory test pits where necessary, in advance of trench excavation, to determine exact locations of subsurface pipe lines, conduits and structures which are likely to be encountered; protect, support and maintain in operation all active utilities.
4. Trench Drainage:
 - a. If water is encountered, furnish and operate suitable pumping equipment of capacity adequate to dewater the trench, dispose of such water, and to

maintain satisfactory drainage conditions. Conduct pump discharge to natural drainage channels, drains or storm sewers. Removal and handling of water required to maintain dry trenches or other excavations for construction of pipe lines or other structures, shall be at Contractor's expense.

- b. Where trenches are dug through areas of lateral ground water seepage or in areas below ground water table, construct bulkheads within trench, consisting of compacted native clay soil or other fines, at intervals as required to resist movement of ground water along trench and prevent displacement of bedding and backfill materials. Extend bulkheads approximately three feet in a direction parallel to the pipe, and from bottom of trench to one-half foot above top of pipe.

G. Rock Excavation:

1. Definition: Rock excavation includes boulders and solid masonry, exceeding 12 cubic feet in volume, which requires removal by drilling and blasting, wedging, sledging or barring, or breaking up with a power operated hand tool. Rock excavation does not include soft or disintegrated rock which can be removed with a hand pick or power operated excavator or shovel, or back hoe of $\frac{3}{4}$ cubic yard capacity; loose, shaken or previously blasted rock or broken stone; or rock beyond the minimum limits of measurement, which may fall into the excavation.
2. Where trench excavation is made in rock or boulders, excavate trenches minimum 6 inches below the pipe barrel for pipes 24 inches in diameter or less, and 9 inches for pipes larger than 24 inches in diameter. Bed pipe in compacted granular material placed on the trench bottom in accordance with the piping installation requirements.
3. Perform drilling and blasting, where necessary, in accordance with ODOT 208. Contractor shall satisfy all claims for damages resulting from blasting and shall fully indemnify Owner and Architect from such claims.

3.04 FILLING, BACKFILLING AND COMPACTING:

- A. Subgrade Preparation and Compaction: Prior to placing fill or backfill, proof compact subgrade under slabs and paved areas with pneumatic or sheeps-foot compactor in accordance with ODOT 204. Where soft areas are encountered, excavate unsuitable material to the depth directed by the testing firm's Soils Engineer and replace with granular fill. Provide moisture control in accordance with ODOT 203; where necessary, reduce excess moisture using the following methods:

1. Scarify subgrade to a depth of 12 inches; aerate and dry to within 2% of optimum moisture content; recompact to minimum 100% of maximum laboratory dry density in accordance with ASTM D698.

B. General Filling and Backfilling:

1. Carefully place and compact fill material to ensure firm support and to prevent future displacement.

2. Do not place frozen fill material, or place fill material on frozen or snow-covered surfaces.
 3. Fill excess cuts under slabs with approved compacted fill material.
 4. Where fill meets the natural grade of a slope, cut a bench in existing slope to serve as a key to connect existing grade with each lift of newly placed fill.
 5. Place structural fills in layers of maximum 8 inches for the full width of the cross section. Thoroughly compact each layer with sheeps-foot roller with 200 psi rating.
 6. Bring grades to underside of their respective surfacing. Grades not otherwise indicated shall be uniform levels or slopes between points where elevations are given or between such points and existing finished grades. Abrupt changes in slopes shall be rounded. Slope grades slightly away from buildings.
 7. Fill planting areas to the top of adjacent curb or pavement with minimum 18 inches clean topsoil.
- C. Site Filling and Rough Grading: After completion of site preparation, prepare surface of areas to be filled by scarifying with a disc or harrow to a depth of 4 to 6 inches. Spread an initial 3 inch layer of fill material and compact entire area.
- D. Backfilling for Foundations: Backfill around foundation walls immediately after walls have thoroughly set. Backfill around walls with stone to within two feet of finish grade; fill remainder of excavation with top soil. Where concrete work occurs next to the foundation wall, backfill with stone in compacted layers to the underside of the slab.
- E. Compacting:
1. Fill material placed in layers shall be within 2% of the optimum moisture content before compacting. Material which displays a pronounced deformation under construction equipment shall not exceed the optimum moisture content.
 - a. Expedite drying of wet soil by use of plows, discs, harrows or other approved methods.
 - b. Add water to dry soil, uniformly distributed by sprinkling wagons, pressure distributors, or other approved equipment. Manipulate material to secure a uniform moisture content throughout the layer.
 2. Compact each layer of fill material to the following minimum percentage of maximum laboratory dry density as determined in accordance with the test method indicated.
 - a. Granular Fill and Backfill under Slabs: ASTM D1557; 96%.
 - b. Granular Backfill for Foundations: ASTM D698; 98%.
 - c. Site Grading: In accordance with ODOT 203.
 3. Compact areas with approved equipment of design, weight, and quantity to obtain required density. Consolidate and compact areas inaccessible to a roller by

mechanical tampers. Operate equipment in such manner that hardpan cemented gravel, clay, or other chunky soil material will be broken in the layer.

3.05 SITE GRADING AND DRAINAGE:

- A. Control grading so that ground is pitched to prevent water from running into excavated areas. Maintain pits, trenches, and excavations free of water at all times.
- B. Take all control measures necessary to prevent damage from flooding, erosion, and sedimentation to on-site and off-site areas throughout the entire period of the Contract, in accordance with ODOT SS 832 and applicable requirements of authorities having jurisdiction.
- C. Rough Grading:
 - 1. Fill and compact areas as specified.
 - 2. Rough grade all areas to required subgrade, smooth and free from irregular surface changes. At lawn areas, rough grade to 4 inches below finish grade.
 - 3. Tolerances:
 - a. Paved Areas: ½ inch.
 - b. Walks, Lawns, and Unpaved Areas: 0.10 foot.
 - 4. Roll all cut areas; check for soft, yielding material. Where such areas are encountered and cannot be satisfactorily stabilized by moisture control and compaction, excavate unstable material to extent directed by the testing firm's Soils Engineer; fill and compact as required.
- D. Final Grading:
 - 1. Repair and reestablish rough grades to specified tolerances where eroded, rutted, settled, or decompacted due to construction operations or weather conditions; reshape and recompact to required density.
 - 2. Where surface elevations are not indicated, grade to drain with a minimum surface slope of 1 percent.
 - 3. As soon as the concrete work is completed, spread minimum 6 inches of stockpiled topsoil over planting and lawn areas to a level finish grade.
 - 4. Compact exposed subgrade to 95% ASTM D698, Method D maximum dry density near optimum moisture content.
 - 5. Remove stones, gravel, slag aggregate, and other objects 1 inch diameter and larger; remove roots, brush, wire, and other objects which may hinder fine grading operations.
 - 6. Refill and compact excavations showing evidence of shrinkage, settlement, or wash.

- E. Remove from the site and dispose of all debris and excess earth, and all excavated material not required or not suitable for fill.

3.06 FIELD QUALITY CONTROL:

- A. Subsurface soil investigation reports were not conducted for this project. If deemed necessary, such an investigation shall take place with costs borne by the Owner.
- B. Testing firm will perform testing of excavating and backfilling in accordance with Section 014520.
- C. The footing excavations are to be inspected by the testing firm's Soils Engineer during construction and immediately prior to placement of concrete, to establish that the soil bearing conditions over the entire bearing area are in accordance with the minimum soil bearing pressure stated on the Drawings.

END OF SECTION

SECTION 32 1743 – PAVEMENT SNOW MELTING SYSTEMS

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes: Snow melting heat tracing systems.
- B. Related Sections:
 - 1. Section 03 3300 – Cast-in-Place Concrete.
 - 2. Division 26 – Electrical.

1.02 SUBMITTALS: In accordance with Section 01 3300.

- A. Shop Drawings: Indicate layout, power connections, splices, end seals, controller wiring diagrams, and circuit cable length.
- B. Product Data: Include heating cables, connection kits, and accessories.

1.03 CLOSEOUT SUBMITTALS: In accordance with Section 01 7700.

- A. Operating and Maintenance Data: Installation and inspection record; troubleshooting guide.

1.04 QUALITY ASSURANCE:

- A. Provide system design and inspection by manufacturer's personnel.
- B. Manufacturer Qualifications: ISO 9001 registered; minimum 40 years' experience in manufacturing self-regulating electric heating cables.
 - 1. On request, provide references for installations that have been in operation for over 15 years.
- C. Installer Qualifications: Licensed electrician, approved by manufacturer.

1.05 DELIVERY, STORAGE AND HANDLING: In accordance with Section 01 6000.

- A. Store heating cable in a clean, dry location with a temperature range of 0 to 140 degrees F.
- B. Protect heating cable from mechanical damage.

1.06 WARRANTY: In accordance with Section 01 7700.

- A. Provide 2 year manufacturer warranty for all system components.
- B. Provide 10 year manufacturer warranty for heating cable.

PART 2 PRODUCTS

2.01 MANUFACTURERS: In accordance with Section 01 6000.

- A. nVent Thermal Management, LLC; Raychem ElectroMelt.

2.02 MATERIALS:

- A. Self-Regulating Heating Cable: IEEE 515.1; UL 515; 208 volts; continuous conductive polymer core that is radiation crosslinked, extruded between two 14 AWG nickel-plated copper bus wires; polyolefin inner and outer jacket, outer jacket marked with model number, agency listings, batch number, and meter marks; 5/24 tinned copper braid with minimum 70 percent coverage; power output varying in response to temperature change, with 70 percent reduction of heating cable power from 0 to 80 degrees F. (Raychem EM2-XR)
- B. Expansion Joint Connector: Expansion tube to form expansion loop for heating cable and provide physical protection beneath slab joints. (Raychem EMK-XEJ)
- C. Junction Box: Weatherproof enclosure for terminating both ends of two heating cable circuit; high impact strength molded structural foam; chemical resistant; high dielectric strength. (Raychem EMK-XJB)
- D. Single Circuit Digital Controller: 208 volt, 50 amp switching capacity rating; integral ground fault protection with adjustable trip levels from 30 to 120 mA; adjustable timer from 0 to 10 ours; high limit temperature sensor; support for 6 aerial or slab mounted temperature and moisture sensors; polycarbonate NEMA 3R enclosure. (Raychem APS-4C)
 - 1. Input Contacts: 10 mA dry switch type for override on and override off.
 - 2. Output Contacts: 10 mA dry switch type for supply, snow, heat, high temp, and alarm.
- E. Snow Sensors: Overhead type. (Raychem CIT-1)
- F. Power Connection: Raychem EMK-XP.
- G. Snow Melting Caution Sign: Raychem SMCS.
- H. Accessories: Splices, repair kits, cable ties; manufacturer's standard.

PART 3 EXECUTION

3.01 EXAMINATION:

- A. Test heating cable insulation resistance prior to installation to verify cable integrity.

3.02 INSTALLATION:

- A. Install and secure components in accordance with manufacturer's instructions to provide a complete functional system.
- B. Perform electrical wiring in accordance with Division 26.

C. Connect heating cable braid to ground in accordance with Division 26.

3.03 FIELD QUALITY CONTROL:

A. Factory representative shall perform initial startup and field testing.

B. Test heating cable circuit integrity at each step in the installation process. Minimum insulation resistance shall be 1000 megohms. Protect and clean areas failing tests so repairs can be made before cable is encased in concrete.

1. Before and after cable installation.
2. After installing connection kits.
3. Before and during concrete pour.
4. Prior to initial startup.

C. Verify controller parameters are set to project requirements.

3.04 PROTECTION:

A. Protect heating cable ends from moisture until cable is terminated.

END OF SECTION

SECTION 32 9200 – LAWNS AND GRASS

PART 1 GENERAL

1.01 SUMMARY:

- A. Section Includes: Preparation, fertilizing, and seeding indicated areas including site areas disturbed as a result of construction³
- B. Related Sections:
 - 1. Section 31 2000 – Earth Moving: Rough and final grading; removal of stones during grading operations.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. Fertilizer: ODOT 659.04; dry or liquid type; 10-20-10 analysis or as recommended by topsoil analysis.
- B. Lime: ODOT 659.03; agricultural ground limestone.
- C. Seed for Lawn Areas: ODOT 659.09, Class 1. Verify grass seed mixture with Owner prior to purchasing materials.
 - 1. Kentucky Bluegrass: 30% by weight.
 - 2. Creeping Red Fescue: 30% by weight.
 - 3. Annual Ryegrass: 20% by weight.
 - 4. Perennial Ryegrass: 20% by weight.
- D. Mulch: ODOT 659.14; wheat or oat straw, free of seeds and foreign matter.

PART 3 EXECUTION

3.01 PREPARATION:

- A. Machine cultivate soil evenly to provide a firm seed bed four inches deep, free of hard clumps. No heavy objects except necessary lawn making equipment shall be moved over the lawn areas after the soil is prepared, unless it is again loosened and graded.
- B. Remove stones, roots, brush, wire, and other foreign materials and objects larger than one inch in thickness or diameter.
- C. Repair eroded areas to indicated grade elevations, with smooth transitions to adjacent areas. Hand rake adjacent to building where necessary.

3.02 FERTILIZER APPLICATION:

- A. Apply fertilizer at a uniform rate of 20 pounds per 1000 square feet. Apply lime at a uniform rate of 92 pounds per 1000 square feet. Incorporate fertilizer and lime into

subgrade to a minimum depth of two inches by discing, harrowing, or other approved methods.

- B. At Contractor's option, fertilizer may be applied together with seed by mechanical machine spreading.

3.03 SEEDING:

- A. Apply seed at a total rate of 10 pounds per 1000 square feet of area, in two equal applications at right angles to each other.
- B. Mulch seeded areas at a rate of 100 pounds per 1000 square feet of area within 48 hours after seeding is completed. After application, cut straw into the seedbed using a disc roller; wet down to prevent displacement.
- C. Perform seeding between April 1 and June 1, or between August 15 and November 1, unless otherwise approved.
- D. Do not sow seed or spread mulch when wind speed exceeds 5 mph.
- E. Rolling: Immediately after seeding, firm entire area with a roller not exceeding 90 lbs per foot of roller width. Rolling is not required for hydroseeded areas, areas seeded with cultipacker-type seeder, or slopes in excess of 3 to 1.

3.04 LAWN ESTABLISHMENT AND MAINTENANCE:

- A. Provide continued proper care of lawn areas for minimum 60 days and as long as necessary to establish a uniformly close stand of grasses, free of weeds and undesirable grasses, with bare spots no larger than 6 inch diameter totaling a maximum of 2 percent of the entire lawn area.
- B. Mowing: When average grass height reaches 3½ inches, mow lawn areas with approved mowing equipment to a height of 2 inches; continue mowing at maximum 7 day intervals during growing seasons until Substantial Completion.
- C. Weeding: Uproot and remove weeds and other undesirable vegetation.
- D. Refertilization: Where areas are designated for refertilization, apply fertilizer between August 15 and October 15 during a period when the grass is dry.
- E. Reseeding: Where areas are designated for reseeding, apply seed at a rate of 4 pounds per 1000 square feet of area, in a manner which will cause minimum disturbance to existing grass, and at a minimum 15 degree angle from the direction of prior seeding.

3.05 PROTECTION:

- A. Protect all other finished areas during the work of this section.
- B. Keep paved areas clean. Remove dirt, debris, waste materials, equipment and unused materials. Leave the grounds in a clean and orderly condition at the completion of the work.

- C. Protect finished lawn areas against damage, including erosion and washouts.
Promptly repair damaged areas.

END OF SECTION

