

CITY OF FORT WAYNE

DIVISION OF PUBLIC WORKS



FW PUBLIC WORKS

**Board of
Public Works**

In Your Neighborhood

Bid Documents

for

PROJECT NAME

RES. NO. RES#

Sharon Tucker, Mayor

BOARD OF PUBLIC WORKS

Shan Gunawardena, Chair

Kumar Menon, Member

Chris Guerrero, Member

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ADVERTISEMENT for BIDS

NOTICE is hereby given by the Board of Public Works of the City of Fort Wayne, Indiana, that sealed bids for:

PROJECT NAME

RESOLUTION NUMBER RES#

Sealed bids will **ONLY** be received and accepted via the online electronic bid service through www.questcdn.com until **BID-DATE at 2:00 pm** and publicly opened at Citizens Square, 200 East Berry St, Fort Wayne In, Public Works Office, Suite 210, in Conference Room 220.

The Bidder shall furnish all labor, insurance, equipment, materials and power for the complete performance of this project as follows:

Brief description of Work

all in accordance with the Bidding Documents and Drawing No. ST- **RES#** as prepared by **TES/CONSULTANT** for the City of Fort Wayne, Indiana.

No bid will be accepted from, or contract awarded to any person, firm, or corporation that is in arrears to the City, upon any debt or contract, or, who has failed to execute, in whole or in part in a satisfactory manner, any contract with the City; or, who is a defaulter as to surety or otherwise, upon any obligation to the City.

Bidding Information can be downloaded at <http://bidding.cityoffortwayne.org/city.php> and/or www.questcdn.com for a non-refundable charge. Contact QuestCDN Customer Support at 952-233-1632 or info@questcdn.com for assistance in membership registration, downloading digital project information and vBid online bid submittal. Project bid documents must be downloaded from QuestCDN which will add your company to the Planholder List and allow access to vBid online bidding for the submittal of your bid. Vendors will be charged a fee to submit a bid electronically.

The QuestCDN eBidDoc number for this project is # **(00000)**

No bid may be withdrawn after the scheduled time for receipt of bids for at least ninety (90) days to allow review of bids before announcing award of contract. The successful bidder may be required to furnish a satisfactory Labor and Material Payment Bond and Performance Bond each in the amount no less than one hundred (100%) percent of the contract price.

A Pre-Bid Conference will be held on **DATE** at **TIME** local time at the Citizens Square Building, 200 E Berry St., Conference Room 220 to familiarize prospective bidders with the proposed project and to answer any questions.

The Board reserves the right to reject any and all bids for failure to comply with applicable laws and/or with the Instructions to Bidders. The Board also reserves the right to waive any defect in any bid.

MICHELLE FULK-VONDRAN, CLERK

Publish: **DATE**, and **DATE** in the Journal Gazette.

INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

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ARTICLE 1—DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 - B. *Issuing Office*—The Issuing Office for this project is the City of Fort Wayne Board of Public Works located in Suite 210, Citizens Square at 200 E. Berry Street, Fort Wayne, Indiana.
 - C. *Project Manager*—NAME, Transportation Engineering Services, City of Fort Wayne. Office: 200 E. Berry St, Suite 210, Fort Wayne, IN 46802. Phone Number: (260) 427-XXXX
 - D. *Successful Bidder*—The lowest responsible Bidder submitting a responsive Bid to who Owner (on the basis of Owner’s evaluation as hereinafter provided) makes an award.
 - E. *Bid Worksheet*—Basis of Bid (see Article 3 of Bid Form section)
 - F. *E-Verify Program*—An electronic verification of work authorization program of the Illegal Immigration Reform and Immigration Responsibility Act of 1996 (P.L. 104-208), Division C, Title IV, s.403(a), as amended, operated by the United States Department of Homeland Security or other federal agency authorized to verify the work authorization status of newly hired employees under the Immigration Reform and Control Act of 1986 (P.L. 99-603). As added by P.L. 171-2011, SEC. 16 and included in IC 22-5-1.

ARTICLE 2—BIDDING DOCUMENTS

- 2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder’s responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.
- 2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.
- 2.03 Owner has established a Bidding Documents Website as indicated in the Advertisement or invitation to bid. Owner requires that Bidder register as a plan holder with the Issuing Office at such website, and obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are

complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.

2.04 Plan rooms (including construction information subscription services, and electronic and virtual plan rooms) may distribute the Bidding Documents, or make them available for examination. Those prospective bidders that obtain an electronic (digital) copy of the Bidding Documents from a plan room are still required to register as plan holders from the Bidding Documents Website or Issuing Office. Owner is not responsible for omissions in Bidding Documents or other documents obtained from plan rooms, or for a Bidder's failure to obtain Addenda from a plan room.

2.05 *Electronic Documents*

A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.

1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf) that is readable by Adobe Acrobat Reader Version **11** or later. It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of Electronic Documents nor the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.

B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents, described in Paragraph 2.06.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.

C. After the Contract is awarded, the Owner may provide or direct the Engineer to provide for the use of the Contractor documents that were developed by Engineer as part of the Project design process, as Electronic Documents in native file formats.

1. Electronic Documents that are available in native file format may include:

a. [List documents that will be made available to Contractor]

2. Release of such documents will be solely for the convenience of the Contractor. No such document is a Contract Document.

3. Unless the Contract Documents explicitly identify that such information will be available to the Successful Bidder (Contractor), nothing herein will create an obligation on the part of the Owner or Engineer to provide or create such information, and the Contractor is not entitled to rely on the availability of such information in the preparation of its Bid or pricing of the Work. In all cases, the Contractor shall take appropriate measures to verify that any electronic/digital information provided in Electronic Documents is appropriate and adequate for the Contractor's specific purposes.
4. In no case will the Contractor be entitled to additional compensation or time for completion due to any differences between the actual Contract Documents and any related document in native file format.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within 7 days of Owner's request, Bidder must submit the following information:
- A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.
 - B. A written statement that Bidder is authorized to do business in the state where the Project is located, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.
 - C. Bidder's state or other contractor license number, if applicable.
 - D. Subcontractor and Supplier qualification information.
 - E. Other required information regarding qualifications.
 - F. A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.02 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

ARTICLE 4—PRE-BID CONFERENCE (PM WILL SELECT WHICH APPLIES - DELETE OTHER 2)

- 4.01 A pre-bid conference will not be conducted for this Project.
- 4.02 A non-mandatory pre-bid conference will be held at the time and location indicated in the Advertisement or invitation to bid. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference; however, attendance at this conference is not required to submit a Bid.
- 4.03 A mandatory pre-bid conference will be held at the time and location indicated in the Advertisement or invitation to bid. Representatives of Owner and Engineer will be present to

discuss the Project. Proposals will not be accepted from Bidders who do not attend the conference. It is each Bidder's responsibility to sign in at the pre-bid conference to verify its participation. Bidders must sign in using the name of the organization that will be submitting a Bid. A list of qualified Bidders that attended the pre-bid conference and are eligible to submit a Bid for this Project will be issued in an Addendum.

ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

5.01 *Site and Other Areas*

A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

5.02 *Existing Site Conditions*

A. Subsurface and Physical Conditions; Hazardous Environmental Conditions

1. The Supplementary Conditions identify the following regarding existing conditions at or adjacent to the Site:
 - a. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data.
 - b. Those drawings known to Owner of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data.
 - c. Reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
 - d. Technical Data contained in such reports and drawings.
2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.02.A of these Instructions to Bidders. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

5.03 *Other Site-related Documents*

A. In addition to the documents regarding existing Site conditions referred to in Paragraph 5.02.A, the following other documents relating to conditions at or adjacent to the Site are known to Owner and made available to Bidders for reference:

1. [List of other Site-related documents].

5.04 Owner will make copies of these other Site-related documents available to any Bidder on request.

A. Owner has not verified the contents of these other Site-related documents, and Bidder may not rely on the accuracy of any data or information in such documents. Bidder is responsible for any interpretation or conclusion Bidder draws from the other Site-related documents.

B. The other Site-related documents are not part of the Contract Documents.

C. Bidders are encouraged to review the other Site-related documents, but Bidders will not be held accountable for any data or information in such documents. The requirement to review and take responsibility for documentary Site information is limited to information in (1) the Contract Documents and (2) the Technical Data.

D. No other Site-related documents are available.

5.05 *Site Visit and Testing by Bidders*

A. Bidder is required to visit the Site and conduct a thorough visual examination of the Site and adjacent areas. During the visit the Bidder must not disturb any ongoing operations at the Site.

B. Bidders visiting the Site are required to arrange their own transportation to the Site.

C. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.

D. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder general access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such

access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site. Bidder is responsible for establishing access needed to reach specific selected test sites.

- E. Bidder must comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- F. Bidder must fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

5.06 *Owner's Safety Program*

- A. Site visits and work at the Site may be governed by an Owner safety program. If an Owner safety program exists, it will be noted in the Supplementary Conditions.

5.07 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Express Representations and Certifications in Bid Form, Agreement*

- A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder's examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications, and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.
- B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

- 7.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.

- 7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Contact information and submittal procedures for such questions are as follows:
- A. **[Insert contact information for submittal of questions to Engineer; describe any permissible or required special procedures, such as submittal via a Bidding Documents Website.]**
- 7.03 *Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than four days prior to the date for opening of Bids may not be answered.*
- 7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 8—BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5 percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 10 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.
- 8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Contract or 91 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.

- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid award.

ARTICLE 9—CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement.
- 9.02 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 10—SUBSTITUTE AND “OR EQUAL” ITEMS

- 10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or “or-equal” items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or “or-equal” item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.
- 10.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 11.01 The apparent Successful Bidder, and any other Bidder so requested, must submit to Owner a list of the Subcontractors or Suppliers proposed for the following portions of the Work within five days after Bid opening:
- A. [List key categories of the Work. Depending on the Project this might include electrical, fire protection, major equipment items].**
- 11.02 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or Supplier. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder will submit a substitute, Bidder’s Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

- 11.03 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.07 of the General Conditions.

ARTICLE 12—PREPARATION OF BID

- 12.01 The Bid Form is included with the downloadable Bidding Documents and only available on QuestCDN. No hardcopies are available or allowed to be submitted.
- 12.02 All blanks on the Bid Worksheet shall be completed on QuestCDN and the Bid Form shall be signed and uploaded to QuestCDN. Bid price shall be indicated for each item therein.
- 12.03 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.
- 12.04 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.
- 12.05 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.
- 12.06 A Bid by an individual must show the Bidder's name and official address.
- 12.07 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.
- 12.08 All names must be printed in ink below the signatures.
- 12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.
- 12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.
- 12.11 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.

- 12.12 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder’s licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder’s state contractor license number, if any, must also be shown on the Bid Form.

ARTICLE 13—BASIS OF BID (PM CHOOSES ONE BETWEEN 13.01 & 13.02 – DELETE OTHER, MOST OFTEN BE 13.02)

13.01 *Lump Sum*

- A. Bidders must submit a Bid on a lump sum basis as set forth in the Bid Form.

13.02 *Unit Price*

- A. Bidders must submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The “Bid Price” (sometimes referred to as the extended price) for each unit price Bid item will be the product of the “Quantity”, which Owner or its representative has set forth in the Bid Form, for the item and the corresponding “Bid Unit Price” offered by the Bidder. The total of all unit price Bid items will be the sum of these “Bid Prices”; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.

13.03 *Allowances*

- A. For cash allowances the Bid price must include such amounts as the Bidder deems proper for Contractor’s overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

ARTICLE 14—SUBMITTAL OF BID

- 14.01 The QuestCDN online bidding qualification information tab requires the following document types be downloaded, reviewed, and submitted (as listed below) for each project prior to allowing a bid submittal:

- A. Upload the required bid security information as an electronic (pdf) version of the bid bond or copy of a certified or bank check. If sending a certified or bank check it must be delivered to the BOPW office (200 E Berry St, Suite 210, Fort Wayne, IN 46802) within 24 hours of the bid. If certified or bank check is not received within 24 hours of the bid, bid may be determined non-response.
- B. Download all documents listed in the “Download Only” section.

- C. Download, complete, and submit all documents listed in the “Download, Complete, and Submit” section.
- 14.02 Bids may only be submitted electronically, through the QuestCDN online bidding website; at www.questcdn.com. A Bid shall be submitted no later than the date and time prescribed in the Advertisement to Bid.
- 14.03 QuestCDN online bidding will not allow bids to be received after the official bid closure time.
- 14.04 If Bidder/Proposer has any information that cannot be disclosed, the proprietary information should be submitted as a separate package. Bidder/Proposer must understand that all information submitted is subject to public records request after award is made. If proprietary information is requested bidder/proposer will be contacted and given an opportunity to defend its position that the information is proprietary.

ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID

- 15.01 Bids may be modified or withdrawn by the bidder at any time prior to the date and time for the bid closure, through QuestCDN.
- 15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 15.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

ARTICLE 16—OPENING OF BIDS

- 16.01 Bids will be opened at the time and place indicated in the Advertisement or Invitation to Bid and, unless obviously non-responsive, displayed publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders on the QuestCDN website (www.questcdn.com) after opening of the bids.

ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE

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

ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

- 18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.
- 18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.
- 18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner may reject the Bid as nonresponsive.
- 18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.
- 18.05 *Evaluation of Bids*
- A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
 - B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. To determine the Bid prices for purposes of comparison, Owner will announce to all bidders a “Base Bid plus alternates” budget after receiving all Bids, but prior to opening them. For comparison purposes alternates will be accepted, following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of its additive alternate Bids for which Owner determines funds will be available at the time of award.
 - C. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.
- 18.06 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 18.07 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 19—BONDS AND INSURANCE

- 19.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner’s requirements as to performance and payment bonds, other required bonds (if any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.
- 19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—SIGNING OF AGREEMENT

- 20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 10 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.
- 20.02 If required by City Ordinance, the contract for the work specified herein, although executed on behalf of the City by the Mayor and the Board, shall not be binding upon the City unless and until the contract has been ratified and approved by the Common Council of the City of Fort Wayne, Indiana. If the Common Council fails to approve the contract within ninety (90) days after the date of the bid opening, then the contractor shall not be bound unless the contractor elects to be bound.

ARTICLE 21—SALES AND USE TAXES

- 21.01 Owner is exempt from **Indiana** state sales and use taxes on materials and equipment to be incorporated in the Work. (Exemption No. **0005745365**. Said taxes must not be included in the Bid. Refer to Paragraph SC-7.10 of the Supplementary Conditions for additional information.

ARTICLE 22—CONTRACTS TO BE ASSIGNED

Not Used

ARTICLE 23—RETAINAGE

- 23.01 Provisions concerning retainage are set forth in the Agreement in accordance with Indiana Code 36-1-12-14.

ARTICLE 24—DEBARMENT AND SUSPENSION

- 24.01 The Board may debar or suspend a participant and/or affiliate from contract awards to protect the public interest and the City of Fort Wayne, for any of the clauses referenced in Paragraph

3.01 of these Instructions to Bidders. A participant, including any affiliate, may appeal a debarment or suspension by filing a written request for a hearing with the Board within thirty (30) days upon receipt of the particular notice. The Board determination shall be final and shall become a part of the record.

ARTICLE 25—INDIANA CODE ALLOWANCES

25.01 Indiana Code allows procurement agents to consider giving preference to purchasing commodities manufactured in the United States that meet the conditions and specifications defined in the statute. This category includes the U.S. Manufactured and Steel Products Preferences: IC 5-22-15-25 and IC 5-22-15-21. Bidder must indicate the desired preference on their Vendor Submission form. No claims for preference will be allowed by Owner after Bid opening.

BID FORM FOR CONSTRUCTION CONTRACT

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

- 1.01 This Bid is submitted to: **City of Fort Wayne, Board of Public Works, 200 E. Berry St, Suite 210, Fort Wayne, IN 46802**
- 1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

- 2.01 The following documents are submitted with and made a condition of this Bid:
 - A. Required Bid security;
 - B. State Board of Accounts Form 96;
 - C. Certificate in Lieu of Financial Statement (if financial statement is on file with the Board of Public Works and is current within 15 months);
 - D. Drug Policy Acknowledgement Form (Project Bid estimates under \$150,000.00) or Certificate in Lieu of Drug Testing Program (Project Bid Estimate over \$150,000.00).

ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

- 3.01 Bidder will complete the Work in accordance with the Contract Documents for the prices as submitted on the QuestCDN online Bid Worksheet.
- 3.02 Unit prices have been computed in accordance with Paragraph 13.03.B of the Standard General Conditions.
- 3.03 Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 4—BASIS OF BID—COST-PLUS FEE

NOT USED

ARTICLE 5—PRICE-PLUS-TIME BID

NOT USED

ARTICLE 6—TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7—BIDDER’S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

7.01 Bid Acceptance Period

- A. This Bid will remain subject to acceptance for **90** days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

7.02 Instructions to Bidders

- A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

7.03 Receipt of Addenda

- A. Bidder acknowledges receipt of Addenda through the Bidding Documents Website.

ARTICLE 8—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS

8.01 Bidder’s Representations

- A. In submitting this Bid, Bidder represents the following:
1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
 2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
 5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
 6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the

effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

8.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
 - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
 - b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
 - c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
 - d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

BIDDER hereby submits this Bid as set forth above:

Bidder:

(typed or printed name of organization)

By: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

Address for giving notices:

Bidder's Contact:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Phone: _____

Email: _____

Address: _____

Bidder's Contractor License No.: (if applicable) _____

BID BOND (PENAL SUM FORM)

Bidder Name: [Full formal name of Bidder] Address <i>(principal place of business)</i> : [Address of Bidder's principal place of business]	Surety Name: [Full formal name of Surety] Address <i>(principal place of business)</i> : [Address of Surety's principal place of business]
Owner Name: [Full formal name of Owner] Address <i>(principal place of business)</i> : [Address of Owner's principal place of business]	Bid Project <i>(name and location)</i> : [Owner project/contract name, and location of the project] Bid Due Date: [Enter date bid is due]
Bond Penal Sum: [Amount] Date of Bond: [Date]	
Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.	
Bidder	Surety
_____ <i>(Full formal name of Bidder)</i>	_____ <i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature) (Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.	

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
 - 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2. All Bids are rejected by Owner, or
 - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.



CONTRACTOR'S BID FOR PUBLIC WORK - FORM 96

State Form 52414 (R2 / 2-13) / Form 96 (Revised 2013)

Prescribed by State Board of Accounts

PART I

(To be completed for all bids. Please type or print)

Date (month, day, year): _____

1. Governmental Unit (Owner): _____

2. County : _____

3. Bidder (Firm): _____

Address: _____

City/State/ZIPcode: _____

4. Telephone Number: _____

5. Agent of Bidder (if applicable): _____

Pursuant to notices given, the undersigned offers to furnish labor and/or material necessary to complete the public works project of _____

(Governmental Unit) in accordance with plans and specifications prepared by _____

_____ and dated _____ for the sum of

_____ \$ _____

The undersigned further agrees to furnish a bond or certified check with this bid for an amount specified in the notice of the letting. If alternative bids apply, the undersigned submits a proposal for each in accordance with the notice. Any addendums attached will be specifically referenced at the applicable page.

If additional units of material included in the contract are needed, the cost of units must be the same as that shown in the original contract if accepted by the governmental unit. If the bid is to be awarded on a unit basis, the itemization of the units shall be shown on a separate attachment.

The contractor and his subcontractors, if any, shall not discriminate against or intimidate any employee, or applicant for employment, to be employed in the performance of this contract, with respect to any matter directly or indirectly related to employment because of race, religion, color, sex, national origin or ancestry. Breach of this covenant may be regarded as a material breach of the contract.

CERTIFICATION OF USE OF UNITED STATES STEEL PRODUCTS

(If applicable)

I, the undersigned bidder or agent as a contractor on a public works project, understand my statutory obligation to use steel products made in the United States (I.C. 5-16-8-2). I hereby certify that I and all subcontractors employed by me for this project will use U.S. steel products on this project if awarded. I understand that violations hereunder may result in forfeiture of contractual payments.

ACCEPTANCE

The above bid is accepted this _____ day of _____, subject to the following conditions: _____

Contracting Authority Members:

PART II

(For projects of \$150,000 or more — IC 36-1-12-4)

Governmental Unit: _____

Bidder (Firm) _____

Date (*month, day, year*): _____

These statements to be submitted under oath by each bidder with and as a part of his bid. Attach additional pages for each section as needed.

SECTION I EXPERIENCE QUESTIONNAIRE

1. What public works projects has your organization completed for the period of one (1) year prior to the date of the current bid?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

2. What public works projects are now in process of construction by your organization?

Contract Amount	Class of Work	Expected Completion Date	Name and Address of Owner

3. Have you ever failed to complete any work awarded to you? _____ If so, where and why?

4. List references from private firms for which you have performed work.

SECTION II PLAN AND EQUIPMENT QUESTIONNAIRE

1. Explain your plan or layout for performing proposed work. *(Examples could include a narrative of when you could begin work, complete the project, number of workers, etc. and any other information which you believe would enable the governmental unit to consider your bid.)*

2. Please list the names and addresses of all subcontractors *(i.e. persons or firms outside your own firm who have performed part of the work)* that you have used on public works projects during the past five (5) years along with a brief description of the work done by each subcontractor.

3. If you intend to sublet any portion of the work, state the name and address of each subcontractor, equipment to be used by the subcontractor, and whether you will require a bond. However, if you are unable to currently provide a listing, please understand a listing must be provided prior to contract approval. Until the completion of the proposed project, you are under a continuing obligation to immediately notify the governmental unit in the event that you subsequently determine that you will use a subcontractor on the proposed project.

4. What equipment do you have available to use for the proposed project? Any equipment to be used by subcontractors may also be required to be listed by the governmental unit.

5. Have you entered into contracts or received offers for all materials which substantiate the prices used in preparing your proposal? If not, please explain the rationale used which would corroborate the prices listed.

SECTION III CONTRACTOR'S FINANCIAL STATEMENT

Attachment of bidder's financial statement is mandatory. Any bid submitted without said financial statement as required by statute shall thereby be rendered invalid. The financial statement provided hereunder to the governing body awarding the contract must be specific enough in detail so that said governing body can make a proper determination of the bidder's capability for completing the project if awarded.

SECTION IV CONTRACTOR'S NON — COLLUSION AFFIDAVIT

The undersigned bidder or agent, being duly sworn on oath, says that he has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by him, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone at such letting nor to prevent any person from bidding nor to include anyone to refrain from bidding, and that this bid is made without reference to any other bid and without any agreement, understanding or combination with any other person in reference to such bidding.

He further says that no person or persons, firms, or corporation has, have or will receive directly or indirectly, any rebate, fee, gift, commission or thing of value on account of such sale.

SECTION V OATH AND AFFIRMATION

I HEREBY AFFIRM UNDER THE PENALTIES FOR PERJURY THAT THE FACTS AND INFORMATION CONTAINED IN THE FOREGOING BID FOR PUBLIC WORKS ARE TRUE AND CORRECT.

Dated at _____ this _____ day of _____

(Name of Organization)

By _____

(Title of Person Signing)

ACKNOWLEDGEMENT

STATE OF _____)
) ss
COUNTY OF _____)

Before me, a Notary Public, personally appeared the above-named _____ and swore that the statements contained in the foregoing document are true and correct.

Subscribed and sworn to before me this _____ day of _____, _____

Notary Public

My Commission Expires: _____

County of Residence: _____

BID OF

_____ (Contractor)

_____ (Address)

FOR
PUBLIC WORKS PROJECTS
OF

Filed _____

Action taken _____

CERTIFICATE IN LIEU OF FINANCIAL STATEMENT

I, _____, the _____

NAME

_____, of _____

POSITION

COMPANY

HEREBY CERTIFY THAT:

1. The Financial Statement of said Company, dated the ____ day of _____, 20__, now on file in the office of the Board of Public Works of the City of Fort Wayne, Indiana, made a part hereof, is a true and correct statement, and, accurately reflects the financial condition of said Company, as of the date hereof; and,
2. I am familiar with the books of said Company, showing its financial condition and am authorized to make this certificate on its behalf.

DATE:

SIGNATORY

PRINTED NAME OF SIGNATORY

Drug Policy Acknowledgement Form

Pursuant to Item 23 of the Instruction to Bidders, Contractor acknowledges the City of Fort Wayne has in place a Drug and Alcohol Policy that applies to any Contractor doing business with the City. A copy of this policy is available for inspection on the City of Fort Wayne website at: <http://www.cityoffortwayne.org/purchasing-home.html>. As a condition of being awarded any contract, the successful bidder shall sign this Drug Policy Acknowledgement and agree to be bound by those provisions of the policy that may be applicable. A copy of this form will be retained by the City of Fort Wayne.

The undersigned, on behalf of the Contractor deposes and states that the Contractor acknowledges the City of Fort Wayne's Alcohol and Drug Policy.

Name of Company

By: _____

Name and Title

CERTIFICATE IN LIEU OF DRUG TESTING PROGRAM

(For Project Bid Estimates over \$150,000.00)

I, _____, the _____

NAME

POSITION

of _____

COMPANY

HEREBY CERTIFY THAT:

1. A copy of our Drug Testing Program of said Company, dated the ____ day of _____, 20____, now on file in the office of the Board of Public Works of the City of Fort Wayne, Indiana.

DATE:

SIGNATORY

PRINTED NAME OF SIGNATORY



Notice of Award

Project: **PROJECT NAME**

Owner: City of Fort Wayne Board of Works

Resolution/Work Order #**RES#**

Bidder: **Contractor**

Bidder's Address: **Street Address**

City, State & Zip

You are notified that your Bid dated **Bid-Date** for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for **PROJECT NAME**

Brief description of Work

The Contract Price of your Contract is \$_____.

1 copy of the proposed Construction Contract (except Drawings) accompany this Notice of Award.

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

1. Deliver to the Owner [1] fully executed counterparts of the Construction Contract.
2. Deliver with the executed Agreement the following documents:
 - a. Performance Bond
 - b. Payment Bond
 - c. Certificate of Insurance
 - d. Executed Vendor Disclosure Statement (Must have one on file annually with the City of Fort Wayne).
 - e. Executed E-Verify Affidavit.
 - f. Executed Drug Policy Acknowledgement Form.
3. Deliver evidence of successful Bidder's Affirmative Action Plan; OR, executed City of Fort Wayne Affirmative Action Program document to City of Fort Wayne Vendor Compliance, Jessica.Bucher@cityoffortwayne.org.

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited. Contractor will be allowed an additional 11 calendar days to submit Bonds.



Notice of Award

Within thirty days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Agreement.

CITY OF FORT WAYNE

BOARD OF PUBLIC WORKS

Shan Gunawardena, Chair

Kumar Menon, Member

Chris Guerrero, Member

ATTEST:

Michelle Fulk-Vondran, Clerk

Date: _____

cc: Project Manager

AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

Resolution/Work Order #RES#

This Agreement is by and between the City of Fort Wayne – Board of Public Works (“Owner”) and CONTRACTOR NAME (“Contractor”).

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

Owner and Contractor hereby agree as follows:

ARTICLE 1—WORK

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

ARTICLE 2—THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: Project Name

ARTICLE 3—ENGINEER

3.01 The part of the Project that pertains to the Work has been designed by TES/CONSULTANT.

ARTICLE 4—CONTRACT TIMES (SELECT BETWEEN EITHER 4.02 OR 4.03 – DELETE THE ONE NOT USED)

4.01 *Time is of the Essence*

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

4.02 *Contract Times: Dates*

A. The Work will be substantially complete on or before [date], and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before [date].

4.03 *Contract Times: Days*

A. The Work will be substantially complete within [number] days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within [number] days after the date when the Contract Times commence to run.

4.04 *Milestones* (N/A for each if no Milestones)

- A. Parts of the Work must be substantially completed on or before the following Milestone(s):
1. Milestone 1 [event & date/days]
 2. Milestone 2 [event & date/days]
 3. Milestone 3 [event & date/days]

4.05 *Liquidated Damages*

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):
1. *Substantial Completion:* Contractor shall pay Owner up to \$**1000** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.
 2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner up to \$**1000** for each day that expires after such time until the Work is completed and ready for final payment.
 3. *Milestones:* Contractor shall pay Owner up to \$**1000** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved, or until the time specified for Substantial Completion is reached, at which time the rate indicated in Paragraph 4.05.A.1 will apply, rather than the Milestone rate.
 4. Liquidated damages for failing to timely attain Milestones, Substantial Completion, and final completion are not additive, and will not be imposed concurrently.
- B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

ARTICLE 5—CONTRACT PRICE

- 5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:
- A. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.
 - B. Total of all unit prices **\$*****.**

ARTICLE 6—PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on the basis of Contractor's Applications for Payment no more often than every 30 days during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.
 - 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.
 - a. **95** percent of the value of the Work completed (with the balance being retainage).
 - b. **95** percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

- A. The Contract Documents consist of all of the following:
 - 1. This Agreement.

2. Bonds:
 - a. Performance bond (together with power of attorney).
 - b. Payment bond (together with power of attorney).
3. General Conditions.
4. Supplementary Conditions.
5. Specifications as listed in the table of contents of the project manual (copy of list attached).
6. Drawings (not attached but incorporated by reference) consisting of **[number]** sheets with each sheet bearing the following general title: **[title on Drawings]**.
7. Addenda (numbers **[N/A]** to **[N/A]**, inclusive).
8. Exhibits to this Agreement (enumerated as follows):
 - a. Drug Policy Acknowledgement Form (Project Bids under \$150,000.00) or Written copy of Contractors Drug Policy (Project Bids over \$150,000.00)
 - b. E-Verify Affidavit
 - c. Escrow account agreement
9. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Orders.
 - d. Field Orders.
 - e. Warranty Bond, if any.
- B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 7.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 *Contractor's Representations*

- A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:
1. Contractor has examined and carefully studied the Contract Documents, including Addenda.
 2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
 4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
 5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
 6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.
 7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
 8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:
 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 *Standard General Conditions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

ARTICLE 9—MISCELLANEOUS

9.01 Terms

Terms used in this Agreement will have the meanings stated in the General Conditions

9.02 Severability

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

9.03 Emerging Business Enterprise(EBE) Participation

EBE Retainage Requirements – If the Contractor is in compliance with the provisions of the construction Contract the Owner will make payments for such work performed and completed. Pursuant to Executive Order 90-01 (amended 5-8-06); the Owner will retain five percent (5%) of the Contract Price to ensure compliance with the EBE participation requirements. Upon final inspection and acceptance of the Work, and determination by the Fort Wayne Board of Public Works that the Contractor has made a good faith effort to subcontract ten percent (10%) of the Contract Price to emerging business enterprises, the Contractor will be paid in full.

In the event there is a determination that good faith compliance with these EBE participation requirements has not occurred, appropriate reduction in the final payment pursuant to paragraph 9.03.E will be made.

If the Contract Price is in excess of \$200,000, the contract will be subject to the standard Board of Public Works escrow agreement. However, payments to the Contractor are not to exceed 95% of the total Contract Price until the Owner has verified that the Contractor has made good faith efforts to attain the 10% EBE goal stipulated in here within. Payment of the final 5% of the total Contract Price will be dependent upon acceptance of the Work, in accordance with Paragraph 15.06 of the General Conditions, and good faith efforts to comply with these EBE participation requirements; subject to reduction in the event of non-compliance as provided in paragraph 9.03.E.

- A. Request for Waiver – If, at the time final payment application is made, Contractor has not attained the ten percent (10%) EBE goal, Contractor shall file with the final payment application a “Request for Waiver.” Said Request for Waiver shall contain a written description of the efforts taken by Contractor to attain the ten percent (10%) EBE goal.
- B. Determination of Waiver Requests – The Vendor Compliance Department of the City of Fort Wayne shall examine all Requests for Waiver to determine if Contractor’s efforts constitute good faith efforts to attain such goal and shall submit recommendations concerning said requests for Waiver for the final determination of the Board of Public Works of the City of Fort Wayne.
- C. Good Faith Efforts. – In determining whether or not the Contractor used “good faith” efforts, the following shall be considered:

1. Whether the contract can be subdivided as determined by the Engineer and Administrator of Contract Compliance;
 2. Availability of certified EBE businesses to participate as subcontractors;
 3. Non-competitive price quotes received from EBE firms. The Board of Public Works' determination for granting a reduction or waiver of the goal because of higher quotes from EBE firms will be based on factors that include, but are not limited to the following:
 - a. The Engineer's estimate for the work under a specific contract;
 - b. The Contractor's own estimate for the work under the subcontract;
 - c. An average of the valid prices quoted for the subcontract;
 - d. Demonstrated increase in other contract costs as a result of sub-contracting to EBE firm(s).
 4. Documented measures taken by the Contractor to comply with the EBE participation goal;
 5. EBE subcontractor failed to fulfill their obligation in regard to the time delivery of goods and/or services. Also in regards to the quality of the goods and/or services set forth in the bid specifications.
 6. Such other matters as the Board of Public Works deems relevant.
- D. Consequences of Noncompliance – In the event the Board of Public Works approves a recommendation that Contractor failed to make good faith efforts at compliance, the Contract Price shall be reduced by the amount calculated as the difference between the EBE participation goal of 10% and the actual participation level met by the Contractor, but in no case shall it be reduced by more than 5%. Said amount shall be added to the City of Fort Wayne EBE Bond Guarantee Fund and Contractor agrees to accept the reduced amount as full payment under the terms of his/her Contract.
- E. Waiver Approved – In the event the Board of Public Works determines that a good faith effort to comply with these EBE participation requirements has been made, the Contract Price shall not be reduced, and the balance owing to the Contractor shall be paid in full.

ACKNOWLEDGMENT

STATE OF INDIANA)
SS:)
COUNTY OF ALLEN)

BEFORE ME, a Notary Public, in and for said County and State, this ____ day of _____, 20__, personally appeared the within named _____ who being by me first duly sworn upon his oath says that he is the _____ of _____ and as such duly authorized to execute the foregoing instrument and acknowledged the same as the voluntary act and deed of _____ for the uses and purposes therein set forth.

IN WITNESS WHEREOF, hereunto subscribed my name, affixed my official seal.

Notary Public

Printed Name of Notary

My Commission Expires:

Resident of _____ County.

ACKNOWLEDGMENT

STATE OF INDIANA)
SS:)
COUNTY OF ALLEN)

BEFORE ME, a Notary Public, in and for said County and State, this ____ day of _____, 20__, personally appeared the within named **Sharon Tucker, Shan Gunawardena, Kumar Menon, Chris Guerrero, and Michelle Fulk-Vondran**, by me personally known, who being by me duly sworn said that they are respectively the **Mayor** of the **City of Fort Wayne**, and **Chairman, Members, and Clerk** of the **Board of Public Works** of the **City of Fort Wayne, Indiana**, and that they signed said instrument on behalf of the City of Fort Wayne, Indiana, with full authority so to do and acknowledge said instrument to be in the voluntary act and deed of said **City** for the uses and purposes therein set forth.

IN WITNESS WHEREOF, hereunto subscribed my name, affixed my official seal.

Notary Public

Printed Name of Notary

My Commission Expires:

Resident of _____ County.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement (Contract/Resolution Number **RES#**).

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

CONTRACTOR

OWNER

CONTRACTOR NAME

CITY OF FORT WAYNE

BY: _____
Print Name _____

BY: _____
SHARON TUCKER, MAYOR

TITLE: _____

BOARD OF PUBLIC WORKS

DATE: _____
(Date signed by Contractor)

BY: _____
SHAN GUNAWARDENA, CHAIR

Address for giving notices:

BY: _____
KUMAR MENON, MEMBER

BY: _____
CHRIS GUERRERO, MEMBER

ATTEST: _____
MICHELLE FULK-VONDRAN, CLERK

DATE: _____
(Date signed by Board)

ESCROW AGREEMENT

THE ESCROW AGREEMENT made and entered into this _____ day of _____, 20__ by and between _____ (herein called “Escrow Agent”), and City of Fort Wayne, **Board of Public Works** (herein called “Owner”) and _____ (herein called “Contractor”).

WHEREAS, the Owner and Contractor have entered into a contract dated _____, 20__ providing for the construction by the Contractor of **PROJECT NAME**, a public work subject to the provisions of I.C. 36-1-12-14; and

WHEREAS, said construction contract provides that portions of payments by Owner to Contractor shall be retained by Owner (said payments herein referred to as “retainage”) and;

WHEREAS, I.C. 36-1-12-14 requires that certain public works projects in excess of Two Hundred Thousand Dollars and 00/100 (\$200,000.00) include an Escrow Agreement to be completed among the parties;

NOW THEREFORE, it is agreed as follows:

1. Owner will hereafter deliver or cause to be delivered to Escrow Agent the retainage, to be held in accordance with the terms of this Agreement.
2. Escrow Agent shall invest all escrowed principal in obligations selected by the Escrow Agent. All income earned on such funds shall be added to and become a part of the escrowed account.
3. The Escrow Agent shall hold the escrowed principal and income until receipt of notice from the Owner and the Contractor, specifying the part of the escrowed principal to be released from escrow and the person to whom that portion is to be released. After receipt of the notice, the Escrow Agent shall remit the designated part of escrowed principal and the same proportion of escrowed income to the person specified in the notice.

4. In the absence of such a joint written authorization and in the absence of the termination of the Contractor as provided above, then, disbursements by the Escrow Agent shall be made in the manner directed by a certified copy of a judgment of a court of record establishing the rights of the parties to said funds.

5. This Escrow Agreement shall constitute the direction from the Owner and Contractor to the Escrow Agent of the manner in which the retainage is to be paid to the Escrow Agent, and to be paid by the Escrow Agent, pursuant to I.C. 36-1-12-14.

6. The retainage to be held pursuant to this Escrow Agreement shall consist of the following:
 - a. Five percent (5%) of the dollar value of all Work satisfactorily completed until the public work reaches Substantial Completion.

7. The Escrow Agent shall be compensated for his services. Said compensation shall be computed as follows:
 - a. A charge of \$_____ for the first twelve (12) months to be assessed at the end of the first year or upon termination of the agreement.

 - b. An additional charge of \$_____ for the second twelve (12) months period, such charge to be assessed at the end of the second year or upon termination of the agreement.

 - c. If the agreement is still in effect two (2) years from the initial investment date, charges for a period beyond two years shall be renegotiated. Provided, however, that the escrow fee shall be commensurate with fees now being charged for the handling of escrow accounts of like size and duration.

 - d. The Escrow Agent shall be paid from the escrow income.

8. This agreement and anything done or performed hereunder by either the Contractor or Owner shall not be construed to prejudice or limit the claims which either party may have against the other arising out of the aforementioned construction agreement.

9. This instrument constitutes the entire agreement among the parties regarding the duties of the Escrow Agent with respect to the investment and payment of escrow funds; the Escrow Agent is not liable to the Owner and Contractor for any loss or damages not caused by its gross negligence or willful misconduct.

10. The Contractor, pursuant to I.C. 36-1-12-14 shall be paid in full all escrowed principal and income within sixty-one (61) days after the date of Substantial Completion, subject to I.C. 36-1-12-11, I.C. 36-1-12-12, and I.C. 36-1-12-13. If, within sixty-one (61) days after the date of Substantial Completion there remain uncompleted minor items, an amount equal to two hundred percent (200%) of the value of each item as determined by the Owner shall be withheld until the item has been completed.

11. This Escrow Agreement shall be construed by the laws of the State of Indiana.

ESCROW AGENT:

BY: _____
(Signature)

(Printed Name)

(Address)

(City, State, ZIP)

Phone: _____

Fax: _____

OWNER:

**CITY OF FORT WAYNE, INDIANA
BOARD OF PUBLIC WORKS**

BY: _____
Shan Gunawardena, Chair

Kumar Menon, Member

Chris Guerrero, Member

Attest:

Michelle Fulk-Vondran, Clerk

Date

CONTRACTOR:

BY: _____
(Signature)

(Printed Name)

(Address)

(City, State, ZIP)

RE: **PROJECT NAME**
RESOLUTION NO. **RES#**
WORK ORDER NO. **RES#**

CITY OF FORT WAYNE, INDIANA

(Vendor Name)

VENDOR DISCLOSURE STATEMENT RELATING TO:

- 1. FINANCIAL INTERESTS;**
- 2. POTENTIAL CONFLICTS OF INTEREST;**
- 3. CURRENT AND PENDING CONTRACTS OR PROCUREMENTS**

Vendors desiring to enter into certain contracts with the City of Fort Wayne, Indiana (the "City") shall disclose their financial interests, potential conflicts of interest and current and pending contract or procurement information as set forth below.

The following disclosures by Vendors are required for all contracts with annual payments by the City in the amount of \$50,000 or more. Vendors shall disclose their financial interests, potential conflicts of interest and other contract and procurement information identified in Sections 1, 2 and 3 below as a prerequisite for consideration for a contract awarded by the City. This Disclosure Statement must be completed and submitted together with the Vendor's contract, bid, proposal or offer.

A publicly traded entity may submit its current 10K disclosure filing in satisfaction of the disclosure requirements set forth in Sections 1 and 2 below.

Section 1: Disclosure of Financial Interest in Vendor

a. If any individuals have either of the following financial interests in Vendor (or its parent), please check all that apply and provide their names and addresses (attach additional pages as necessary):

- (i) Equity ownership exceeding 5%
- (ii) Distributable income share exceeding 5%
- (iii) Not Applicable (If N/A, go to Section 2)

Name: _____ Name: _____

Address: _____ Address: _____

b. For each individual listed in Section 1a. show his/her type of equity ownership:

sole proprietorship stock
partnership interest units (LLC)
other (explain) _____

c. For each individual listed in Section 1a. show the percentage of ownership interest in Vendor (or its parent):
ownership interest:

Name: _____ %

Name: _____ %

Section 2: Disclosure of Potential Conflicts of Interest (not applicable for vendors who file a 10K)

For each individual listed in Section 1a. check "Yes" or "No" to indicate which, if any, of the following potential conflict of interest relationships apply. If "Yes", please describe using space under applicable subsection (attach additional pages as necessary):

a. City employment, currently or in the previous 3 years, including contractual employment for services:

Yes _____ No _____

b. City employment of "Member of Immediate Family" (defined herein as: *Spouse, Child, Step Child, Parent or Step Parent, Father-in-law or Mother-in-law, Brother or Sister, Step Brother or Step Sister, Half Brother or Half Sister, Brother-in-law or Sister-in-law, Son-in-law or Daughter-in-law, Grandparent or Step Grandparent, Grandparent or Step Grandparent of Spouse, Grandchild*)

Including contractual employment for services in the previous 3 years: Yes _____ No _____

c. Relationship to Member of Immediate Family holding elective City office currently or in the previous 3 years:

Yes _____ No _____

Section 3: DISCLOSURE OF OTHER CONTRACT AND PROCUREMENT RELATED INFORMATION

a. Does Vendor have **current** contracts (including leases) with the City? Yes _____ No _____

If "Yes", identify each current contract with descriptive information including purchase order or contract reference number, contract date and City contact below (attach additional pages as necessary).

b. Does Vendor have **pending** contracts (including leases), bids, proposals, or other pending procurement relationship with the City? Yes _____ No _____

If "Yes", identify each pending matter with descriptive information including bid or project number, contract date and City contact using space below (attach additional pages as necessary).

c. Does vendor have any existing employees that are also employed by the City of Fort Wayne?

Yes _____ No _____

If "Yes", provide the employee's name, current position held at vendor, and employment payment terms (hourly, salaried, commissioned, etc.).

Name / Position / Payment Terms: _____

Name / Position / Payment Terms: _____

Name / Position / Payment Terms: _____

d. Does vendor's representative, agent, broker, dealer or distributor (if applicable) have any existing employees that are also employed by the City of Fort Wayne? For each instance, please provide the name of the representative, agent, broker, dealer or distributor; the name of the City employee, and the payment terms (hourly, salaried, commissioned, etc.).

Company / Name / Payment Terms: _____

Company / Name / Payment Terms: _____

Section 4: CERTIFICATION OF DISCLOSURES

In connection with the disclosures contained in Sections 1, 2 and 3 Vendor hereby certifies that, except as described in attached Schedule A:

- a. Vendor (or its parent) has not, within the five (5) year period preceding the date of this Disclosure Statement, been debarred, suspended, proposed for debarment declared ineligible or voluntarily excluded from any transactions by any federal, state or local unit of government;
- b. No officer or director of Vendor (or its parent) or individual listed in Section 1a. is presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state or local) with commission of any offense;
- c. Vendor (or its parent) has not, within the five (5) year period preceding the date of this Disclosure Statement, had one or more public transactions (federal, state or local) terminated for cause or default;
- d. No officer or director of Vendor (or its parent) or individual listed in Section 1a. has, within the five (5) year period preceding the date of this Disclosure Statement, been convicted, adjudged guilty, or found liable in any criminal or civil action instituted by the City, the federal or state government or any other unit of local government; and
- e. Neither Vendor, nor its parent, nor any affiliated entity of Vendor, or any of their respective officers, directors, or individuals listed in Section 1a. is barred from contracting with any unit of any federal, state or local government as a result of engaging in or being convicted of: (i) bid-rigging; (ii) bid-rotating; or

(iii) any similar federal or state offense that contains the same elements as the offense of bid-rigging or bid-rotating

- f. Pursuant to IC 5-22-16.5, Vendor hereby certifies they do NOT provide \$20 million dollars or more in goods or services to the energy sector of Iran. Vendor also certifies it is not a financial institution that extends \$20 million dollars or more in credit that will provide goods or services to the energy sector of Iran or extends \$20 million dollars or more in credit to a person identified on the list as a person engaging in investment activities in Iran.

The disclosures contained Sections 1, 2 and 3 and the foregoing Certifications are submitted by

_____	_____
(Name of Vendor)	Address
	() _____
	Telephone

	E-Mail Address

The individual authorized to sign on behalf of Vendor represents that he/she: (a) is fully informed regarding the matters pertaining to Vendor and its business; (b) has adequate knowledge to make the above representations and disclosures concerning Vendor; and (c) certifies that the foregoing representations and disclosures are true and accurate to the best of his/her knowledge and belief.

Name (Printed) _____ Title _____

Signature _____ Date _____

NOTE: FAILURE TO COMPLETE AND RETURN THIS FORM WITH YOUR DOCUMENTATION MAY RESULT IN YOUR CONTRACT, OFFER, BID OR PROPOSAL BEING DISQUALIFIED FROM CONSIDERATION.

E-Verify Affidavit

Pursuant to Indiana Code 22-5-1.7, Contractor agrees and shall enroll in and verify the work eligibility status of all newly hired employees of the contractor through the E-Verify program. E-Verify means the electronic verification of work authorization program of the Illegal Immigration Reform and Immigration Responsibility Act of 1996 (P.L. 104-208). Division C, Title IV, s.403(a), as amended, operated by the United States Department of Homeland Security or a successor work authorization program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work authorization status of newly hired employees under the Immigration Reform and Control Act of 1986 (P.L. 99-603). Contractor is not required to verify the work eligibility status of all newly hired employees of Contractor through the E-verify program if the E-Verify program no longer exists.

The undersigned, on behalf of the Contractor, being first duly sworn, deposes and states that the Contractor does not knowingly employ an unauthorized alien. The undersigned further affirms that, prior to entering into its contract with the City, the undersigned Contractor will enroll in and agrees to verify the work eligibility status of all its newly hired employees through the E-Verify program.

Name of Company

By: _____

Title

ACKNOWLEDGEMENT

STATE OF INDIANA)

) SS

COUNTY OF ALLEN)

Before me, a Notary Public, in and for said State and County, personally appeared the within named Company by Name, Title, who being first duly sworn upon his/her oath states that he/she is a duly authorized agent of the Contractor, and as such duly authorized to execute the foregoing Declaration, and acknowledged the same as his/her voluntary act and deed.

WITNESS my hand and swear this _____ day of _____, 20____.

My Commission Expires: _____

Signature of Notary Public

Resident of _____ County

Printed Name

PERFORMANCE BOND

<p>Contractor</p> <p>Name: [Full formal name of Contractor]</p> <p>Address <i>(principal place of business)</i>: [Address of Contractor's principal place of business]</p>	<p>Surety</p> <p>Name: [Full formal name of Surety]</p> <p>Address <i>(principal place of business)</i>: [Address of Surety's principal place of business]</p>
<p>Owner</p> <p>Name: [Full formal name of Owner]</p> <p>Mailing address <i>(principal place of business)</i>: [Address of Owner's principal place of business]</p>	<p>Contract</p> <p>Description <i>(name and location)</i>: [Owner's project/contract name, and location of the project]</p> <p>Contract Price: [Amount from Contract]</p> <p>Effective Date of Contract: [Date from Contract]</p>
<p>Bond</p> <p>Bond Amount: [Amount]</p> <p>Date of Bond: [Date]</p> <p><i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 16</p>	
<p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.</p>	
Contractor as Principal	Surety
<p>By: _____ <i>(Full formal name of Contractor)</i></p> <p>_____</p> <p style="text-align: center;"><i>(Signature)</i></p>	<p>By: _____ <i>(Full formal name of Surety) (corporate seal)</i></p> <p>_____</p> <p style="text-align: center;"><i>(Signature)(Attach Power of Attorney)</i></p>
<p>Name: _____</p> <p style="text-align: center;"><i>(Printed or typed)</i></p>	<p>Name: _____</p> <p style="text-align: center;"><i>(Printed or typed)</i></p>
<p>Title: _____</p>	<p>Title: _____</p>
<p>Attest: _____</p> <p style="text-align: center;"><i>(Signature)</i></p>	<p>Attest: _____</p> <p style="text-align: center;"><i>(Signature)</i></p>
<p>Name: _____</p> <p style="text-align: center;"><i>(Printed or typed)</i></p>	<p>Name: _____</p> <p style="text-align: center;"><i>(Printed or typed)</i></p>
<p>Title: _____</p>	<p>Title: _____</p>
<p><i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i></p>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
 - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

- 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
- 6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
- 7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
 - 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
 - 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
- 8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
- 9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
- 10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
- 11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.
- 12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.
- 13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

- 14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
 - 14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
 - 14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
 - 14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
16. Modifications to this Bond are as follows: **[Describe modification or enter “None”]**

PAYMENT BOND

<p>Contractor</p> <p>Name: [Full formal name of Contractor]</p> <p>Address <i>(principal place of business)</i>: [Address of Contractor's principal place of business]</p>	<p>Surety</p> <p>Name: [Full formal name of Surety]</p> <p>Address <i>(principal place of business)</i>: [Address of Surety's principal place of business]</p>
<p>Owner</p> <p>Name: [Full formal name of Owner]</p> <p>Mailing address <i>(principal place of business)</i>: [Address of Owner's principal place of business]</p>	<p>Contract</p> <p>Description <i>(name and location)</i>: [Owner's project/contract name, and location of the project]</p> <p>Contract Price: [Amount, from Contract]</p> <p>Effective Date of Contract: [Date, from Contract]</p>
<p>Bond</p> <p>Bond Amount: [Amount]</p> <p>Date of Bond: [Date]</p> <p><i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 18</p>	
<p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.</p>	
Contractor as Principal	Surety
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____	By: _____
<i>(Signature)</i>	<i>(Signature)(Attach Power of Attorney)</i>
Name: _____	Name: _____
<i>(Printed or typed)</i>	<i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____	Attest: _____
<i>(Signature)</i>	<i>(Signature)</i>
Name: _____	Name: _____
<i>(Printed or typed)</i>	<i>(Printed or typed)</i>
Title: _____	Title: _____
<p><i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i></p>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
 - 5.1. Claimants who do not have a direct contract with the Contractor
 - 5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2. Pay or arrange for payment of any undisputed amounts.
 - 7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. Definitions
 - 16.1. *Claim*—A written statement by the Claimant including at a minimum:
 - 16.1.1. The name of the Claimant;
 - 16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;
 - 16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 - 16.1.4. A brief description of the labor, materials, or equipment furnished;

- 16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 - 16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 - 16.1.7. The total amount of previous payments received by the Claimant; and
 - 16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
- 16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic’s lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of “labor, materials, or equipment” that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor’s subcontractors, and all other items for which a mechanic’s lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
 - 16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
 - 16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
 18. Modifications to this Bond are as follows: **[Describe modification or enter “None”]**

Notice to Proceed

Via Certified Mail, Return Receipt Requested

Dated _____

Project: PROJECT NAME	Owner: City of Fort Wayne Board of Public Works	Owner's Contract No.: RES# WO#: RES#
Contract:	Engineer's Project No.:	
Contractor:		
Contractor's Address:		

You are notified that the Contract Times under the above contract will commence to run on _____. On or before that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement, the date of Substantial Completion is _____, and the date of readiness for final payment is _____ [(or) the number of days to achieve Substantial Completion is _____, and the number of days to achieve readiness for final payment is _____].

Before you may start any Work at the Site, Paragraph 2.01.B of the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insureds) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also, before you may start any Work at the Site, you must *[add other requirements]*:

«BOARD», City of Fort Wayne, Indiana

Owner

By:

Authorized Signature

Title

Date

Copy to Engineer

Contractor's Application For Payment No. _____

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

APPLICATION FOR PAYMENT

Change Order Summary

Approved Change Orders				
Number	Additions	Deductions		
TOTALS				
NET CHANGE BY				
CHANGE ORDERS				

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

CONTRACTOR'S CERTIFICATION

The undersigned Contractor certifies that: (1) all previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work covered by prior Applications for Payment; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any such Liens, security interest or encumbrances); (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective; and (4) Contractor has delivered all payrolls for project (including subcontractors'), up to the end of the month preceding the date below, to Vendor Compliance, Suite 495, of the Citizens Square, 200 East Berry Street, Fort Wayne, IN.

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

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

Progress Estimate - Unit Price Work

Contractor's Application for Payment

Owner: _____		Owner's Project No.: _____	
Engineer: _____		Engineer's Project No.: _____	
Contractor: _____		Contractor's Project No.: _____	
Project: _____		Contractor's Project No.: _____	
Contract: _____		Contractor's Project No.: _____	

Application No.:		Application Period: From		to		Application Date:							
A	B	C		D	E	F	G		H	I	J	K	L
Bid Item No.	Description	Item Quantity	Units	Unit Price	Value of Bid Item	Work Completed		Materials Currently Stored (not in G)	Work Completed and Materials Stored to Date (H + I)	% of Value of Item	Balance to Finish (J - K)		
						Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G)						
Original Contract													
Original Contract Total						\$	-	\$	-	\$	-	\$	-
Change Orders													
Change Order Total						\$	-	\$	-	\$	-	\$	-
Original Contract and Change Orders													
Project Totals \$							-	\$	-	\$	-	\$	-

CHANGE ORDER

Date:

Change Order #:

Resolution #:

Project:

W.O.#:

To: (Contractor)

The CONTRACTOR is directed to make the following changes in the contract documents as set forth in this change order and attachments.

See attached Contract Cost Analysis Sheet

	<u>Decrease</u>	<u>Increase</u>
Total Decrease _____		
Total Increase _____		
Net Increase/Decrease to Contract Price: _____		

The sum of _____ hereby _____ the total contract price, and the contract shall be adjusted as follows:

Sum of prior Change Orders	_____
Amount of Change Order #__	_____
Original Contract Price	_____
Current Contract Price Adjusted by Previous Change Order (if any)	_____
New Contract Price including this Change Order	_____

The time provided for _____ Completion of this project on this contract is _____ by _____ calendar days due to this Change Order. The date for _____ completion of all work shall be _____. Furthermore, this document shall become an amendment to the contract and all provisions of the contract shall apply hereto.

Justification for Change:

Will Proposed Change Order alter size of project _____

If yes, Explain:

Effect on operation & maintenance cost of the project:

Recommended by: _____ Date: _____
(Type Project Manager Name), Project Manager

Accepted by: _____ Date: _____
(Type Contractor's Name)

Approved by: _____ Date: _____
Matthew Gray, Manager Transportation Engineering Services

Approved by: BOARD OF PUBLIC WORKS Date: _____

Shan Gunawardena, Chair

Kumar Menon, Member

Chris Guerrero, Member

Attested by: _____
Michelle Fulk-Vondran, Clerk

Certificate of Substantial Completion Form

Project: PROJECT NAME	Owner: City of Fort Wayne, Board of Public Works	Owner's Contract No.: RES# , WO#: RES#
Contract:	Date of Contract:	
Contractor:	Engineer's Project No.:	

This [tentative] [definitive] Certificate of Substantial Completion applies to:

All Work under the Contract Documents:

The following specified portions:

Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Project or portion thereof designated above is hereby declared and is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below.

A [tentative] [revised tentative] [definitive] list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

The responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, heat, utilities, insurance and warranties shall be as provided in the Contract Documents except as amended as follows:

Amended Responsibilities

Not Amended

Owner's Amended Responsibilities:

Contractor's Amended Responsibilities:

The following documents are attached to and made part of this Certificate:

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Executed by Engineer

Date

Accepted by Contractor

Date

Accepted by Owner

Date

COMPLETION AFFIDAVIT

Name of Project: _____

Resolution/Work Order Number _____

Contract Number _____

Date of Final Completion _____

Contractor Name _____

_____, under penalty of perjury, deposes and states:

1. That the matters and things herein stated have reference to those Public Works Improvements made pursuant to the project stated above along with the plans and specifications relating thereto.

2. That affiant is an officer of the corporation, firm, partnership, or party of the contractor awarded the contract and which has performed the work required pursuant to the above stated project and related plans and specifications.

3. That affiant has personal knowledge of the matters stated herein and makes the following statements to induce the City of Fort Wayne, Indiana to accept said work and to proceed with the final payment to the Contractor:

a. That Contractor and all of its subcontractors, material-men, laborers, and suppliers have fully complied with all the terms and conditions of the contract and related plans and specifications in every aspect.

b. That the work has been fully completed in every respect and is ready for inspection and acceptance thereafter by the City.

c. That the materials used were of the character, kind, and quality specified.

d. That the work was performed in a good and workmanlike manner.

e. That all bills and expenses for labor, materials, supplies, subcontractors and all other matters have been fully paid or will have been paid in full before the date of acceptance of the work by the Board of Public Works of the City of Fort Wayne.

f. That Contractor has fully and completely met all other requirements of the contract documents including laws, rules, regulations, and ordinances of the United States, State of Indiana, and City of Fort Wayne pertaining to the payment of wages, the hiring of minorities and females, the non-discrimination requirements, and the utilization of Emerging Business Enterprises.

Affiant _____ Title _____

STATE OF _____)

) SS:

COUNTY OF _____)

Subscribed and sworn to before me, a Notary Public in and for said County and State, this _____ day of _____, 20____.

Notary Public _____

My Commission Expires: _____

Resident Of: _____

WARRANTY BOND

Contractor Name: [Full formal name of Contractor] Address (principal place of business): [Address of Contractor's principal place of business]	Surety Name: [Full formal name of Surety] Address (principal place of business): [Insert address of Surety's principal place of business]
Owner Name: [Full formal name of Owner] Address (principal place of business): [Address of Owner's principal place of business]	Construction Contract Description (name and location): [Owner's project/contract name, and location of the project] Contract Price: [Amount from Contract] Effective Date of Contract: [Date from Contract] Contract's Date of Substantial Completion: [Date from Contract]
Bond Bond Amount: [Amount] _____ Bond Period: 2 years from Final Acceptance of the Work under the Construction Contract. Date of Bond: [Date] _____ Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 9	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth herein, do each cause this Warranty Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal _____ <i>(Full formal name of Contractor)</i> By: _____ <i>(Signature)</i> Name: _____ <i>(Printed or typed)</i> Title: _____ Attest: _____ <i>(Signature)</i> Name: _____ <i>(Printed or typed)</i> Title: _____	Surety _____ <i>(Full formal name of Surety) (corporate seal)</i> By: _____ <i>(Signature) (Attach Power of Attorney)</i> Name: _____ <i>(Printed or typed)</i> Title: _____ Attest: _____ <i>(Signature)</i> Name: _____ <i>(Printed or typed)</i> Title: _____
<i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>	

12. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract's Correction Period Obligations. The Construction Contract is incorporated herein by reference.
13. If the Contractor performs the Correction Period Obligations, the Surety and the Contractor shall have no obligation under this Warranty Bond.
14. If Owner gives written notice to Contractor and Surety during the Bond Period of Contractor's obligation under the Correction Period Obligations, and Contractor does not fulfill such obligation, then Surety shall be responsible for fulfillment of such Correction Period Obligations. Surety shall either fulfill the Correction Period Obligations itself, through its agents or contractors, or, in the alternative, Surety may waive the right to fulfill the Correction Period Obligations itself, and reimburse the Owner for all resulting costs incurred by Owner in performing Contractor's Correction Period Obligations, including but not limited to correction, removal, replacement, and repair costs.
15. The Surety's liability is limited to the amount of this Warranty Bond. Renewal or continuation of the Warranty Bond will not modify such amount, unless expressly agreed to by Surety in writing.
16. The Surety shall have no liability under this Warranty Bond for obligations of the Contractor that are unrelated to the Construction Contract. No right of action will accrue on this Warranty Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
17. Any proceeding, legal or equitable, under this Warranty Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and must be instituted within two years after the Surety refuses or fails to perform its obligations under this Warranty Bond.
18. Written notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown in this Warranty Bond.
19. Definitions
 - 19.1. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page of this Warranty Bond, including all Contract Documents and changes made to the agreement and the Contract Documents.
 - 19.2. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
 - 19.3. *Correction Period Obligations*—The duties, responsibilities, commitments, and obligations of the Contractor with respect to correction or replacement of defective Work, as set forth in the Construction Contract's Correction Period clause, EJCDC® C-700, Standard General Conditions of the Construction Contract (2018), Paragraph 15.08, as duly modified.
 - 19.4. *Substantial Completion*—As defined in the Construction Contract.
 - 19.5. *Work*—As defined in the Construction Contract.
20. Modifications to this Bond are as follows: **[Describe modification or enter "None"]**

AUTHORIZATION FOR RELEASE OF ESCROW

The undersigned Owner and Contractor hereby directs _____

(Escrow Agent) to advance to the Contractor the sum of _____ dollars

(\$_____). This is pursuant to paragraph 3 of the Escrow Agreement dated

_____, 20____, by and between the aforementioned parties, including accrued income, less the escrow fee.

FULL/PARTIAL RELEASE OF ESCROW FOR _____ PROJECT.

ACCOUNT # _____

CONTRACT # _____

OWNER:

CITY OF FORT WAYNE

CONTRACTOR

By: BOARD OF PUBLIC WORKS

By: _____

Shan Gunawardena, Chair

Kumar Menon, Member

Chris Guerrero, Member

Attest:

Michelle Fulk-Vondran, Clerk

Date _____

STANDARD GENERAL CONDITIONS

OF THE CONSTRUCTION CONTRACT

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STANDARD GENERAL CONDITIONS

OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

10. *Claim*

- a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.
 - b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
 - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
 - d. A demand for money or services by a third party is not a Claim.
11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.

20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.
22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner’s acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.

30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor’s plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications;

Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion of such Work.
43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
 - a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm

water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives*: The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day*: The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective*: The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 1. does not conform to the Contract Documents;
 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. *Furnish, Install, Perform, Provide*

1. The word “furnish,” when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
2. The word “install,” when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.

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

ARTICLE 2—PRELIMINARY MATTERS

2.01 Delivery of Performance and Payment Bonds; Evidence of Insurance

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 Copies of Documents

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 Before Starting Construction

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 Preconstruction Conference; Designation of Authorized Representatives

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 Acceptance of Schedules

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
 - 4. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for

the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

5. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
6. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
7. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 Electronic Transmittals

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 Intent

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

G. Nothing in the Contract Documents creates:

1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 Reference Standards

A. Standards Specifications, Codes, Laws and Regulations

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 Reporting and Resolving Discrepancies

A. Reporting Discrepancies

2. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
3. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

4. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

5. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 Requirements of the Contract Documents

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 Reuse of Documents

- A. Contractor and its Subcontractors and Suppliers shall not:
 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 Commencement of Contract Times; Notice to Proceed

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 Starting the Work

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

4.03 Reference Points

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

4.04 Progress Schedule

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 Delays in Contractor's Progress

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. Abnormal weather conditions;
 - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 - 4. Acts of war or terrorism.
- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
 - 1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 - 2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 - 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
 - 1. The circumstances that form the basis for the requested adjustment;
 - 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;

3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

22.02 Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

- A. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- B. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 Availability of Lands

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations;

(c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.

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

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

5.03 Subsurface and Physical Conditions

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

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and

3. Technical Data contained in such reports and drawings.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.
- C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.
- D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
 3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
 4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 Differing Subsurface or Physical Conditions

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
 2. is of such a nature as to require a change in the Drawings or Specifications;
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further

disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. Possible Price and Times Adjustments
 - 1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
 - 2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;

- b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 Underground Facilities

- A. *Contractor's Responsibilities:* Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 2. complying with applicable state and local utility damage prevention Laws and Regulations;
 3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:

1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. Possible Price and Times Adjustments
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
 - c. Contractor gave the notice required in Paragraph 5.05.B.
 2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 Hazardous Environmental Conditions at Site

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

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is

responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be

included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 Performance, Payment, and Other Bonds

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing

and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 Insurance—General Provisions

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.
- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may

block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.

- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.
- H. Contractor shall require:
 - 1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
 - 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.
- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.

- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 Contractor's Insurance

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
1. include at least the specific coverages required;
 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds:* The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);
 4. not seek contribution from insurance maintained by the additional insured; and
 5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 Builder's Risk and Other Property Insurance

- A. *Builder's Risk:* Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur:* Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities:* Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 Property Losses; Subrogation

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.
 - 1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss

covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.

2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.

1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.

C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.

D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 Receipt and Application of Property Insurance Proceeds

A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 Contractor's Means and Methods of Construction

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

7.02 Supervision and Superintendence

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 Labor; Working Hours

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.
- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.

- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 Services, Materials, and Equipment

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 "Or Equals"

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
 - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

- 3) has a proven record of performance and availability of responsive service; and
 - 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense:* Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination:* Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 Substitutes

- A. *Contractor's Request; Governing Criteria:* Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
 - a. will certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design;
 - 2) be similar in substance to the item specified; and
 - 3) be suited to the same use as the item specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from the item specified; and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 Concerning Subcontractors and Suppliers

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 Patent Fees and Royalties

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.09 Permits

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 Taxes

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

7.11 Laws and Regulations

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 Record Documents

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples,

will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 Safety and Protection

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 Hazard Communication Programs

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

7.15 Emergencies

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

7.16 Submittals

A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:

- a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
- b. determine and verify:
 - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
 - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

- 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
 2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.
 3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
 1. *Shop Drawings*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.
 2. *Samples*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Engineer's Review of Shop Drawings and Samples*
 1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.
5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. Resubmittal Procedures for Shop Drawings and Samples

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. *Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
 - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
 - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.
 - d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.

F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 Contractor's General Warranty and Guarantee

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
 1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.

- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
1. Observations by Engineer;
 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. Use or occupancy of the Work or any part thereof by Owner;
 5. Any review and approval of a Shop Drawing or Sample submittal;
 6. The issuance of a notice of acceptability by Engineer;
 7. The end of the correction period established in Paragraph 15.08;
 8. Any inspection, test, or approval by others; or
 9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 Indemnification

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

them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 Delegation of Professional Design Services

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.
- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
 - 1. Checking for conformance with the requirements of this Paragraph 7.19;
 - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
 - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 Other Work

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.
- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 Coordination

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. An itemization of the specific matters to be covered by such authority and responsibility; and
 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 Legal Relationships

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
4. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
 5. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- G. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve

the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER’S RESPONSIBILITIES

9.01 Communications to Contractor

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

9.02 Replacement of Engineer

A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer’s status under the Contract Documents will be that of the former Engineer.

9.03 Furnish Data

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

9.04 Pay When Due

A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 Lands and Easements; Reports, Tests, and Drawings

A. Owner’s duties with respect to providing lands and easements are set forth in Paragraph 5.01.

I. Owner’s duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.

J. Article 5 refers to Owner’s identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 Insurance

A. Owner’s responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 Change Orders

A. Owner’s responsibilities with respect to Change Orders are set forth in Article 11.

9.08 Inspections, Tests, and Approvals

A. Owner’s responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 Limitations on Owner’s Responsibilities

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

9.10 Undisclosed Hazardous Environmental Condition

- A. Owner’s responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 Evidence of Financial Arrangements

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner’s obligations under the Contract (including obligations under proposed changes in the Work).

9.12 Safety Programs

- A. While at the Site, Owner’s employees and representatives shall comply with the specific applicable requirements of Contractor’s safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER’S STATUS DURING CONSTRUCTION

10.01 Owner’s Representative

- A. Engineer will be Owner’s representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner’s representative during construction are set forth in the Contract.

10.02 Visits to Site

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor’s executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer’s efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer’s visits and observations are subject to all the limitations on Engineer’s authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer’s visits or observations of Contractor’s Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor’s means, methods, techniques, sequences, or procedures of construction, or the

safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 Resident Project Representative

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 Engineer's Authority

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.
- E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 Determinations for Unit Price Work

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 Decisions on Requirements of Contract Documents and Acceptability of Work

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 Limitations on Engineer's Authority and Responsibilities

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 Compliance with Safety Program

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 Amending and Supplementing the Contract

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 Change Orders

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 Work Change Directives

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.
- B. If Owner has issued a Work Change Directive and:
5. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
 6. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 Field Orders

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 Owner-Authorized Changes in the Work

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the

Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.

- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 Unauthorized Changes in the Work

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 Change of Contract Price

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
 - 1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
 - 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
 - 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:
 - 1. A mutually acceptable fixed fee; or

2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
 - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
 - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 Change of Contract Times

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 Change Proposals

A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. *Change Proposal Procedures*

3. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.

4. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.

a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.

b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

5. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.

6. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

7. *Binding Decision:* Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.

- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 Notification to Surety

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

ARTICLE 12—CLAIMS

12.01 Claims

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
 - 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 - 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
 - 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
 - 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct

negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. *Mediation*

1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.

E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.

F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 Cost of the Work

A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:

1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost

of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
 5. Other costs consisting of the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.
- c. *Construction Equipment Rental*
- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
 - 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
 - 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.
- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

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

C. *Costs Excluded:* The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
2. The cost of purchasing, renting, or furnishing small tools and hand tools.
3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
6. Expenses incurred in preparing and advancing Claims.
7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change Order, Change Proposal, Claim,

set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances*: Contractor agrees that:
 - 1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- F. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- G. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

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

E. Adjustments in Unit Price

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 Access to Work

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

14.02 Tests, Inspections, and Approvals

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor

shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 3. by manufacturers of equipment furnished under the Contract Documents;
 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 Defective Work

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

- F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 Acceptance of Defective Work

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 Uncovering Work

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as

to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 Owner May Stop the Work

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

14.07 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

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

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. *Applications for Payments*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

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

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
 - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. The Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. The Contract Price has been reduced by Change Orders;
 - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
 - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
 - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to

Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 Contractor's Warranty of Title

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 Substantial Completion

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and

Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 Partial Use or Occupancy

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
 - 2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 - 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 Final Inspection

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

15.06 Final Payment

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
 - d. a list of all duly pending Change Proposals and Claims; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

- C. *Notice of Acceptability*: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 Waiver of Claims

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim, appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 Correction Period

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such adjacent areas;
 - 2. correct such defective Work;
 - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.

- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 Owner May Suspend Work

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 Owner May Terminate for Cause

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 Owner May Terminate for Convenience

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 Contractor May Stop Work or Terminate

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 Methods and Procedures

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.

- B. *Final Resolution of Disputes*: For any dispute subject to resolution under this article, Owner or Contractor may:
1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
 2. agree with the other party to submit the dispute to another dispute resolution process; or
 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 Giving Notice

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 Computation of Times

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

18.03 Cumulative Remedies

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

18.04 Limitation of Damages

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 No Waiver

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 Survival of Obligations

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 Controlling Law

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

18.08 Assignment of Contract

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

18.09 Successors and Assigns

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

18.10 Headings

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

SUPPLEMENTARY CONDITIONS

PROJECT NAME

RESOLUTION NO. RES#

The Supplementary Conditions amend and supplement the General Conditions of the Construction Contract and other provisions of the Contract Documents as indicated in these Supplementary Conditions. All provisions, which are not so amended or supplemented, remain in full force and effect.

The letters "SC" which represent Supplementary Condition shall prefix paragraph numbering of these Supplementary Conditions. Reference to the General Conditions is made by the letters "GC" and the appropriate paragraph number

SC-GC-1.01 Defined Terms

Add the Following Terms to the Defined Terms:

51. E-Verify Program -- A electronic verification of work authorization program of the Illegal Immigration Reform and Immigration Responsibility Act of 1996 (P.L. 104-208), Division C, Title IV, s.403(a), as amended, operated by the United States Department of Homeland Security or successor work authorization program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work authorization status of newly hired employees under the Immigration Reform and control Act of 1986 (P.L. 99-603).

As added by P.L. 171-2011, SEC.16 and included in IC 22-5-1.7

52. Contractor Tier -- Refers collectively to Tier 1, Tier 2, Tier 3, and Lower tier contractors.

Tier 1 contractor – Each Contractor that has a contract with Owner to perform some part of, supply some of the materials for, or supply a service for the performance of part of the Work at the Site.

Tier 2 contractor – Each Subcontractor having a direct contract with the Contractor to perform some part of, supply some of the materials for, or supply a service for the performance of part of the Work at the Site.

Tier 3 contractor – Each Subcontractor having a direct contract with a Tier 2 contractor to perform some part of, supply some of the materials for, or supply a service for the performance of part of the Work at the Site.

Lower tier contractor – Each Subcontractor having a direct contract with a Tier 3 contractor or with any other lower tier contractor to perform some part of, supply some of the materials for, or supply a service for the performance of part of the Work at the Site.

53. Project Manual

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

54. Schedule of Road Closures

A schedule, prepared and submitted by Contractor, showing locations and timelines of all road closures which are necessary to complete the Work, or otherwise known by the Contractor to potentially impact the Project.

55. Project Managers

The person designated as such by the Owner and having all duties and responsibilities of the Engineer except as specifically noted or requiring registration as a Professional Engineer.

56. Final Completion

The date upon which the owner agrees that all work as required by the Contract is fully complete and issues an acceptance letter. **[insert PM definition]**

57. Substantial Completion

Add the following to the end of paragraph 1.01.42

[insert PM definition]

SC-GC-2.02 Copies of documents

Replace 2.02 A with the following:

- A: Owner shall furnish to Contractor ONE Printed copy of the contract (including one fully signed counterpart of the agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

SC-GC-2.03 Before Starting Construction

Add the following new language immediately after Paragraph 2.03.A.3.

4. Preliminary Schedule of Road Closures. Schedule shall include approximate dates of all planned road closures, and available preliminary information on barricade locations and types. Full signage and barricade information shall be submitted in accordance with the submittal requirements.

SC-GC-2.05.A Acceptance of Schedules

Delete 2.05 in its entirety and replace with new 2.05:

2.05 *Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times and is in general conformance with any attached specifications identifying requirements of Progress Schedules. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
 4. The Preliminary Schedule of Road Closures shall be acceptable if it identifies all locations of closures, includes start and end dates of each planned closure, and is accompanied by a map with legend indicating the general sequence of closures in relation to the general sequence of the work.
 5. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

SC-GC-4.01 Commencement of Contract Times; Notice to Proceed

Delete the last sentence of Paragraph 4.01.A in its entirety.

SC-GC-4.02 Starting the Work

Add the following new section immediately after 4.02.A

- 4.02.B Contractor shall not commence any work or operation as described in these Project Specifications and/or Project Bid items, in part or whole, prior to the Notice-to-Proceed. Work performed prior to the date of the Notice to Proceed shall be considered work outside of the scope of the contract for purposes of payment. Contractor agrees that such action is at the Contractor's risk and without liability on the part of the City.

SC-GC-4.05 Delay's in the Contractor's Progress

Delete Section 4.05.C.2 in its entirety and replace with new 4.05.C.2:

2. Inclement weather shall be defined as any weather which prevents Contractor from making progress on the critical path Work. It is the Contractor's responsibility to document the weather conditions from an approved weather service or as documented by the RPR on site, and to document the impacts to the critical path. If the number of days in which inclement weather delayed Contractor's critical path progress exceeds the

days in table 4.05.C.2. in any given month, then Contractor shall be given a no cost time extension to the contract duration.

Table 4.05.C.2	
Contractor shall plan for the following number of inclement weather days:	
January	7
February	6
March	6
April	8
May	5
June	3
July	3
August	3
September	3
October	4
November	5
December	6

- Months in which the contract spans only a portion of the month shall utilize a pro-rated system based on the percentage of the month encompassed by the contract and the table above.

SC-GC-5.03 Subsurface and Physical Conditions

Add the following new sections immediately after 5.03.A.3

- The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which Contractor may rely.

NTS: If there are no such reports, indicate within table. – Delete rows not used

Report Title	Author	Date of Report	Technical Data
Results of Investigation of Subsoil Conditions and Geotechnical Recommendations—Riverside Wastewater Treatment Plant	X,X,X	August 8, 2018	Boring Log, Test Site 1, at page 32 of Report.
Add	As	Appropriate	...
N/A	N/A	N/A	N/A

5. The following table lists the drawings of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which Contractor may rely.

NTS: If there are no such drawings, indicate within table – Delete rows not used

Drawing Source	Author	Date of Drawing	Technical Data
Record Drawing from Project ###.##.#—Riverside Wastewater Treatment Plant	X,X,X	August 8, 2018	Bedrock outcropping elevation, as shown on page 32 of As-Built Drawing.
Add	As	Appropriate	...
N/A	N/A	N/A	N/A

SC-GC-5.06 Hazardous Environmental Conditions at Site

Add the following new sections immediately after 5.06.A.3

4. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely:

NTS: If there are no such reports, indicate within table – Delete rows not used.

Report Title	Author	Date of Report	Technical Data
			[Identify Technical Data]
N/A	N/A	N/A	N/A

5. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any) contained in such Drawings upon which Contractor may rely:

NTS: If there are no such drawings, indicate within table.

Drawings Title	Author	Date of Drawings	Technical Data
			[Identify Technical Data]
N/A	N/A	N/A	N/A

SC-GC-6.01 Performance, Payment and Other Bonds

Delete Section 6.01 B in its entirety and replace with new 6.01.B:

NTS: The following offer examples of potential bonds which are required to protect warranties which extend beyond the two-year correction period. Revise as appropriate. Check engineer’s estimate to ensure bond amount of a reasonable dollar amount to cover all aspects of correcting defective work and materials. 110% of the engineer’s estimate for the intended work is recommended.

- B. The correction period specified as one year after the date of Substantial Completion in Paragraph 15.08.A of the General Conditions is hereby revised to be 2 years after Final Acceptance.

1. Contractor shall furnish the following specialty bond(s) issued in the form of EJCDC® C-612, Warranty Bond (2018). The specialty bond must be in the amount listed in the table below. The

bond period will be for the dates as indicated in the table. Contractor shall deliver the fully executed specialty bond to Owner prior to execution of the Contract.

NTS: The Guarantee Bond shall be used for all standard City of Fort Wayne projects. The tree Bond is an example of a typical “other” bond that may be issued. Fill in this table for the specific project’s needs.
 – Delete rows not used.

Specialty Bonds	Work Covered	Effective Times	Amount of Bond	Notes
Guarantee Bond	All work required under the correction period.	2 years from Final Acceptance	Full Contract Amount	...
Tree Warranty Bond	All trees and shown on the Drawings, sheets 4, and 5	5 years from Final Completion	\$3,000	[Minimum 80% survival rate Required Per ACOE Permit]
Add	As	appropriate		...

2. All bonds listed above must be issued by the same surety that issues the performance bond required under Paragraph 6.01.A of the General Conditions.

SC-GC-6.03 Contractor’s Liability Insurance

Add the following new paragraphs immediately after Paragraph 6.03.A:

- B. Contractor’s liability insurance shall contain an endorsement on the general liability policy that will provide limits on a "per project" basis.
- C. The limits of liability for the insurance required by Paragraph 6.02 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:
 1. Worker's Compensation, and related coverage, under Paragraphs contained in 6.03 of the General Conditions:
 - a. State: Statutory
 - b. Employer’s Liability \$100,000.00

2. Contractor's General Liability under Paragraphs contained in 6.03 of the General Conditions, which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody, and control of Contractor or provide equivalent coverage under Builders Risk:

a. General Aggregate:

(Except Products-Completed Operations): \$ 2,000,000

b. Products-Completed

Operations Aggregate: \$ 1,000,000

c. Personal and Advertising

Injury (Per Person/Organization): \$ 1,000,000

d. Bodily Injury and Property

Damage (Each Occurrence): \$ 1,000,000

e. Property Damage liability insurance will provide Explosion, Collapse, and Underground coverages where applicable.

f. Each Subcontractor employed by the Contractor or by any other Subcontractor shall have equivalent General Liability coverage limits as provided above.

3. Automobile Liability under Paragraph 6.03 of the General Conditions:

a. Combined Single Limit: \$ 300,000

b. Non-owned and Hired

Automobile Liability: \$ 300,000

c. Aggregate: \$ 1,000,000

4. The Contractual Liability coverage shall provide coverage for not less than the following amounts:

a. Bodily Injury:

Each Accident \$ 300,000

Annual Aggregate \$ 1,000,000

b. Property Damage:

Each Accident \$ 300,000

SC-GC-6.04 Builder's Risk and other Property Insurance Proceeds

Delete Paragraph 6.04 B and C in its entirety and insert the following in its place:

- B. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof. The insurance shall:
1. Include the interests of owner, Contractor, Subcontractors, Engineer, Engineer's Consultants, Consulting Engineer, and any other individuals or entities identified below, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;
 2. Be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss and damage to the Work, temporary buildings, false work, and materials and equipment in transit and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils or causes of loss as may be specifically required by these Supplementary Conditions.
 3. Include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of Engineers and Architects);
 4. Cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 5. Allow for partial utilization of the Work by Owner;
 6. Include testing and startup; and
 7. Be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

C. ::NOT USED::

Add the following new sections after 6.04 E:

- F. Contractor shall be responsible for any deductible or self-insured retention.

- G. The policies of insurance required to be purchased and maintained by Contractor in accordance with the Paragraph SC 6.04 shall comply with the requirements of Paragraph 6.04.C.
- H. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph SC 6.04 will contain a provision or endorsement that the coverage afforded will not be cancelled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph SC 6.05.

SC-GC-7.01 Contractor's Responsibilities

Add the following Sentence to the end of paragraph 7.01.B:

Professional engineering or other design services shall be performed by a Professional Engineer registered in the state of Indiana.

SC-GC-7.03 Labor; Working Hours

Add the following sentence to the end of paragraph 7.03.C:

Contractor shall adhere to all applicable ordinances including local noise ordinances.

SC-GC-7.04 Services, Materials, and Equipment

Add the following new paragraph immediately after Paragraph 7.04.C:

- D. **LEAD BASE PAINT.** The Contractor shall take all necessary steps to reduce the hazard from lead base paint. Lead base paint is defined as paint containing more than six-one-hundredths of one percent of lead by weight in the total non-volatile content of liquid paint, or in the dried film of paint already applied, and shall include cracking, scaling, peeling, chipping, or loose paint. Any surfaces to be painted shall be treated as necessary. Treatment involves washing, sanding, scraping, wire brushed, or otherwise cleaned so as to remove cracking, scaling, peeling, chipping, or loose paint back to sound surfaces and repainting with two (2) coats of suitable non-lead paint. If paint film integrity cannot be maintained, the surface must be covered.

SC-GC-7.09 Permits

Add the following new paragraph immediately after Paragraph 7.09.A

- B. Owner will obtain and pay for the following permits:
 - 1. **List those checked off on checklist or put N/A if there are none.**

SC-GC- 7.10 Taxes

Add the following new paragraph immediately after Paragraph 7.10.A:

- B. Pursuant to the Indiana State Gross Retail Sales Act, all tangible, personal property, which becomes a component part of the Work is exempt, from Indiana General Sales Tax. This exemption applies to purchases of tangible property made by the Contractor, which incorporates such property into the Work and transfers such property to the Owner in fulfillment of the Contract. Certification of exempt use shall be made in accordance with the State of Indiana.

SC-GC- 7.12 Record Documents

Add the following language to the beginning of 7.12

The following applies to projects in which Contractor is responsible for construction engineering as specified in the Agreement.

SC-GC- 7.13 Safety and Protection

Add the following paragraph immediately after 7.13.E:

1. Pursuant to IC 36-1-12-20, IOSHA regulation 29 C.F.R. 1926, Subpart P, for trench safety are hereby incorporated into these Contract Documents by reference and the costs for trench safety systems shall not be paid for separately; but shall rather be included in the unit prices bid for the work that requires trench safety systems.

SC-GC-7.20 Compliance with E-Verify Program

Add the follow new Section 7.20:

- 7.20 Compliance with E-Verify Program. Pursuant to IC 22-5-1.7, Contractor shall enroll in and verify the work eligibility status of all newly hired employees of Contractor through the E-Verify Program ("Program"). Contractor is not required to verify the work eligibility status of all newly hired employees through the Program if the Program no longer exists.
 - A. Contractor and its subcontractors shall not knowingly employ or contract with an unauthorized alien or retain an employee or contract with a person that Contractor or its subcontractor subsequently learns is an unauthorized alien. If Contractor violates this Section 16.23, Owner shall require Contractor to remedy the violation not later than thirty (30) days after Owner notifies Contractor. If Contractor fails to remedy the violation within the thirty (30) period, Owner shall terminate the contract for breach of contract. If Owner terminates the contract, Contractor shall, in addition to any other contractual remedies, be liable to Owner for actual damages. There is a rebuttable presumption that Contractor did not knowingly employ an unauthorized alien if Contractor verified the work eligibility status of the employee through the Program.

- B. If Contractor employs or contracts with an unauthorized alien but Owner determines that terminating the contract would be detrimental to the public interest or public property, Owner may allow the contract to remain in effect until Owner procures a new contractor.
- C. Contractor shall, as a condition of being awarded a contract, execute the E-Verify Affidavit, affirming that Contractor does not knowingly employ an unauthorized alien and further affirming that Contractor has enrolled and is participating in the E-Verify Program
- D. Contractor shall, prior to performing any work, require each subcontractor to certify to Contractor that the subcontractor does not knowingly employ or contract with an unauthorized alien and has enrolled in the Program. Contractor shall maintain on file a certification from each subcontractor throughout the duration of the Project. If Contractor determines that a subcontractor is in violation of this Section 16.23, Contractor may terminate its contract with the subcontractor for such violation. Such termination may not be considered a breach of contract by Contractor or the subcontractor.

SC-GC-7.21 Other Requirements

Add the follow new Section 7.21:

- 7.21 The City of Fort Wayne, Department of Public Works Standard Details latest edition is hereby incorporated into these Contract Documents by reference. These Details are available at:

<https://www.cityoffortwayne.org/publicworks/construction-standard-details.html>

SC-GC-7.22 Contractor Tier

Add the follow new Section 7.22:

7.22:

- A. Each Contractor and Subcontractor performing Work in connection with the Project shall meet one of the classifications in the Contractor Tier.
- B. Each Tier 1 Contractor shall contribute at least 15% of the Contract Price, as determined on the date the Contract is awarded, in (1) labor performed by the Tier 1 Contractor's employees; (2) materials supplied directly by the Tier 1 Contractor; (3) services supplied directly by the Tier 1 Contractor's employees; or (4) any combination of (1) through (3).
- C. No employee of a Contactor or Subcontractor may be paid in cash for Work performed in connection with the Project.
- D. If a Contractor or Subcontractor violates this Section 6.23, the Owner shall require the Contractor or Subcontractor to remedy the violation no later than thirty (30) days after notification. If the Contractor or Subcontractor fails to remedy the violation within the thirty (30) day period, then Owner may find the Contractor or Subcontractor not responsible and determine the length of time the Contractor or Subcontractor is not responsible. The period during which a Contractor or Subcontractor is considered not

responsible may not exceed forty-eight (48) months and begins on the date of substantial completion of the Work.

Prior to commencing any Work on the Project, all tiers of contractors must be qualified by the Indiana Department of Transportation under IC 8-23-10 or the Indiana Department of Administration under IC 4-13.6-4.

A Contractor or Subcontractor employing ten (10) or more employees must provide access to a training program applicable to the tasks to be performed in the normal course of the employee's employment with the contractor. This requirement may be met through (1) an apprenticeship program; (2) a program offered by Ivy Tech College of Indiana; (3) a program offered by Vincennes University; (4) a program established by or for the contractor; (5) a program offered by an entity sponsored by the US Department of Labor, Bureau of Apprenticeship and Training; (6) a program that results in the aware of an industry recognized portable certification; (7) a program approved by the US Department of Transportation, Federal Highway Administration; or (8) a program approved by the Indiana Department of Transportation.

Tier 1 or 2 contractors employing fifty (50) or more journeymen shall participate in an apprenticeship or training program that meets the standards established by or approved by any of the following: (1) U.S. Department of labor, Bureau of Apprenticeship and Training' (2) The Indiana Department of Labor; (3) U.S. Department of Transportation, Federal Highway Administration; or (4) The Indiana Department of Transportation.

SC-GC- 8.01 Other Work

Add the following immediately after 8.01.A

NTS: This varies based on each project's individual circumstances. Please select from one of the following and modify as appropriate:

1. No other work by the Owner is scheduled for this work site.

::OR::

NTS: The following is an example. If this format is chosen specifier must insert the applicable projects

1. The following other projects are in vicinity to the site. Contractor shall coordinate laydown and parking areas with the following projects:

Other construction contracts have been or will be awarded by Owner that are in close proximity to or border on the Work of this Contract. Work under these other contracts is briefly described as follows:

Project_Name	Anticipated Dates	Near or Overlapping?	Notes:
Morton Street Force-Main	06/2018-11/2019	Overlapping	Force-main discharge and header discharge must be coordinated to flange as indicated on drawings
Add	As	Appropriate	...

SC-GC- 9.13 Owner’s Site Representative

Add the following immediately after 9.12:

9.13 *Owner’s Site Representative*

- A. Owner may elect to provide a “Public Works Engineering Technician” to represent Owner at the Site and assist Owner in observing the progress and quality of the Work. The Owner’s Site Representative is not Engineer’s consultant, agent, or employee. Owner’s Site Representative’s duties shall be the same as a Resident Project Representative as identified in SC 10.03.

SC-GC- 10.03 Resident Project Representative

Add the following immediately after 10.03.B

- C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:
 1. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor’s safety meetings), and as appropriate prepare and circulate copies of minutes thereof.
 2. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR’s own personal safety while at the Site.
 3. *Liaison*
 - a. Serve as Engineer’s liaison with Contractor. Working principally through Contractor’s authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner’s liaison with Contractor when Contractor’s operations affect Owner’s on-Site operations.

- c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.
4. *Review of Work; Defective Work*
- a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Observe whether any Work in place appears to be defective.
 - c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.
5. *Inspections and Tests*
- a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.
 - b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.
6. *Payment Requests: Review Applications for Payment with Contractor and assists in reconciling discrepancies with Engineer and Contractor*
7. *Completion*
- a. Participate in Engineer's visits regarding Substantial Completion.
 - b. Assist in the preparation of a punch list of items to be completed or corrected.
 - c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
 - d. Observe whether items on the final punch list have been completed or corrected.
- D. The RPR will not:
- 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
 - 2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
 - 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.

4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Authorize Owner to occupy the Project in whole or in part.

SC-GC- 11.07 Change Orders

Add the following sentence to the beginning of section 11.07.C:

This section applies to changes in work which are in addition to the Contract Price. For changes paid using Allowances, See GC 13.02 and related SC 13.02.

SC-GC- 13.01 Cost of the Work

SC 13.01 Supplement Paragraph 13.01.B.5.c.(2) by adding the following sentence:

The equipment rental rate that governs the included costs for the rental of machinery and equipment owned by Contractor (or a related entity) under the Cost of the Work provisions of this Contract shall be no more than as determined by local rental rates.

SC-GC- 13.02 Allowances

Add the following sections immediately after 13.02.C.

- B. When Work is being paid for out of an Owner's Contingency Allowance, the Contractor's fee for overhead and profit will be determined as follows:
 1. A mutually acceptable fixed fee; or
 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 5 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 13.02.C.2.a and 13.02.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower

tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;

- d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
- e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
- f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 13.02.C.2.a through 13.02.C.2.e, inclusive.

SC-GC- 13.03 Unit Price Work

SC-13.03 Delete Paragraph 13.03.E in its entirety and insert the following in its place:

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the extended price of a particular item of Unit Price Work amounts to 20% percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than 20% percent from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

SC-GC- 14.02 Test and Inspections

::OR::

NTS: There are two options for 14.02. the first assumes the Owner (city) is to perform all testing. Option two assumes the contractor to hire an independent lab for testing. Choose based on project's individual circumstance.

NTS: Select this Option if owner is responsible for testing:

Amend the first paragraph of 14.02 D to read:

Owner shall be responsible for arranging, obtaining, and paying for all inspection and tests required unless specifically called out to be responsibility of the Contractor in the technical specifications:

NTS: Or add these if Contractor is responsible for testing and do NOT modify 14.02 D:

Add the following new paragraphs immediately after Paragraph 14.02.F:

G. QUALIFICATIONS OF LABORATORY

1. Where applicable, meet "Recommended Requirements for Independent Laboratory Qualification", latest edition, published by American Council of Independent Laboratories and the basic requirements of ASTM E 329, "Standards of Recommended Practice for Inspection and Testing Agencies for Concrete and Steel as Used in Construction". Laboratory shall be authorized to operate in the state in which Project is located.
2. Submit copy of report of inspection of facilities made by Materials Reference Laboratory of National Bureau of Standards during most recent tour of inspection; with memorandum of remedies of any deficiencies reported by inspection.
3. Material Testing Equipment:
 - a. Calibrate at maximum 12-month intervals by devices of accuracy traceable to either National Bureau of Standards or accepted values of natural physical constants.
 - b. Submit copy of certificate of calibration, made by accredited calibration agency.

H. LABORATORY DUTIES

1. Cooperate with Engineer and provide qualified personnel promptly on notice.
2. Perform specified inspections, sampling and testing of water quality, materials and methods of construction; comply with applicable standards; ascertain compliance with requirements of Contract Documents.
3. Promptly notify Engineer and Contractor of irregularities or deficiencies of Work, which are observed during performance of services.
4. Promptly submit five (5) copies of reports of inspections and tests to Engineer, including:
 - a. Date issued.
 - b. Project title and number.
 - c. Testing laboratory name and address.
 - d. Name and signature of inspector.

- e. Date of inspection or sampling.
 - f. Record of temperature and weather.
 - g. Date of test.
 - h. Identification of product and Specification Section.
 - i. Location in Project.
 - j. Type of inspection or test.
 - k. Results of test and observations regarding compliance with Contract Documents.
5. Perform additional tests and services as required to assure compliance with the Contract Documents.

I. CONTRACTOR'S COORDINATION WITH LABORATORY

1. Cooperate with laboratory personnel; provide access to Work and to manufacturer's operations.
2. Provide to laboratory, representative samples of materials to be tested, in required quantities.
3. Furnish labor and facilities:
 - a. To provide access to Work to be tested.
 - b. To obtain and handle samples at the site.
 - c. To facilitate inspections and tests.
 - d. For laboratory's exclusive use for storage and curing of test samples.
 - e. Forms for preparing concrete test beams and cylinders.
4. Notify laboratory and Engineer sufficiently in advance of operations to allow for assignment of personnel and scheduling of sampling and tests.
5. Arrange with laboratory and pay for additional samples and tests required for Contractor's convenience.

J. TEST REPORTS

1. Furnish copies of product test reports where required by the Specifications or requested by Engineer.

SG-GC-15.01 Progress Payments

Amend the first sentence in Paragraph 15.01.B.1:

Delete the words "At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month)" and replace them with "Not more than once a month"

Add the following language to the end of Paragraph 15.01.B.3:

Said affidavit shall also certify that Contractor has provided current payroll information for the project (up to the end of the month preceding the most recent progress payment) to the City Vendor Compliance.

Add the following language to the end of Paragraph 15.01.B.4:

As required by I.C. 36-1-12-14, an escrow account shall be established to receive and hold funds retained in accordance with the Contract. The Contractor shall select an Escrow Agent and complete the Escrow Account Agreement on the forms included herein. The completed forms signed by the Contractor and the Escrow Agent, shall be submitted to the Board of Public Works within 10 days of the Contractor's receipt of Notice of Award. The Board of Public Works will sign the forms and return copies to the Contractor and Escrow Agent after issuing Notice to Proceed.

SG-GC-15.03 Substantial Completion

Add the following new paragraph immediately after Paragraph 15.03:

Contractor's request for issuance of a Certificate of Substantial Completion shall occur after Contractor has, in the opinion of the Engineer, satisfactorily completed the Work as defined in the Agreement.

SG-GC-15.06 Final Payment

Add the following new paragraph immediately after Paragraph 15.06.E

- F. *Timeline for Project Closeout:* Contractor shall have 30 days, beginning the day after actual final completion, to submit all closeout documents, including, but not limited to, final application for payment, retainage invoicing, change orders, completion affidavit, maintenance bonds, Vendor Compliance documents and any other paperwork deemed necessary by this contract, to the Engineer. Liquidated Damages, defined herein, will be assessed for non-compliance outside of this 30 day period, at an amount of \$250 per calendar day, until all necessary paperwork has been submitted to the Engineer.

The Project Manager/Engineer will have the discretion to waive Liquidated Damages for issues beyond the control of the contractor.

SG-GC-15.08 Correction Period

Add the following new paragraph immediately after Paragraph 15.08.G:

- G. The correction period specified as one year after the date of Substantial Completion in Paragraph 15.08.A of the General Conditions is hereby revised to be the number of years set forth in SC 6.01.B.1

SC-GC-18.11 Anti-Discrimination under Indiana Code Chapter 5-16-6-1

Add Paragraph 18.11 Anti-Discrimination under Indiana Code Chapter 5-16-6-1 after Paragraph 18.10, to read as follows:

Contractor agrees:

- A. That in the hiring of employees for the performance of work under the Contract or any subcontract hereunder, no contractor or subcontractor, nor any person acting on behalf of such

contractor or subcontractor, shall, by reason of race, religion, color, sex, national origin or ancestry, discriminate against any resident of the State of Indiana who is qualified and available to perform the work to which the employment relates;

- B. That no contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under the Contract on account of race, religion, color, sex, national origin or ancestry;
- C. That there may be deducted from the amount payable to the contractor by the City of Fort Wayne under the Contract a penalty of five (\$5.00) per person for each calendar day during which such person is discriminated against or intimidated in violation of the provisions of the Contract; and,
- D. That the Contract may be canceled or terminated by the City of Fort Wayne and all money due or to become due hereunder may be forfeited for a second or any subsequent violation of the terms or conditions of this clause.

SC-GC-18.12 Anti-Discrimination under the Code of the City of Fort Wayne, Section 93.036

Add Paragraph 18.12 Anti-Discrimination under the Code of the City of Fort Wayne, Section 93.036 after Paragraph 18.11, to read as follows:

- A. In the performance of work under this Contract or any subcontract hereunder the contractor, subcontractor, and any person acting on behalf of such contractor or subcontractor will not discriminate against any person who is qualified and available to perform the work to which the employment relates.

The contractor, subcontractor, or any person acting on behalf of such contractor or subcontractor will not obstruct the enforcement of this provision.

The contractor, subcontractor, or any person acting on behalf of such contractor or subcontractor will not retaliate against any person because of good faith, reasonable actions taken to overcome, alleviate, or report discrimination.

Enforcement of this chapter shall be through order of the City of Fort Wayne in the following manner:

1. Whenever any member of the Division of the City of Fort Wayne awarding this Contract, or whenever a Compliance Officer of the City of Fort Wayne has reason to believe that any of the provisions of this clause and of Chapter 93.036 have been violated, the matter may be referred to the Metropolitan Human Relations Commission for investigation and initiation of discrimination charges against the contractor or subcontractor. Cases over which the Metropolitan Human Relations Commission has no jurisdiction, shall be investigated by the Compliance Officer of the City.
2. A final order of the Metropolitan Human Relations Commission shall be forwarded to the Compliance Officer of the City of Fort Wayne and to the Division awarding the Contract, which may invoke one of the remedies set forth in subsection 3 of this clause. If it is a matter over which the Metropolitan Human Relations Commission does not have jurisdiction, the Division

awarding the Contract shall conduct a hearing to determine whether there has been a breach of Ordinance Chapter 93.036.

3. If the Division awarding the Contract determines that a contractor, subcontractor, or any person acting on behalf of such contractor or subcontractor has violated the provision or provisions of Ordinance Chapter 93.038, whether discriminating, obstructing, retaliating, or otherwise, the Division awarding the Contract may:
 - a. Deduct from the amount payable to the contractor by the City of Fort Wayne under such Contract the sum of not less than ten dollars (\$10.00) per day, nor more than one thousand dollars (\$1,000.00) per day per each violation. Each day upon which the violations exist shall be deemed a separate offense.
 - b. The Division of the City awarding this Contract may cancel or terminate this Contract, and all money due or to become due under the Contract may be forfeited for a second or any subsequent violation of Chapter 93.038.

SC-GC-18.13 Contractor Employee Drug Testing (Contracts \$150,000 or more)

Add Paragraph 18.13 Contractor Employee Drug Testing Program after Paragraph 18.12, to read as follows:

Pursuant to IC 4-13-18, the Contractor shall implement the employee drug testing program submitted as part of its Bid. Owner may cancel this Agreement if it determines that the Contractor:

- A. Has failed to implement its employee drug testing program during the term of this Contract:
- B. Has failed to provide information regarding implementation of the Contractor’s employee drug testing program at the request of Owner; or
- C. Has provided to the Owner false information regarding the Contractor’s employee drug testing program.

SC-18.14 Emerging, Minority, Women Business Enterprise

EBE GOALS – The City’s goal for qualified Emerging Business Enterprise (E.B.E), as subcontractors on this project is **ten percent (10%)** of the contract amount.

For the current Emerging, Minority, Women Business Enterprise Directory please access through the following URL/Link:

<https://www.cityoffortwayne.org/emerging-business-directory.html>

Recurring Special Provisions

(see attached pages)

Recurring Special Provisions
Division 100 – General Provisions
City of Fort Wayne
Public Works

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Section 100.01 General

Contractor shall follow the Current Standard Specifications by the Indiana Department of Transportation unless amended, supplemented, or replaced by recurring Special Provisions or Unique Special Provisions provided by the City of Fort Wayne in the following Technical Specifications/Special Provisions.

Anywhere in the Standard Specifications where “state” is used, it shall be in reference to both the State of Indiana and/or the City of Fort Wayne.

Anywhere in the Standard Specifications where “agency” is used, it shall be in reference to both INDOT and/or the Public Works Department of the City of Fort Wayne.

Anywhere in the Standard Specifications where “Engineer” is used, it shall be in reference to either the City Engineer or his assigned representative.

Anywhere in the Standard Specifications where “Highway” is used, it shall be synonymous with City Roadway.

Section 101 – Definitions and Terms

101.02 Above Normal Inclement Weather Days

Replace INDOT Spec 101.02 with the following:

Inclement weather shall be defined as any weather which prevents Contractor from making progress on the critical path Work. It is the Contractor’s responsibility to document the weather conditions from an approved weather service or as documented by the RPR on site, and to document the impacts to the critical path. If the number of days in which inclement weather delayed Contractor’s critical path progress exceeds the days in table 4.05.C.2. in any given month, then Contractor shall be given a no cost time extension to the contract duration.

Contractor shall plan for the following number of inclement weather days:	
January	7
February	6
March	6
April	8
May	5
June	3
July	3
August	3
September	3

October	4
November	5
December	6

Months in which the contract spans only a portion of the month shall utilize a pro-rated system based on the percentage of the month encompassed by the contract and the table above.

150 101.03 ~~Blank~~ City of Fort Wayne Created Pay Items

INDOT Pay Items with no changes and Fort Wayne Recurring Special Provisions that modify INDOT Pay Items will retain the same INDOT Pay Item number.

New City Created **Recurring** Special Provisions will have Pay Items coded:
(Section Number ###) – FWR##

Example:

City created Pay Item in Section 620 Brick Pavers of Recurring Special Provisions:
620-FWR01 Reset Brick Pavement, Utilizing Existing Brick

City created **Unique** Special Provisions will have Pay Items coded:
(Section Number, ###)-FWU##

Example:

City created Pay Item in Section Traffic Control Devices of Unique Special Provisions:
801-FWU01 Maintenance of Traffic

101.12 Contract

The written agreement between the Department and the Contractor setting forth the obligations of the parties thereto including, but not limited to, the performance of the work, the furnishing of labor and materials, and the basis of payment.

The contract may include, but is not limited to, the Proposal book, Bid Documents, Schedule of Pay Items, contract form, bid bond, performance and payment bond,

200 specifications, special provisions, information to bidders, instructions to bidders, general and detailed plans, notice to proceed, and any change orders and agreements that are required to complete the construction of the work in an acceptable manner, including authorized extensions thereof, all of which constitute one instrument.

101.19 Department

The Indiana Department of Transportation and/or the City of Fort Wayne as constituted under the laws of Indiana for the administration of highway and roadway work.

270 **101.27 Holidays**

Holidays are considered to be:

- All Sundays
 - New Year's Day
 - Martin Luther King Day
 - ~~Lincoln's Birthday~~
 - ~~Washington's Birthday~~
 - ~~Good Friday~~
 - ~~Primary Election Day~~
 - 280 Memorial Day
 - Independence Day
 - Labor Day
 - ~~Columbus Day~~
 - ~~Election Day~~
 - Veteran's Day
 - Thanksgiving Day
 - Friday after Thanksgiving Day
 - Christmas Day
 - Day before/or after Christmas Day
-

330 **101.37 Performance Bond**

The approved form of security, furnished and executed by the bidder and its surety or sureties, guaranteeing complete execution of the contract, as defined herein, and for the payment of all legal debts pertaining to the construction of the project. The performance bond will be in effect after both parties have signed the contract and the contract has been approved by the Attorney General of the State Board of Public Works.

101.41 Project

The specific section of the highway roadway where work is to be performed under the contract.

SECTION 102 Bidding Requirements and Conditions**102.01 ~~Prequalification and Bidding~~**

~~The bidder will be required to prequalify and follow the bidding procedures as set out in the rules for Prequalification of Contractors and Bidding, 105 IAC 11, now on file with the Indiana Secretary of State, copies of which are available upon request in the Contract Administration Division.~~

10 If apparent errors, discrepancies, or unclear statements are found in the contract documents prior to letting, the District Construction Engineer for the district Project Manager shown on the Proposal sheet shall be contacted by telephone, email, or fax.

SECTION 103 – Award and Execution of Contract**103.01 Disadvantaged Business Enterprise Program**

This section is not applicable to City Specifications

103.04 Insurance

This section is not applicable to City Specifications

103.06 Waiver of Damages

This section not applicable to City Specifications

SECTION 104 – Scope of Work**104.02 Changed Conditions****(b) Suspensions of Work Ordered by the Engineer/Project Manager**

80 If the performance of all or any portion of the work is suspended or delayed by the Engineer/Project Manager in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the Contractor believes that additional compensation, and/or contract time is due as a result of such suspension or delay, the Contractor shall submit to the Engineer in writing a request for

adjustment within seven calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.

90 Upon receipt, the Engineer/**Project Manager** will evaluate the Contractor's request. If the Engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the Contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the Engineer will make an adjustment (excluding profit) and modify the contract in writing accordingly. The Contractor will be notified of the Engineer's/**Project Manager's** determination whether or not an adjustment of the contract is warranted.

No contract adjustment will be allowed unless the Contractor has submitted the request for adjustment within the time prescribed in accordance with 105.16.

No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided or excluded under any other term or condition of this contract.

(c) Significant Changes in the Character of Work

The Engineer/**Project Manager** reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the Contractor agrees to perform the work as altered.

260

104.03 Extra Work

Unforeseen work, for which there is no price included in the contract, shall be performed whenever it is deemed necessary to fully complete the contract within its intended scope, or it is in the best interest of the **State City** to complete the unforeseen work under the contract. Work Allowances are stipulated amounts available as reserve for sole use by Owner to cover unanticipated costs for extra work. Such work shall be performed in accordance with the specifications and as directed, and will be paid for in accordance with 109.05 in the City of Fort Wayne Recurring Special Provisions.

SECTION 105 – Control of Work

105.01 Authority of the Engineer/Project Manager

The Engineer/Project Manager will decide all questions which may arise as to the quality and acceptability of materials furnished and work performed and as to the rate of progress of the work; which may arise as to the interpretation of the plans and specifications; and as to the acceptable fulfillment of the contract on the part of the Contractor.

10 The Engineer/Project Manager will have the authority to suspend the work wholly or in part for failure to carry out provisions of the contract; for failure to carry out orders; for such periods as may be deemed necessary due to unsuitable weather; for conditions considered unsuitable for prosecution of the work; or for any other condition or reason deemed to be in the public interest. Any contract adjustments for suspension of work will be in accordance with 104.02(b). Work shall not be suspended without written authority from the Engineer.

100 105.04 Coordination of Plans, Standard Specifications, and Special Provisions

The Standard Specifications, the plans, special provisions, and all supplementary documents are essential parts of the contract. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions. ; and the following relationships apply:

~~Instruction to Bidders and
description of pay items listed~~

~~in the Schedule of Pay Items~~ ————— hold over:

~~Unique Special Provisions~~

~~Plans~~

~~Recurring Special Provisions~~

~~Standard Specifications~~

~~Unique Special Provisions~~

~~hold over: ————— Plans~~

~~Recurring Special Provisions~~

~~Standard Specifications~~

~~Plans~~ — hold over:

~~Recurring Special Provisions~~

~~Standard Specifications~~

~~Recurring Special Provisions~~

~~hold over: ————— Standard Specifications~~

110 ~~In case of discrepancy relative to other contract documents, the list of approved or Prequalified Materials will be regarded the same as Recurring Special Provisions. Notes on the plans which are not also included in either the special provisions or among the~~

~~general notes portion of the plans, and refer to payment, non payment, or cost to be included in that of other pay items, will not govern over specifications. The precedence outlined herein shall not absolve the Contractor of its responsibility in accordance with 107.17.~~

120 Advantage shall not be taken of any apparent error or omission in the plans or specifications. In the event such an error or omission is discovered, the Engineer shall be notified immediately. Such corrections and interpretations as may be deemed necessary for fulfilling the intent of the plans and specifications will then be made.

105.06 Cooperation with Utilities

170 The contract documents identify each known utility and describe all known necessary work and an anticipated schedule for completion. However, if a utility fails to relocate or adjust their facilities as provided for in the contract documents and the Contractor sustains delays, losses, or both, that could not have been avoided by the Contractor's judicious handling of forces, equipment, and plant or by reasonable revisions to the schedule of operations, and the Contractor has documented its utility coordination efforts and sustained delays and losses, and if the sustained delays and losses were not caused by the negligence of the Contractor, the Contractor may pursue appropriate compensation and/or extension under 104.02 or from the documented offending party in accordance with Public Law 35-2005. If the Contractor is delayed and it provides the aforementioned information to the Engineer, the time for completion may be extended in such amount as the conditions justify or the Contractor may be compensated for an accelerated
180 construction schedule.

105.08 Construction Stakes, Lines, and Grades

(a) Construction Engineering by the State

Not applicable to City Specifications.

400 105.09 Duties of Technician and Inspector

The technicians and inspectors employed by the Department are stationed on the work to:

- (a) keep the Engineer/Project Manager informed as to the progress of the work and the manner in which it is being done;
-

105.16 Notice of Changed Conditions and Claims

(c) Claim Resolution Process

1. Project Level Review

720 The Contractor shall submit the claim to the Engineer at the project level. The Engineer will review the claim and make an effort to resolve the claim at the project level within 30 days of receipt of the claim, or other time as mutually agreed. Meetings may be requested by either the Engineer or the Contractor to discuss the claim in an effort to reach resolution. The Engineer will make a project level ruling on the claim and notify the Contractor in writing of the ruling.

730 If the Contractor disagrees with the project level ruling or if a ruling is not issued within the specified or agreed upon time, a written request for a ~~District Office~~ a Department Head review may be submitted to the Engineer within 30 days of receipt of the project level ruling or the end of the time for the ruling to be issued. Failure to submit a request for District Office review within the specified time will constitute an acceptance of the project level ruling by the Contractor and a contract adjustment will be made in accordance with the ruling. The contract adjustment will be considered as full and complete compensation for the changed condition and the Contractor shall waive any right to further contest the ruling.

When a ~~District Office~~ Department Head review of the project level ruling is requested, the claim will be sent from the Project Manager office to the ~~District Office~~ Department Head for the review. The Contractor shall not modify the basis of the claim or the method for calculating the amount claimed after submittal to the ~~District Office~~ Department Head.

740 2. ~~District Office~~ Department Head Review

The Engineer will review the claim as submitted to the ~~District Office~~ Department Head. Meetings may be requested by either the Engineer or the Contractor to discuss the claim in an effort to reach resolution.

750 ~~For claims with a total value less than or equal to \$150,000, 20% of the original contract amount and 100 days of contract time extension, the Engineer will review the project level ruling and issue a written District Office ruling within 45 days, or other time as mutually agreed, of the Contractor's request for a District Office claim review. A claim review by the District may affirm, overrule, or modify the project level ruling. The District ruling will specify the portions, if any, of the project ruling that are being overruled or modified and the rationale supporting the portions overruled or modified.~~

The Contractor may accept or reject a claim review ruling made by the ~~District Office~~ Department Head. If the Contractor accepts the ruling, it will be considered as the final decision by the Department and a contract adjustment will be made in accordance with the ruling.

760 If a ~~District~~ **Department Head** ruling is rejected, the Contractor may submit a written request for a final hearing before a ~~District Claim Review Board~~ **the City Engineer**. The request shall be submitted to the **Chief City** Engineer within 30 days of the Contractor's receipt of the ~~District~~ **Department Head** ruling. The **Chief City** Engineer will respond in writing to the Contractor and will convene a ~~Board~~ **hearing** to review the claim. Failure to submit a request for a hearing within the specified time will constitute an acceptance of the ~~District Office~~ **Department Head** ruling by the Contractor and a contract adjustment will be made in accordance with the ruling. The contract adjustment will be considered as full and complete compensation for the changed condition and no further claim shall be made for the circumstances that gave rise to the claim.

770 ~~The District Claim Review Board will consist of three Department personnel selected by the Chief Engineer and will include one member from District Construction in the District involved in the claim and two members from the Division of Construction Management. The Chief Engineer will assign one member as the chairperson who will then schedule a hearing with the Contractor at a mutually agreed time and location. The Contractor will be given sufficient time at the hearing to present arguments and exhibits in support of the claim. The Board will issue a written decision within 30 days of the hearing and the decision will be considered as the final decision by the Department and no further appeal will be considered by the Department. A contract adjustment will be made in accordance with the decision of the Board and will be considered as full and complete compensation for the changed condition and no further claim shall be made for~~
780 ~~the circumstances that gave rise to the claim.~~

~~For claims with a total value greater than \$150,000 or 20% of the original contract amount or 100 days of contract time extension, the District will forward the claim, along with the project level ruling and a District Office written opinion to Central Office for a ruling. The Contractor shall not modify the basis of the claim or the method for calculating the amount claimed after submittal to Central Office.~~

3. Central Office Review

Not applicable to City Specifications.

Section 106 – Control of Material

106.01 Source of Supply and Quality Requirements

(b)

3. Payment Procedures

If the Contractor does not provide the necessary documentation for the materials, such materials will not be paid for. The Engineer will notify the Contractor of those materials held from the estimate with the justification for withholding payment. If corrective action

has not been taken within six weeks of the materials delivery to the project site, the entire estimate payment may be withheld.

80

(c) Buy America Requirement

Not applicable to City Specifications.

107.06 Equal Employment Opportunity Trainees

Section not applicable to City Specifications

107.08 Public Convenience and Safety

(a) Worker Safety

All workers within the right-of-way who are exposed either to traffic or construction equipment within the work area shall wear high visibility safety apparel in accordance with Section 6D.03 of the MUTCD.

760 **107.24 Governing Law**

This contract shall be construed by the laws of the State of Indiana. Suit, if any, shall be brought in the State of Indiana. The courts located in Allen County, Indiana shall be the exclusive courts of jurisdiction and venue for any proceedings between the parties that are brought or may rise out of or in connection with this Agreement.

SECTION 108 – PROSECUTION AND PROGRESS

108.01 Subletting of Contract

10

The contract, contracts, or portions thereof; or the right, title, or interest therein shall not be sublet, sold, transferred, assigned, or otherwise disposed of without written consent. In case such consent is given, the Contractor will be allowed to sublet a portion thereof, but shall perform with its own organization, work amounting to not less than 50% of the original or revised contract amount, whichever is less. All items designated in the contract as specialty items may be performed by subcontract. The cost of such specialty items so performed by subcontracts may be deduced from the total cost before computing the amount of work required to be performed by the Contractor with its own organization. No subcontracts or transfer of contracts will release the Contractor of liability under the contract and bonds. Approved subcontractors will not be allowed to further subcontract their work.

~~Unless the Department provides written consent, the Contractor shall not be entitled to any payment for subcontracted work or materials unless it is performed or supplied by a subcontractor approved on the contract prior to the work being performed.~~

20

~~The minimum wage for labor as stated in the Proposal book shall apply to all labor performed on all work sublet, assigned, or otherwise disposed of in any way.~~

The Contractor or subcontractor may enter into leases or rental agreements for equipment with operators or trucks with drivers. When certified payrolls are required, they shall be submitted for all such equipment operators and truck drivers who perform work. This payroll shall verify that these employees have been paid not less than the predetermined wage rate set out elsewhere in the contract for the classification of work performed.

30

The subcontractor shall be in accordance with the requirements of 105 IAC 11-2-10, Subcontractors.

~~The Contractor shall submit payment records through the Department's Subcontractor Payment Tracking System (<http://itap.indot.in.gov>) of all payments made to subcontractors and DBE firms approved by the Department. Reports shall be submitted no later than 10 days after the end of each month in which a subcontractor is paid for work on the contract. Reports shall include any release of retainage payments made to subcontractors.~~

40

108.03 Notice to Proceed

Unless otherwise provided, the Contractor will be expected to start active and continuous work on the contract within ~~45~~ **10** calendar days after the date of the notice to proceed. Work shall not begin prior to the date of the notice to proceed.

60

If a delayed starting date is indicated in the proposal, the ~~45~~ **10** calendar day limitation will be waived. Work day charges will then begin on a date mutually agreed upon, but not later than the delayed starting date specified. If the contract is canceled after an award has been made but prior to the issuing of the notice to proceed, no reimbursement will be made for any expenses accrued relative to this contract during that period.

If the contract involves demolition work, the Contractor shall not enter the parcel or proceed with the demolition without written authority from the Engineer. The Contractor will be compensated only for those houses and buildings which are actually removed from the right-of-way. Time of commencing demolition work and time of completion shall be in accordance with 108.08.

70 **108.04 Prosecution of the Work**

A pre-construction conference will be held at the earliest possible date, at which time it will be determined at what point the Contractor's operations will start.

The Contractor shall furnish the Engineer with a bar graph type schedule which shows the estimated times required to prosecute the major or critical items of work for acceptance unless the contract has less than 60 30 calendar days completion time, less than 35 22 work days, or less than 60 30 days between the date of the notice to proceed and the calendar completion date. This schedule shall incorporate all contract requirements regarding the order of performance of work and each activity. The schedule shall graphically show the calendar time for which each activity is scheduled for work. The schedule may be used as the basis for establishing major construction operations and as a check on the progress of the work. Sufficient materials, equipment, and labor shall be provided to guarantee the completion of the project in accordance with the plans and specifications within the specified completion time. The Engineer shall be notified at least three days in advance of the date on which the work is expected to begin. The schedule shall be submitted at the pre-construction conference.

80 The ~~Department~~ Project Manager and the Contractor shall meet at least once each month to review actual and proposed schedules. The Contractor shall submit the correspondence to the ~~district~~ City after each monthly meeting addressing each item of work that is behind schedule and as to what action will be taken to get the work back on schedule.

90 If, in the opinion of the ~~Engineer~~ Project Manager, construction progress has been or will be materially affected by changes in the plans or in the quantities of work, or if performance has failed to conform to the accepted schedule, a revised schedule shall be submitted when requested. Acceptance of the schedules will in no way justify them, but will simply indicate concurrence in their reasonableness and feasibility on the assumption that every effort shall be made to meet them. Existence of a current and accepted schedule will be a condition precedent to the processing and payment of a partial pay estimate.

100 If the prosecution of the work is discontinued, the ~~Engineer~~ Project Manager shall be notified at least 24 h in advance of resuming operations.

During the progress of the work, the Engineer shall be notified at least 24 h in advance of undertaking construction operations. ~~This advance notification shall also apply anytime a DBE is scheduled to work on a project or deliver material or supplies to a project site.~~

108.05 Pre-phase Site Construction Meetings

A pre-phase site construction meeting shall be scheduled and conducted by the Contractor prior to the beginning of work on each major work phase, unless waived by the Project Manager. These meetings are intended to help improve the quality of construction, personnel safety on the project site, and safety of the traveling public. These meetings shall include all subcontractors connected with the particular phase. When the conditions described in 105.07 are possible during a particular phase, the other Contractors shall be invited to attend. The Department’s project staff and the Area Engineer shall be invited to attend.

180

At each meeting, the Contractor shall indicate its current schedule for the phase, discuss maintenance of traffic control, project site personnel safety, compliance with the plans and specifications including quality construction, and all other pertinent subjects.

The number of pre-phase site construction meetings will be determined at the pre-construction conference. No additional payment will be made for these meetings.

108.08 Determination and Extension of Contract Time

The number of days allowed for the completion of the work included in the contract will be stated in the Proposal book/Bid Documents and will be known as the contract time.

..... SKIP AHEAD IN SECTION TO HOLIDAY PERIODS

Contractors shall not work during the following holiday periods unless prior written approval is received from the Engineer. All deliveries and traffic coming from suppliers shall cease during the Department-ordered suspensions of work listed below. No time extensions to closure periods, intermediate completion dates, or contract completion dates will be granted for suspending work during these holiday periods.

340

(a) New Year’s Day. If New Year’s Day falls on a Sunday, work shall be suspended from ~~noon~~ 5 PM December 31 until sunrise January 3. If New Year’s Day falls on a Monday through Saturday, work shall be suspended from ~~noon~~ 5 PM December 31 until sunrise January 2.

~~(b) Good Friday. Work shall be suspended from noon on Good Friday until sunrise Monday.~~

350

(c) Memorial Day. Work shall be suspended from ~~noon~~ 5 PM the Friday before Memorial Day until sunrise Tuesday, the day after Memorial Day.

(d) Independence Day. If Independence Day falls on a:

Sunday - Work shall be suspended from ~~noon~~ 5 PM
Friday, July 2, until sunrise Tuesday, July 6.

360 Monday - Work shall be suspended from ~~noon~~ 5 PM
Friday, July 1, until sunrise Tuesday, July 5.

Tuesday - Work shall be suspended from ~~noon~~ 5 PM
Friday, June 30, until sunrise Wednesday, July 5.

Wednesday - Work shall be suspended from sunset on
Tuesday, July 3, until sunrise Thursday, July 5.

370 Thursday - Work shall be suspended from ~~noon~~ 5 PM
Wednesday, July 3, until sunrise Monday, July 8.

Friday - Work shall be suspended from ~~noon~~ 5 PM
Thursday, July 3, until sunrise Monday, July 7.

Saturday - Work shall be suspended from ~~noon~~ 5 PM
Thursday, July 2, until sunrise Monday, July 6.

(e) Labor Day. Work shall be suspended from ~~noon~~ 5 PM the Friday before Labor
Day until sunrise Tuesday, the day after Labor Day.

380 (f) Thanksgiving Day. Work shall be suspended from ~~noon~~ 5 PM the
Wednesday before Thanksgiving Day until sunrise the Monday after
Thanksgiving Day.

(g) Christmas Day. Work shall be suspended from ~~noon~~ 5 PM
December 24 until sunrise December 27.

..... SKIP AHEAD TO LINE 440 OF SECTION

440 Not all of the parcels shown in the Schedule of Pay Items will be available for demolition
at the time of the letting. Houses and buildings shall be removed as soon as they are
vacated in accordance with the procedure as follows:

(a) The ~~45~~ 10 calendar days limitation after the date of notice to proceed as specified
in 108.03 will not apply.

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(b) Excusable, Compensable Delays

Excusable, compensable delays are delays that are not the fault or responsibility of the Contractor and are the fault or responsibility of the Department. The following are excusable, compensable delays:

1. Delays due to differing site conditions in accordance with 104.02(a), significant changes in the character of work in accordance with 104.02(c), or extra work in accordance with 104.03.

520

2. Delays due to suspension of work ordered by the Engineer in accordance with 104.02(b).

3. Delays due to work that utilities or other third parties perform within the project limits.

The Department will extend the contract time for completion. ~~and will pay for delay costs covered under item 1 above in accordance with 104.03.~~

530 The Department will ~~make payment for delay costs under items 2 and 3 above in accordance with 109.05.2.~~

~~108.09 Failure to Complete on Time~~

~~For each calendar day, as specified, that work shall remain incomplete during the months of April through November inclusive, after the control time specified for the completion of the work provided for in the contract, the sum specified in the schedule below will be deducted, as liquidated damages, from any money due the Contractor. Account will be taken of adjustment of the contract time for completion of the work granted in accordance with 108.08. Calendar days will not be charged while waiting for final inspection as defined in 105.15 provided all contract work has been satisfactorily completed. However, five work days will be allowed after notification from the Department to complete all corrective or clean up work necessary for final inspection. Thereafter, time will be charged for each day the work remains uncompleted. Further, 10 calendar days will be allowed after notification by the Department to remove all construction signs and temporary traffic control devices. Thereafter, time will be charged for each day the signs and devices remain.~~

560

~~For each calendar day, as specified, that any work shall remain incomplete during the months of December through March inclusive, liquidated damages will be deducted. However, when the project is open for its intended purpose or modified for safe use, liquidated damages will not be deducted, and payment for the field office and field~~

laboratory, if set out as a pay item in the itemized proposal, will not be made. Intended purpose will include all pavement lanes, sidewalks, trails, drainage features, and all safety appurtenances. The Contractor may be required to make temporary repairs to the pavement or structures. Liquidated damages will be assessed until temporary repairs are made. No payment will be made for such temporary repairs.

570

If the contract is not completed, or the pavement or structure is not opened to traffic within the stipulated time as set out in the Proposal book/~~Bid Documents~~, the Department may reduce the qualified rating of the Contractor for bidding on future contacts.

See Section 4.05 of EJCDC C-520 Agreement between Owner and Contractor for Construction Contract (Stipulated Price) for Information on Failure to Complete on Time.

SECTION 109 – Measurement and Payment

109.05 Payment for Extra Work

650 A Change Order Request form, ~~available on the Department's website~~, shall be submitted for review for all extra work prior to the Engineer drafting a change order. The form shall describe any unique circumstances and shall include unit prices or lump sum prices utilizing standard Department pay items.

Extra work performed in accordance with 104.03 will be paid for by one of the following methods:

(a) Agreed Price

660 Extra work will be paid for at agreed upon unit prices or lump sum prices as documented on approved change orders. The Department will perform a cost analysis of the Contractor's unit price or lump sum price indicated on the Change Order Request form.

Based on the results of the cost analysis, the Engineer may direct the Change Order Request form to be amended to incorporate additional information, including:

1. A Detailed explanation of unique circumstances of the extra work.
2. The effect of the circumstances on the requested price
- 670 3. A breakdown of the estimated costs for the categories of labor, equipment, and materials in sufficient detail to enable the Engineer to determine the basis and amount of the requested price.

(b) Force Account

The Department may require the Contractor to perform extra work on a force account basis when a price cannot be agreed upon in accordance with 109.05(a). ~~The City will not pay overtime costs unless agreed to in writing prior to the start of work.~~

680 The Contractor shall, when directed, submit a written proposal for the extra work prior to the start of the work. When directed, the proposal shall include the planned labor, materials, equipment, and schedule for the work. Extra work performed by force account will be documented ~~on an approved change order~~ and will be compensated in the following manner: Change Order.

109.05.1 Quality Adjustments

This section not applicable to City Specifications at this time.

109.05.3 PG Asphalt Binder Material Cost Adjustments

This section not applicable to City Specifications at this time.

1020 **109.07 Partial Payments**

The contract may contain more than one project. Partial payments may be made once each month as the work progresses ~~or twice each month~~ if it is determined that the amount of work performed is sufficient to warrant such payment. These payments will be based on estimates, prepared by the Engineer, of the value of the work performed and materials complete in place in accordance with the contract. No partial payment will be made or estimates will not be submitted when the total value of the work done since the last estimate amounts to less than \$500.

1030 Except as set out in 105 IAC 11-3-8 of the Rules For Prequalification of Contractors and Bidding, the balance, less all previous payments and less amounts claimed which are required to be held by the Department in accordance with Indiana Code 8-23-9-26 through 8-23-9-39, will be certified for payment.

Within 10 business days of receipt of payment for any such estimate, the Contractor shall make payment to all subcontractors, including lessors and material suppliers, for the value of their work performed and materials complete in place in accordance with the contract. Failure to comply with this clause shall constitute a material breach of the contract and may result in sanctions under the contract.

1040 Any delay or postponement of payment among the parties may take place only for good cause, with the Department's written approval. The explanation from the Contractor shall be made in writing to the Department.

Upon receipt of a claim under Indiana Code 8-23-9-26, the Department will retain out of the amount due the Contractor the amount of the claim. The amount to be retained will be withheld from partial payment estimates until the total amount of the claim has been retained.

~~In order to retain an amount when required by Indiana Code 8-23-9-26, the Engineer will apply a negative quantity to the contract liens pay item for the actual dollar amount of the claim. Upon resolution of the claim, the Engineer will post a positive quantity to the contract liens pay item equal to the amount originally retained. The final quantity of the contract liens pay item will be zero prior to final payment.~~

~~The contract unit price for contract liens will be \$1.00.~~

~~Payment will be made under:~~

Pay Item	Pay Unit Symbol
Contract Liens	DOL

No allowance will be made for materials received which have not been incorporated into the work except in accordance with 111.

SECTION 113 – Partnering Overhead

This section not applicable to City Specifications at this time.

SECTION 114 – Computer-Aided Design Files (“CAD Files”) Disclaimer

114.01 Use of CAD Files

The Contractor understands that the CAD Files may be provided to the Contractor for the sole and exclusive purpose of modeling projects for bidding and construction. The CAD Files are provided to the Contractor only as a matter of convenience, and neither the City of Fort Wayne its engineers, designers, employees nor other outside party who may have created or generated the information shall be held responsible for subsequent uses of the data by the Contractor, its agents, employees and/or subcontractors. Any such use by the Contractor, its employees, agents or subcontractors shall be at the sole risk of the Contractor(s) and its full legal responsibility. By the Contractor's use of the CAD Files, the Contractor is not relieved of any duty, including, and without limitation,

the need to check, confirm and coordinate all dimensions and details, take field measurements, verify field conditions, and coordinate Contractor's work with that of others.

114.02 Confidentiality of Information.

The Contractor understands and agrees that the CAD Files and all data, materials, and information disclosed to the Contractor within the CAD Files may contain confidential, proprietary and/or protected information. The Contractor agrees that all files, data, material, and information gathered, based upon or disclosed to the Contractor will not be disclosed nor discussed with third parties without the prior written consent of the City of Fort Wayne. If any confidential or sensitive information is disclosed by Contractor to any third party without the City of Fort Wayne's consent, Contractor shall pay all costs of the notice of disclosure of a breach of the security of the system in addition to any other claims and expenses resulting from the disclosure, directly or indirectly.

114.03 Ownership of Documents and Materials

Except as otherwise provided herein, all CAD Files, information and other data provided to the Contractor for the Project are and shall remain the property of the City of Fort Wayne. Use of these materials by the Contractor for any purpose other than those enumerated in 114.01, without the prior written consent of the City of Fort Wayne, is prohibited. However, the Contractor understands and agrees that the CAD files may contain proprietary information not owned by the CITY. Such proprietary information remains the property of the consultant or other outside party who created or generated the information. The Contractor shall be solely responsible to ensure that it and all its employees, agents and subcontractors comply with any and all terms of use and access to such proprietary information.

114.04 Disclaimer

The CAD Files that may be provided in "as is" condition, and are not the official plan set for the Project. The Contractor must still refer to the official plan set for the Project. The CAD Files are not intended to represent precise locations of natural or man-made features, either planned or pre-existing, nor are they intended to be record "as-built" documents for any work or structures that may already be in place. Because data stored on electronic media can deteriorate undetected or be modified without the City of Fort Waynes's knowledge, the City of Fort Wayne shall not be held liable for the completeness or correctness of the CAD Files or information contained therein. The City of Fort Wayne makes no warranties or guarantees concerning the accuracy of the data contained within the CAD Files. Further, makes no warranties, either express or implied as to any other matter whatsoever, including the condition of any product, or its fitness for any particular purpose, or the compatibility of the CAD Files with the Contractor's hardware or software systems. In no event shall the City of Fort Wayne incur any liability whatsoever for any payment of any consequential, incidental, indirect, special or tort damages of any kind, including any loss of profits arising out of reliance on the CAD Files or the information contained therein. Further, the use of the CAD Files or any information or data contained therein shall not relieve the Contractor of any liability or obligations arising out of any existing or potential future contracts with the City of Fort Wayne, nor does it entitle the Contractor to

compensation for damages or loss which could be attributed to the Contractor's use of the CAD Files.

114.05 Indemnification

The Contractor agrees to indemnify, defend, and hold harmless the CITY, its engineers, designers, employees and consultants who may have prepared or generated the CAD Files or information from all claims, suits, liabilities, damages, charges, settlements, and other expenses or losses of any kind or character including court costs, costs of defense, and attorney's fees, caused, directly or indirectly, by any act or omission of the Contractor, its agents, employees or subcontractors, or arising out of the Contractor's use or possession of the CAD Files provided under this Release. The CITY shall not provide such indemnification to the Contractor.

Recurring Special Provisions

Division 200 – Earthwork

City of Fort Wayne

Public Works

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SECTION 202 – REMOVAL OF STRUCTURES AND OBSTRUCTIONS

CONSTRUCTION REQUIREMENTS

200

202.05 Removal of PCCP, Sidewalks, Curbs, RCBA, and Reinforced Concrete Moment Slabs

All unreinforced PCCP, sidewalks, curbs, gutters, and other unreinforced concrete elements designated for removal shall be:

~~(a) broken into pieces and used for riprap on the project; or~~

~~(b) broken into pieces, the maximum weight of which shall be 150 lb, and incorporated into the work as directed; or~~

230

(c) otherwise disposed of in accordance with 202.02.

SECTION 203 – EXCAVATION AND EMBANKMENT

203.20 Rock and Shale Embankment

~~(c) Shale and Thinly Layered Limestone~~

~~In Dearborn, Decatur, Fayette, Franklin, Jefferson, Ohio, Ripley, Rush, Switzerland, Union, and Wayne Counties specifically, or in other areas where relatively thin layered shale and rock are encountered, their use will be allowed in the construction of embankment, if the following provisions, in addition to those stated in 203.20(b), are observed.~~

930

~~1. The slopes shall be encased with a minimum of 10 ft of relatively impervious, non-shale, non-erodable material.~~

~~2. The maximum size of limestone in the mixture shall be 6 in. in thickness and 1.5 ft in any other dimension.~~

~~3. The minimum number of passes with static roller and the vibratory tamping foot roller shall be six static and two vibratory.~~

~~If the material is found to be too intermixed with limestone fragments to enable~~

940 ~~field density tests as required in this section, this requirement may be waived by written permission. As an alternate to this requirement, proofrolling shall be performed after every four lifts, and the moisture content will be controlled on clayey soils in accordance with 203.23.~~

203.26 Proofrolling

1270 When proof rolling is specified, the work shall be performed with an on-highway dump truck with a minimum tire pressure of 90 psi.

Proofrolling for original ground or embankment construction shall be performed using a dump truck weighing at least 15 t. Proofrolling for subgrade preparation shall be performed using a dump truck weighing at least 33 t. All proof rolled surfaces shall be covered completely with a single pass. Operating speed of the proof rolling truck shall not exceed 2 mph.

1280 Deflections or rutting in excess of 1/2 in. shall require remediation of the surface as directed. Deflection or rutting in excess of 3 in. shall require corrective remediation measures and the ~~Office of Geotechnical Services~~ Agency will be contacted. Proof rolling shall be performed after remediation measures on embankment or subgrade prior to the placement of additional material. There shall be one or two complete coverages as directed. Roller marks, irregularities, or failures shall be corrected.

203.27 Method of Measurement

(d) Measurement of Excavation Items on a Weight Basis

~~A pay item for excavation may be specified to be measured and paid for on a weight basis. When a weight basis is specified, the material will be weighed in accordance with 109.01(b).~~

1360

SECTION 204 – GEOTECHNICAL INSTRUMENTATION

CONSTRUCTION REQUIREMENTS

204.03 Settlement Plates

This section not applicable to City Specifications at this time.

204.04 Standpipe Piezometers

This section not applicable to City Specifications at this time.

204.05 Method of Measurement

This section not applicable to City Specifications at this time.

204.06 Basis of Payment

This section not applicable to City Specifications at this time.

SECTION 207 – SUBGRADE

CONSTRUCTION REQUIREMENTS

207.06 Basis of Payment

- 130 The cost of subgrade treatments including testing, sampling, aggregates, chemicals for modification, geogrid, geotextile and geocell confining system, coarse aggregate for subgrade Type IC, Type ID, Type II, Type IV, Type IVA, Type V, water, and the excavation required, shall be included in the cost of the pay item.
-

207.04 Subgrade Treatment Types

The subgrade treatment type shall be as specified on the contract plans. If required, the subgrade foundation shall be corrected as directed by the Engineer prior to subgrade treatment.

Type	Subgrade Description
I	24 in. of soil compacted in accordance with 203.23
IA	[blank]
IBC	14 in. chemical soil modification using cement
IBL	14 in. chemical soil modification using lime
IC	12 in. coarse aggregate No. 53 in accordance with 301
ID	12 in. coarse aggregate with Type 2B geotextile in accordance with 918.02 (c)
II	6 in. coarse aggregate No. 53 in accordance with 301
IIA	8 in. chemical soil modification
IIIB	6 in. coarse aggregate No. 53 with Type IB geogrid in accordance with 214
III	In-place compaction in accordance with 203.23
IV	12 in. coarse aggregate No. 53 with Type IB geogrid in accordance with 214

IVA	12 in. coarse aggregate with Geocell confining system in accordance with 214
V	3 in. of subgrade excavated and replaced with 3 in. coarse aggregate No. 53

SECTION 209 – FINISHING EARTH GRADED ROADS

209.02 Construction Requirements

This section not applicable to City Specifications at this time.

209.03 Method of Measurement

This section not applicable to City Specifications at this time.

209.04 Basis of Payment

This section not applicable to City Specifications at this time.

SECTION 212 – STOCKPILED SELECTED MATERIALS

40 212.05 Basis of Payment

The accepted quantities of stockpiled selected material and salvaged stockpiled selected material will be paid for at the contract unit price per cubic yard, complete in place.

Payment will be made under:

	Pay Item	Pay Unit Symbol
	Stockpiled Selected Material	CYS
50	Stockpiled Selected Material, Salvaged	CYS

The cost of excavation, hauling, removing material from the stockpile, placing materials, and necessary incidentals shall be included in the cost of the pay items.

Stockpiled Selected Material and Stockpiled Selected Material, Salvaged shall be thoroughly tamped in layers no more than 12 IN. when used as backfill around

new/reconstructed infrastructure and will not be paid for separately unless otherwise noted on the Bid Tab.

SECTION 216 – CELLULAR CONCRETE FILL, CCF

This entire section not applicable to City Specifications at this time.

Recurring Special Provisions

Division 300 – Aggregate Pavement and Bases

City of Fort Wayne

Public Works

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SECTION 301 – AGGREGATE BASE

CONSTRUCTION REQUIREMENTS

301.03 Preparation of Subgrade

20 Subgrade shall be compacted in accordance with 207.04. Proofrolling will not be required in trench sections and other areas where proofrolling equipment cannot be used. If section is 100' or more in length, proofrolling will be performed by a fully loaded 20-ton tri-axle truck and approved by field inspector or Project Manager. If any portions fail, the Project Manager shall determine the next course of action: removal of poor material to a specified depth and replaced with #2 and/or #53 aggregate, with or without approved geotextile, as placed per 918.02.

301.04 Temperature Limitations

Aggregate shall not be placed when the air temperature is less than 35°F, unless the ground has been covered by approved concrete blankets while subgrade has not previously been frozen. Aggregate shall not be placed on a frozen subgrade. Frozen aggregate shall not be placed.

301.05 Spreading

30 The moisture content of dense graded aggregate shall be between 4% and the optimum moisture content when the aggregate is delivered to the project. Unless otherwise directed, water shall not be added to the aggregate on the grade.

The aggregate shall be spread in uniform lifts with a spreading and leveling device approved by the Engineer. The spreading and leveling device shall be capable of placing aggregate to the depth, width, and slope specified. The compacted depth of each lift shall be a minimum of ~~3 in.~~ 2 in. and a maximum of 6 in.

40 The aggregate shall be handled and transported to minimize segregation and the loss of moisture. In areas inaccessible to mechanical equipment, approved hand spreading methods may be used.

Aggregate base shall not be placed until a subgrade proof roll has been approved by either the field inspector or Project Manager. If aggregate base is not placed before a rain event after an approved proof roll, the area will then have to pass another proof roll in order for aggregate to be placed.

301.09 Method of Measurement

Compacted aggregate base will be measured by the ~~tons placed based on the theoretical volume to the neat line as shown on the plans.~~ Geotextiles will be measured in accordance with 616.12.

301.10 Basis of Payment

The accepted quantities of compacted aggregate base will be paid for at the contract unit price per cubic yard or tonnage, complete in place. Geotextiles will be paid for in accordance with 616.13.

80

Payment will be made under:

Pay Item	Pay Unit Symbol
Compacted Aggregate, No. 2	CYS TON
Compacted Aggregate, No. 5	CYS
100 Compacted Aggregate, No. 8	CYS TON
Compacted Aggregate, No. 53	CYS TON
Compacted Aggregate, No. 73	TON

SECTION 302 – SUBBASE

302.01 Description

This work shall consist of a foundation course of selected materials, placed and compacted on a prepared subgrade in accordance with 105.03.

Subbase for PCCP shall consist of a layer of ~~3 in. of coarse aggregate No. 8 as the aggregate drainage layer placed over a~~ 2 or 4 in. coarse aggregate No. 53 as the separation layer as noted per plans. Dense graded subbase shall consist of a 6 in. coarse aggregate No. 53.

10

MATERIALS

302.02 Materials

Materials shall be in accordance with the following:

- ~~Coarse Aggregate, Class B or Higher, Size No. 8.....~~904
- Coarse Aggregate, Class D or Higher, Size No. 53...904

20 ~~Coarse aggregate No. 8 used as an aggregate drainage layer shall consist of 100% crushed stone or ACBF.~~

CONSTRUCTION REQUIREMENTS

302.04 Temperature Limitations

Aggregate shall not be placed when the air temperature is less than 35°F, unless the ground has been covered by approved concrete blankets while subgrade has not previously been frozen.

30 Aggregate shall not be placed on a frozen subgrade. Frozen aggregate shall not be placed.

302.05 Spreading

Aggregate shall be spread in uniform lifts with a spreading and leveling device approved by the Engineer. The spreading and leveling device shall be capable of placing aggregate to the depth, width, and slope specified. The compacted depth of each lift shall be a minimum of ~~3 in.~~ 2 in. and a maximum of 6 in.

40 Aggregate shall be handled and transported to minimize segregation and the loss of moisture. In areas inaccessible to mechanical equipment, approved hand spreading methods may be used.

The moisture content of the aggregate shall be between 4% and the optimum moisture content when the aggregate is delivered to the project. Water shall not be added to the aggregate on the grade.

Aggregate base shall not be placed until a subgrade proof roll has been approved by either the field inspector or Project Manager. If aggregate base is not placed before a rain event after an approved proof roll, the area will then have to pass another proof roll in order for aggregate to be placed.

302.06 Compacting

Subbases shall be compacted as follows:

~~(a) Aggregate Separation Layers and Dense Graded Subbase~~
Compaction shall be in accordance with 301.06.

50 All displacement or rutting of the aggregate separation layers shall be repaired prior to placing subsequent material.

(b) Aggregate Drainage Layers

~~Compaction shall consist of two passes with a vibratory roller before trimming, and one pass with the same roller in static mode after trimming. A vibratory roller shall be equipped with a variable amplitude system, a speed control device, and have a minimum vibration frequency of 1,000 vibrations per minute. A roller in accordance with 409.03(d)4 may be used.~~

60 ~~Construction traffic shall not be allowed on the aggregate drainage layer, except where placement of the PCCP is restricted. Exceptions shall be submitted for approval. All displacement or rutting of the aggregate drainage layers shall be repaired prior to placing subsequent material.~~

~~In areas inaccessible to standard size compacting equipment a specialty roller/compactor in accordance with 409.03(d)7 shall be used.~~

302.08 Method of Measurement

~~Subbase for PCCP or dense graded subbase will be measured by the cubic yard ton based on the theoretical volume to the neat lines as shown on the plans. The quantity shown in the Schedule of Pay Items will be adjusted if it is shown to be different by more than 2% of the measured quantity.~~

302.09 Basis of Payment

The accepted quantities of subbase for PCCP or dense graded subbase will be paid for at the contract unit price per cubic yard TON, complete in place.

Payment will be made under:

	Pay Item	Pay Unit Symbol
90	Dense Graded Subbase	CYS-TON
	Subbase for PCCP	CYS-TON

The cost of compacting, water, aggregate placed outside neat lines as shown on the plans, and necessary incidentals shall be included in the cost of the subbase.

SECTION 303 – AGGREGATE PAVEMENTS OR SHOULDERS

MATERIALS

303.02 Materials

10 Materials shall be in accordance with the following:

Recycled Asphalt.....	904
Coarse Aggregate, Class D or Higher, Size No. 53	904
Coarse Aggregate, Class D or Higher, Size No. 73*	904

* Surface courses only, when specified.

CONSTRUCTION REQUIREMENTS

303.03 Preparation of Subgrade

Subgrade shall be compacted in accordance with 207.04. Proofrolling will not be required in trench sections where proofrolling equipment cannot be used.

303.04 Temperature Limitations

Aggregate shall not be placed when the air temperature is less than 35°F, unless the ground has been covered by approved concrete blankets while subgrade has not previously been frozen. Aggregate shall not be placed on a frozen subgrade. Frozen aggregate shall not be placed.

303.10 Basis of Payment

The accepted quantities of compacted aggregate will be paid for at the contract unit price per ton, for the type specified, complete in place.

Payment will be made under:

	Pay Item	Pay Unit Symbol
70	Compacted Aggregate, No. 53	TON
	Compacted Aggregate, No. 73	TON
	Recycled Asphalt.....	TON

The cost of placing, compacting, water, and necessary incidentals shall be included in the costs of the compacted aggregate.

Payment will not be made for material placed outside of a 1:1 slope from the planned typical section.

Replacement or repair of pavement or shoulders damaged by the Contractor's operations shall be at no additional payment.

Recycled asphalt must be of acceptable quality, free from large or frozen material, wood, or other extraneous material.

SECTION 306 – MILLING

CONSTRUCTION REQUIREMENTS

306.02 General

10 Milling operations shall be described in the QCP in accordance with ITM 803. Where the milling operation in a partial-day closure results in a longitudinal vertical or near vertical face exceeding 2 in. in height, the adjacent lane shall be milled during the same day, the milled lane resurfaced during the same day, or the vertical face tapered at a 45° angle or flatter. Where located within 3 in. of a curb, surface material that cannot be removed by the cold-milling machine shall be removed by other approved methods.

20 Transverse milled vertical faces greater than 1 in. that are exposed to traffic shall be transitioned in an approved manner.

Castings located in milling areas that are not to be adjusted may remain in place during the milling, or may be removed and replaced at the Contractor's option. All castings, water valve boxes, detector housing, etc. shall be painted a bright color with marking paint, and/or a properly reflectorized construction barrel or cone placed over them, if not a hazard to the traveling public, until new asphalt is laid. The cost for these shall be included in the maintenance of traffic.

Any castings, water valves boxes, detector housings, drive approaches, etc. with a one inch (1") plus exposure shall be ramped with millings, or at the contractor's expense, use a rubber "Manhole Safety Ramp (American Highway Products, Model MSR26/28), or similar, as approved by the Project Manager. All ramps shall be maintained and in good working condition until such time that the paving operations take place. The cost for the ramps shall not be paid for separately, but included in the unit price for Surface Milling.

306.03 Equipment

(d) ~~Straightedge~~

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1. ~~Straightedge—16 ft~~

~~A 16 ft straightedge shall be a rigid beam mounted on two solid wheels on axles 16 ft apart. The straightedge has a mounted push bar to facilitate propelling the device along or across the pavement. Tolerance points are located at the 1/4, 1/2, and 3/4 points and may be composed of threaded bolts capable of being adjusted to the tolerance required.~~

2. ~~Straightedge—10 ft~~

70

~~A 10 ft straightedge is the same as a 16 ft straightedge except that the wheels are mounted 10 ft apart. A handheld rigid beam may be substituted.~~

306.04 Asphalt or PCCP Scarification Milling

Milled traveled way areas left open to traffic for longer than ~~five~~ **seven (7)** work days will be assessed ~~\$1,600.00~~ **\$800** per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.

110

Milled non-traveled way areas such as auxiliary lanes and shoulders left open to traffic for longer than 10 work days will be assessed ~~\$800.00~~ **\$400.00** per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.

Milled street surfaces shall be covered with their respective asphalt layers as expeditiously as weather allows. The proposed milled street segments shall have a minimum of one asphalt layer placed within seven (7) working days after the milling has been executed. If wet weather conditions cause a delay in paving, the streets may not be left unpaved for more than 14 working days. The contractor shall mill only those street segments that can be dutifully resurfaced within the seven-day limit. If this cannot be done, the contractor must request approval in writing from the Project Manager if delays may exceed the seven- and fourteen-day limits.

306.05 Asphalt or PCCP Profile Milling to Correct Cross-Slope

Milled traveled way areas left open to traffic for longer than ~~five~~ **seven (7)** work days will be assessed ~~\$1,600.00~~ **\$800.00** per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.

- 140 Milled non-traveled way areas such as auxiliary lanes and shoulders left open to traffic for longer than 10 work days will be assessed ~~\$800.00~~ **\$400.00** per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.

Milled street surfaces shall be covered with their respective asphalt layers as expediently as weather allows. The proposed milled street segments shall have a minimum of one asphalt layer placed within seven (7) working days after the milling has been executed. If wet weather conditions cause a delay in paving, the streets may not be left unpaved for more than 14 working days. The contractor shall mill only those street segments that can be dutifully resurfaced within the seven-day limit. If this cannot be done, the contractor must request approval in writing from the Project Manager if delays may exceed the seven- and fourteen-day limits.

306.06 Approach Milling

Approach milling shall not be performed at driveways unless it is required to meet a paved surface that continues beyond the construction limit. If the driveway is other than HMA or PCC beyond the construction limits, the approach milling is not required.

The transverse vertical cut face for commercial or public road approaches shall be transitioned at a rate of 24:1 or as approved.

This item shall not be considered approach material and shall also be painted with hot asphalt emulsion (tack). These items will be paid for at the corresponding unit bid prices in the contract.

306.07 Asphalt or PCCP Milling to a Specified Average Depth

- 200 Milled traveled way areas left open to traffic for longer than ~~five~~ **seven (7)** work days will be assessed ~~\$1,600.00~~ **\$800.00** per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.

Milled non-traveled way areas such as auxiliary lanes and shoulders left open to traffic for longer than 10 work days will be assessed ~~\$800.00~~ \$400.00 per day per lane mile, or portion thereof, as liquidated damages, not as a penalty, but as damages sustained for each work day that the milled area remains open to traffic.

Milled street surfaces shall be covered with their respective asphalt layers as expeditiously as weather allows. The proposed milled street segments shall have a minimum of one asphalt layer placed within seven (7) working days after the milling has been executed. If wet weather conditions cause a delay in paving, the streets may not be left unpaved for more than 14 working days. The contractor shall mill only those street segments that can be dutifully resurfaced within the seven-day limit. If this cannot be done, the contractor must request approval in writing from the Project Manager if delays may exceed the seven- and fourteen-day limits.

306.11 Basis of Payment

Approach milling, asphalt milling, asphalt removal, PCCP milling, scarification milling, profile milling, and transition milling will be paid for at the contract unit price per square yard.

Milling, Asphalt, 1 IN. to 3 IN. will be paid under a square yard milled basis. Pavement milled deeper than 3 IN and up to 6 IN. shall be paid for at 2 times the square yards milled.

Milling, Asphalt/PCCP, 1 IN. to 4 IN. Payment will be made under a square yard milled basis. Pavement milled deeper than 4 IN and up to 8 IN. shall be paid for at 2 times the square yards milled.

Payment will be made under:

250	Pay Item	Pay Unit Symbol
	Milling, Approach	SYS
	Milling, Asphalt, in._____	SYS
	thickness	
	Milling, Asphalt Removal	SYS
	Milling, PCCP in._____	SYS
	thickness	
	Milling, Profile	SYS
	Milling, Scarification	SYS
260	Milling, Transition	SYS

The cost of all labor, equipment, materials and all incidental work shall be included in the cost of the pay item.

The cost for castings removed and replaced at the Contractor's option in accordance with 306.02 shall be included in the cost of the milling.

SECTION 309 RECYCLED CONCRETE

309.01 Description

This work shall consist of placing aggregate on an approved subgrade in accordance with 105.03.

309.02 Materials

Approved materials shall be of acceptable quality, free from large or frozen lumps, wood, or other extraneous matter.

309.03 Construction Requirements

No. 53, No. 73, and No. 2 stone must be in accordance with gradation requirements of INDOT 904.03(e). Material must be tested by a certified Lab.

309.04 Method of Measurement

The Aggregate will have a printed weight ticket, in TON's.

309.05 Basis of Payment

The accepted Quantities Recycled Aggregate on the Schedule of Pay Items will be paid for at the contract unit price per Ton, complete in place.

Payment will be made under:

Pay Items	Pay Unit Symbol
------------------	------------------------

Compacted Aggregate Recycled NO. 53	TON
Compacted Aggregate Recycled NO. 73.....	TON
Compacted Aggregate Recycled NO. 2.....	TON

The cost of removal of the material, storage, incorporating it into the work, and necessary incidentals shall be included in the cost of the pay item.

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Division 400 – Asphalt Pavements
City of Fort Wayne
Public Works

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SECTION 401 – QC/QA HMA PAVEMENT

401.06 Recycled Materials

Recycled materials may consist of reclaimed asphalt pavement, RAP, ~~or reclaimed asphalt shingles, RAS, or a blend of both.~~ RAP shall be the product resulting from the cold milling or crushing of an existing HMA pavement. Before entering the plant, RAP shall be processed so that 100% will pass the 2 in. (50 mm) sieve ~~and RAS shall be processed so that 100% will pass the 3/8 in. (9.5 mm) sieve.~~ The RAP coarse aggregate shall pass the maximum size sieve for the mixture being produced.

150 Recycled materials may be used as a substitute for a portion of the new materials required to produce HMA mixtures. The amount of total binder replaced by binder in the recycled material shall be computed as follows:

$$\text{Binder Replacement, \%} = \frac{(A \times B) + (C \times D)}{E} \times 100\%$$

where:

A = RAP, % Binder Content by Mass of RAP
B = RAP, % by Total Mass of Mixture
C = ~~RAS, % Binder Content by Mass of RAS~~
D = ~~RAS, % by Total Mass of Mixture~~
E = Total, % Binder Content by Total Mass of Mixture

~~RAS may be obtained from either pre-consumer or post-consumer asphalt shingles but the two RAS types shall not be blended together for use in HMA mixtures.~~

~~Post-consumer asphalt shingles shall be in accordance with the following:~~

- ~~(a) post-consumer asphalt shingles shall be essentially nail-free~~
- 170 ~~(b) extraneous metallic materials retained on or above the No. 4 (4.75 mm) sieve shall not exceed 0.5% by mass~~
- ~~(c) extraneous non-metallic materials such as glass, rubber, soil, brick, paper, wood and plastic retained on or above the No. 4 (4.75 mm) sieve shall not exceed 1.5% by mass~~
- ~~(d) post-consumer shingles shall be prepared by a processing company with an IDEM Legitimate Use Approval letter. The approval letter shall be submitted with the DMF to the Engineer.~~

180

The recycled material percentages shall be as specified on the DMF. HMA mixtures utilizing recycled materials shall be limited to the binder replacement percentages in the following table:

HMA mixtures utilizing RAP ~~or RAS or a blend of RAP and RAS~~

Maximum Binder Replacement, %										
Mixture Category	Base and Intermediate							Surface		
	Dense Graded				Open Graded			Dense Graded		
	25.0 mm	19.0 mm	12.5 mm	9.5 mm	25.0 mm	19.0 mm	9.5 mm	12.5 mm	9.5 mm	4.75 mm
2	25.0*				25.0*			25.0* 20.0		
3	25.0*				25.0*			25.0* 20.0		
4	25.0*				25.0*			25.0* 20.0		
* The contribution of RAS to any HMA mixture shall be $\leq 3.0\%$ by total mass of mixture and $\leq 15.0\%$ binder replacement.										

SECTION 402 – HMA PAVEMENT

402.02 Quality Control

10 The HMA shall be supplied from a certified HMA plant in accordance with ITM 583; Certified Hot Mix Asphalt Producer Program. The HMA shall be transported and placed according to a Quality Control Plan, QCP, prepared and submitted by the Contractor in accordance with ITM 803; Contractor Quality Control Plans for Hot Mix Asphalt Pavements. The QCP shall be submitted to the Engineer at least 15 days prior to commencing HMA paving operations.

Type “D” Certification Sheets will not be required and contractor testing of the asphalt mixtures will not be required. City of Fort Wayne Test Lab shall perform any necessary testing.

When a safety edge is required for a project, the QCP shall identify the device or devices in accordance with 409.03(c) to be used for constructing the safety edge.

MATERIALS

20 402.03 Materials

Materials shall be in accordance with the following:

Asphalt Materials	
PG Binder	902.01(a)
Coarse Aggregates	904

Base Mixtures – Class D or Higher
Intermediate Mixtures – Class C or Higher
Surface Mixtures* – Class B or Higher

Fine Aggregates904

30

* Surface aggregate requirements are listed in 904.03(d).

Surface aggregate may also include air cooled blast furnace slag, steel furnace slag, and sandstone for Type B & C mixtures.

Recurring Special Provisions
Division 500 – Concrete Pavement
City of Fort Wayne
Public Works

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DIVISION 500 – CONCRETE PAVEMENT

SECTION 501 – QC/QA PORTLAND CEMENT CONCRETE PAVEMENT, PCCP

ENTIRE SECTION 501 IS NOT USED

SECTION 502 – PORTLAND CEMENT CONCRETE PAVEMENT, PCCP

502.04 Concrete Mix Criteria

60 The fine aggregate shall be at least 35% but not more than 45% of the total weight of the aggregate in each cubic yard. Proportions will be based upon saturated surface dry aggregates.

(a) Portland Cement Concrete

The CMD shall produce workable concrete mixtures, with the minimum amount of water, and having the following properties.

	Portland cement content.....	564 lbs/cu yd
	Maximum water/cementitious ratio	0.450
70	Maximum cement reduction for GGBFS replacement	30%
	Fly Ash/portland cement substitution ratio.....	1.25 by weight
	Maximum cement reduction for fly ash replacement	20%
	GGBFS/portland cement substitution ratio	1.00 by weight
	Slump, formed.....	2 to 6 in. 4" MAX
	Slump, slipformed.....	1.25 to 3 in.
	Air	5.0% to 8.0%
	Minimum flexural strength, third point loading, with fly ash.....	550 psi at 28 days or 14 days
	Relative yield	0.98 to 1.02

80 Class C concrete in accordance with 702 using Class AP coarse aggregate may be substituted in PCCP.

Chemical admixtures type A, type B, type C, type D, type E, and type F may be allowed with prior written approval.

90 ~~Fly ash or GGBFS used as an additive, or blended cements may only be incorporated in the concrete mix between April 1 and October 15 of the same calendar year. If type IP, type IP-A, type IS or type IS-A cements are to be used, the portland cement content shall be increased to 598 lbs/cu yd. The use of fly ash or GGBFS as an additive will not be allowed when blended cement types IP, IP-A, IS, or IS-A are used. Mid-range water reducer up to 9 oz. per 100 pounds of cement, up to 2% non-chloride~~

(b) High-Early Strength Concrete

The Contractor shall submit, along with the CMDS, all supporting test results for approval to the DTE prior to placing concrete. Testing shall be conducted by an American Concrete Institute, ACI, certified concrete field testing technician, grade 1. The supporting test results shall be signed by the technician and include air content, slump, relative yield, water cement ratio, and the flexural strengths at 1 day, 2 days, and 7 days.

100

The CMD shall produce workable concrete mixtures, with the minimum amount of water, and having the following properties.

	Minimum portland cement content (types I, IL or III) ..	564 658 lbs/cu yd
	Maximum fly ash addition.....	10% of cement content
	Maximum water/cementitious ratio (types I or IL)	0.42
	Maximum water/cementitious ratio (type III)	0.45
	Maximum GGBFS addition	15% of cement content
	Slump, formed	2 to 6 in. 4"MAX
110	Slump, slipformed.....	1.25 to 3 in.
	Air content.....	5.0% to 8.0%
	Minimum flexural strength, third point loading.....	550 psi at 2 days or 14 days
	Relative yield	0.98 to 1.02

~~Fly ash or GGBFS used as an additive may only be incorporated in the concrete mix between April 1 and October 15 of the same calendar year.~~

~~Chemical admixtures type A, type B, type C, type D, type E, and type F may be allowed with prior written approval.~~

~~Mid-range water reducer up to 9 oz. per 100 pounds of cement, up to 2% non-chloride~~

120

502.05 Job Control

Control of PCCP for air content, slump, or relative yield will be determined on the basis of tests performed by the ~~Engineer~~ Field Inspector in accordance with 505. Concrete and necessary labor for sampling shall be furnished as required by the ~~Engineer~~ Project Manager. Testing will be in accordance with the Frequency Manual.

The ~~Engineer~~ City of Fort Wayne Representative will notify the Contractor when test results for air content, slump, or relative yield are outside the requirements of 502.04. Rounding will be in accordance with 109.01(a). The Contractor shall adjust the mixture such that it is in accordance with 502.04.

130

502.09 Placement

Forms shall be staked into place with a minimum of three pins for each 10 ft section. A pin shall be placed at each side of every joint. Form sections shall be locked tightly and be free from play or movement in any direction. No excessive settlement or springing of forms under the finishing machine will be allowed. Forms shall be cleaned and oiled prior to the placing of concrete. Forms shall be placed to allow for the pavement to be placed with a Monolithic Curb or an Inverted Crown as shown in the details.

190 Forms shall be kept a minimum of 500 ft ahead of concrete placement when distance allows. Any material displaced during form setting operations shall be thoroughly compacted. If material under the forms becomes unstable before concrete is placed, the forms shall be removed, the grade corrected, and the forms reset.

CONSTRUCTION REQUIREMENTS

502.10 Concrete Mixing and Transportation

210 Concrete shall be uniformly mixed when delivered to the job site. Batch tickets for each load of PCC shall indicate the weight of cement, pozzolan, and aggregates, volume or weight of water, and the type and volume of admixtures. The weight of the cement shall be within 1% of the CMDP, the saturated surface dry weight of the aggregates shall be within 2% of the CMDP, and the volume or weight of water shall be within 1% of the required amount.

The ~~Engineer~~ City of Fort Wayne Representative(Agency) may conduct additional testing to verify uniformity of the mixture. Additional testing will consist of slump tests taken in accordance with AASHTO T 119 at approximately the 1/4 and 3/4 points of a load. If the slumps differ by more than 1 in. when the average slump is 3 in. or less, or by more than 2 in. when the average slump is greater than 3 in., paving operations may be suspended while the mixing process is jointly reviewed and problems resolved by the ~~Engineer~~ City of Fort Wayne Representative(Agency) and the Contractor.

320 **502.15 Curing**

PCCP shall be cured with an approved white pigmented liquid membrane forming compound. Alternative methods of curing may be approved by the ~~Engineer~~ City of Fort Wayne Representative(Agency). Curing shall be in accordance with 504. For formed PCCP, immediately after the forms are removed, the sides of the PCCP shall be cured.

502.18 Opening to Traffic

340 — ~~When fly ash, GGBFS, or cement type IP, type IS, type IP-A, or type IS-A is incorporated into the PCCP, traffic shall not be allowed on the PCCP until the test beams indicate a modulus of rupture of 550 psi or greater. Opening to traffic of PCCP not containing the above additives shall be based on the following.~~

(a) Construction

350 Construction vehicles or equipment may be allowed on the PCCP after ~~40~~14 days or when the test beams indicate a modulus of rupture of 550 psi or greater. Any construction vehicle or equipment that may damage the PCCP shall not be used on the PCCP unless adequate protection is provided. Approved joint cutting saws may be operated on the PCCP as determined by the Contractor.

(b) Non-Construction

PCCP may be opened to traffic after 14 days or when test beams indicate a modulus of rupture of 550 psi or greater. ~~Prior to opening to traffic, cracks and joints shall be sealed in accordance with 503.05 and the PCCP shall be cleaned.~~

502.20 Pavement Smoothness

360 ~~Pavement smoothness will be in accordance with 501.25 except profilograph requirements will not apply.~~ Pavement smoothness shall be in accordance with the Agency, any pavement smoothness deemed unfit by Agency shall be removed and replaced at contractors cost.

502.21 Pavement Thickness

Replace section 502.21 with the following:

Pavement thickness may be determined by the agency. If pavement cores are outside the specification, the contractor shall remove and replace at their cost.

502.22 Method of Measurement

450 PCCP will be measured by the square yard of the thickness specified. The area of PCCP will be the planned width of the pavement multiplied by the length of the pavement, or as directed in writing. The width of the pavement will be as shown on the typical cross section of the plans. The length of the pavement will be measured parallel to the surface of the pavement along the centerline of the roadway or ramp, excluding paving exceptions as shown on the plans.

~~Milled pavement corrugations will be measured in accordance with 606.02.~~

502.23 Basis of Payment

460 The accepted quantities of PCCP will be paid for at the contract unit price per square yard for the thickness specified, complete in place.

~~Milled pavement corrugations will be paid for in accordance with 606.03.~~

Payment will be made for portland cement content of more than 564 lbs/cu yd when ordered in writing. Additional payment for the quantity used will be at the net unit price of portland cement as shown by certified vouchers for the quantity used in accordance with 109.05.

470 ~~The quality assurance adjustment quantity for thickness will be determined in accordance with 502.21(e).~~

~~An adjustment to the contract payment with respect to thickness will be made utilizing the quality assurance adjustment pay item. The unit price for this pay item will be \$1.00. The quantity is the total calculated in accordance with 502.21(e). A change order developed in accordance with 109.05 will be prepared to reflect contract adjustments.~~

480 ~~Payment for pavement thickness determinations will be made at the contract lump sum price for coring, PCCP in accordance with 501.31. A change order in accordance with 109.05 will be developed to adjust the cost of PCCP when the final PCCP quantity differs from the bid quantity by more than 2,400 sq yd. This adjustment covers the cost of cores for the adjusted quantity of PCCP. The adjustment, plus or minus, will be based on the difference in the number of subsections, rounded to the nearest full subsection, times \$100.~~

Payment will be made under:

	Pay Item	Pay Unit Symbol
490	PCCP, _____ , in..... thickness	SYS
	Quality Assurance Adjustment	DOL

No additional payment will be made for PCCP which has an average thickness above that shown on the plans.

~~The cost of trial batch demonstrations shall be included in the cost of PCCP.~~

~~The cost of corrections for pavement smoothness and re-texturing shall be~~

500 ~~included in the cost of PCCP.~~

Removal and replacement of PCCP found to be deficient or damaged by freezing shall be completed with no additional payment.

The cost of coring and refilling of the pavement holes for appeals shall be included in the cost of PCCP.

~~Backfilling at the edges of PCCP shall be in accordance with Section 212 – Stockpiled Selected Materials.~~

SECTION 503 – PCCP JOINTS

503.01 Description

This work shall consist of the construction of joints in PCC pavements, placing dowel bar assemblies ~~and joint sealing operations in accordance with 105.03.~~

MATERIALS

503.02 Materials

10 Materials shall be in accordance with the following:

Chemical Anchor System.....	901.05
Dowel Bars.....	910.01(b)10
Epoxy Coated Reinforcing Bars	910.01(b)9
Joint Filler.....	906.01
Joint Materials.....	906
PCC Sealer/Healers	901.06
Reinforcing Bars	910.01

20 Tie bars shall be epoxy coated ~~(pre-bent) reinforcing bars or uncoated reinforcing bars if to be field bent.~~

Bent tie bars shall be deformed billet steel in accordance with 910.01 and ASTM A 615, grade 40.

The epoxy coating on the bent and straight tie bars shall be protected in accordance with 703.04.

CONSTRUCTION REQUIREMENTS

503.05 Sealing Cracks and Joints

Cracks and joints in the PCCP shall be cleaned and sealed in accordance with the sealant manufacturer's recommendations. Water blasting shall not be applied under pressure which may damage the concrete. All cracks and joints shall be sealed prior to discontinuing work for the winter.

210 When preformed elastomeric joint seals are used, the material shall be installed in one continuous piece by means of an approved machine. The seal shall not be stretched more than 5% while being placed and show no twisting, rollover, folding, cutting, or excess lubricant-adhesive on the top of the seal. Elastomeric joint seal may be installed in two separate pieces for phased construction with the splice point occurring at the

highest point of the joint. The splicing method used shall be in accordance with the seal manufacturer's recommendations.

503.06 Random Crack Remediation

Random cracks shall be corrected.

220

(a) Transverse

Random transverse cracks shall be corrected by PCCP replacement. The replacement shall be full lane width and a minimum of 6 ft in length. Transverse PCCP removal limits shall be perpendicular to the centerline and shall include the entire random crack. Load transfer for the replacement PCCP shall be obtained by using dowel bars and retrofit epoxy coated tie bars. PCCP replacement areas shall have dowel bars which match contraction joints in any adjacent panels. All remaining panels shall be a minimum of 6 ft in length.

230

(b) Longitudinal

Random longitudinal and skewed cracks within 18 in. of a longitudinal joint shall be routed and sealed. All longitudinal saw cuts in areas of random cracks shall be sealed with a sealer/healer or a bonding agent in accordance with ASTM C 881, grade 1. Full Slab or Half Slab

Random longitudinal and skewed cracks outside 18 in. of a longitudinal joint shall be corrected by PCCP replacement in accordance with 503.06(a).

503.07 Method of Measurement

240 D-1 contraction joints and terminal joints will be measured by the linear foot as measured along the centerline of the joint.

Retrofitted tie bars will be measured by the number of units installed.

503.08 Basis of Payment

~~D-1 contraction joints and terminal joints will be paid for at the contract unit price~~

per linear foot, complete in place.

250 ~~Retrofitted tie bars will be paid for at the contract unit price per each, complete in place.~~

Payment will be made under:

Pay Item	Pay Unit Symbol
D-1 Contraction Joint.....	LFT
Retrofitted Tie Bars.....	EACH
Terminal Joint.....	LFT

260 ~~The cost of furnishing and placing all materials, not specified as a pay item, shall be included in the cost of PCCP.~~

~~The cost of dowels, dowel bar assemblies, backer rod, joint sealants and all necessary incidentals shall be included in the cost of D-1 contraction joints.~~

~~The cost of the sleeper slab, reinforcing bars, bond breaker, and HMA mixtures shall be included in the cost of the terminal joint.~~

270 ~~The cost of retrofitted tie bars or PCCP replacement used to repair damaged PCCP due to fault or negligence, remediation of random cracking, or the replacement of broken deformed bars shall be included in the cost of the PCCP.~~

SECTION 504 – PCCP FINISHING AND CURING

504.04 Curing

(d) Straw

110 ~~The PCCP shall be covered with wet burlap, laid directly on the surface, that is kept wet with a fine spray of water. The burlap shall be removed by 9:00 a.m. the day following its placement and the surface immediately covered with straw no less than 3 in. deep. The straw shall be thoroughly saturated immediately after being placed, and kept wet for the required curing period. After the cure period, the straw shall be removed from the pavement and disposed of properly.~~

~~Straw curing shall not be used in cities or towns unless written permission is obtained.~~

SECTION 505 – TESTS AND PROCEDURES

NO CHANGES TO SECTION 505

SECTION 506 – PCCP PATCHING

NO CHANGES TO SECTION 506

SECTION 507 – PCCP RESTORATION

ENTIRE SECTION 507 IS NOT USED

SECTION 508 – EQUIPMENT

508.02 Mixing Plant

(a) Plant Inspection

- 10 The concrete production equipment shall be capable of producing a uniform mixture. A plant inspection in accordance with 106.03 will be made by the ~~Engineer~~ the Agency annually, after a plant is moved, or as deemed necessary.
-

Recurring Special Provisions

Division 600 – Incidental Construction

City of Fort Wayne

Public Works

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DIVISION 600 – INCIDENTAL CONSTRUCTION

SECTION 601 – GUARDRAIL

601.01 Description

This work shall consist of the fabrication, assembly, and installation of guardrail, guardrail transitions, and guardrail end treatments, in accordance with these requirements, and as shown on the plans. This work may also consist of the extension of existing guardrail with new guardrail, the removal of existing guardrail, or adjusting the height of existing guardrail.

The work for the wood rub rail shall consist of constructing a 2 in. by 12 in. pressure treated board along the back side of the guardrail posts, in accordance with Section 911.02.

10

MATERIALS

601.02 Materials

Materials shall be in accordance with the following:

	Alternate Material Blockouts.....	926.03
	Guardrail Posts	910.10
	Rail Accessories, Fittings, and Hardware	910.11
	Steel Thrie-Beam Rail	910.09
	Steel W-Beam Rail	910.09
20	Timber Posts and Blockouts	911.02(f)
	Treated Lumber.....	911.02
	Hardware.....	911.02, ASTM A307, and F2329

CONSTRUCTION REQUIREMENTS

601.03 General Requirements

90 W-beam guardrail shall be installed as shown on the plans with the W-beam rail element splice at the post. MGS W-beam guardrail shall be installed as shown on the plans with the W-beam rail element splice at midspan. MGS W-beam guardrail

installed with half or quarter post spacing shall be spliced as shown on the plans.

The nested W-beam guardrail element shall consist of two rail elements, one set inside the other. The length of nested guardrail placed over a culvert shall not be spliced.

The wood rub rail shall be the contractor's responsibility to install a 2 in. by 12 in. pressure treated board flush with the top side of the guardrail posts. The contractor shall use a galvanized carriage bolt within two inches of top and bottom of board and one in the center of the board, at each post. The carriage bolt shall be fastened securely to the posts using a flat washer, lock washer, and nut on the backside of the guardrail post. The pressure treated board or boards shall be in accordance with INDOT 911.02 and all galvanized hardware shall be in accordance with ASTM A307 and F2329.

601.13 Method of Measurement

Guardrail, guardrail with rub rail, shop curved guardrail, adjusting guardrail height, guardrail removal, and resetting guardrail will be measured by the linear foot along the top of the rail element, complete in place. Nested guardrail will be measured per each 100 lft run placed. Modified posts for nested guardrail will be measured per each, complete in place. MGS structure top-mounted posts will be measured per each, complete in place. Long span MGS W-beam guardrail will be measured per each for the type specified and corresponding run length between outermost CRT posts.

250 Guardrail transitions, W-beam and MGS W-beam guardrail cable terminal anchors, and guardrail end treatments will be measured per each, complete in place. Guardrail buried end treatments type II will be measured per each. Impact attenuators and resetting impact attenuators will be measured per each for the type and width and test level, complete in place. The curved W-beam guardrail connector system and the curved W-beam guardrail terminal system will be measured per each for the type specified. Grading at guardrail end treatments, the reflectorization of guardrail end treatments, and concrete used in anchoring guardrail end treatments will not be measured for payment.

Wood rub rail installation will be measured by the number of linear feet installed.

601.14 Basis of Payment

290 Where existing guardrail height is adjusted, such work will be paid for at the contract unit price per linear foot. The cost of removal, all necessary storage, new adjustable post brackets, attachment of rail section, and miscellaneous nuts and bolts as required shall be included in the cost of adjust guardrail height.

Wood rub rail will be paid for at the contract unit price per linear foot, complete in place.

Payment will be made under:

Pay Item	Pay Unit Symbol
Guardrail Connector System, W-Beam, Curved, _____	EACH
type	
300 Guardrail End Treatment, _____	EACH
type	
Guardrail Height Transition, MGS	EACH
Guardrail Height Transition, VH, ____ ft ____ in. Spacing	EACH
Guardrail Transition, _____	EACH
type	
Guardrail Transition, MGS, _____	EACH
type	
Guardrail, Adjust Height	LFT
Guardrail, MGS W-Beam, ____ ft ____ in. Spacing	LFT
Guardrail, MGS W-Beam, Cable Terminal Anchor	EACH
310 Guardrail, MGS W-Beam, Double Faced,	
_____ ft _____ in. Spacing	LFT
Guardrail, MGS W-Beam, Shop Curved,	
_____ ft _____ in. Spacing	LFT
Guardrail, MGS, Long Span, _____	EACH
Type	
Guardrail, MGS, Structure Top-Mounted Posts	EACH
Guardrail, Remove	LFT
Guardrail, Reset	LFT
320 Guardrail, Terminal System, W-Beam Curved, _____	EACH
type	
Guardrail, Thrie-Beam	LFT
Guardrail, Thrie-Beam, Double Faced	LFT
Guardrail, W-Beam, ____ ft ____ in. Spacing	LFT
Guardrail, W-Beam, Cable Terminal Anchor	EACH

	Guardrail, W-Beam, Double Faced, _____ ft _____ in. Spacing	LFT
	Guardrail, W-Beam, Nested	EACH
	Guardrail, W-Beam, Shop Curved, _____ ft _____ in. Spacing	LFT
330	Guardrail, WR-Beam	LFT
	Impact Attenuator, _____, _____ type-width test level	EACH
	Impact Attenuator, Reset, _____, _____ type-width test level	EACH
	Modified Posts, Nested Guardrail	EACH
	Wood Rub Rail (2"x12" Attached to Guardrail Posts)	LFT

340 For W-beam guardrail, the substitution of 6 ft posts for 7 ft posts where conditions will not allow the use of the longer post will be at the same contract unit price of the longer post.

The substitution of W 6 x 8.5 for W 6 x 9 steel posts, in MGS W-beam guardrail, will be at the same contract unit price for heavier post.

The cost of resetting guardrail shall include the removal, necessary storage, resetting and replacement of damaged or missing parts and new posts as required.

The cost of reflectorization of impact attenuators and guardrail end treatments shall be included in the respective pay items.

350 The cost of all grading required for the guardrail buried end treatment shall be included in the cost of guardrail end treatment, type II.

The cost of earthwork, grading, and transition panel if required, and PCC pad shall be included in the cost of impact attenuator.

The cost of excavation, concrete footings, reinforcement, and structural steel tubing required for modified posts, nested guardrail, shall be included in the cost of the pay item.

360 The cost of all materials, including replacing damaged or missing parts, labor, and necessary incidentals required to reset impact attenuators, will be included in the cost of impact attenuator, reset.

Where guardrail transition type TGB is used with bridge railing type TR, the cost of eliminating the thrie-beam terminal connector and driving the posts to the height above ground shown on the plans shall be included in the cost of the guardrail transition.

The cost of all labor, materials, equipment, and all incidental work shall be included in the cost of the wood rub rail.

601.15 Guardrail End Treatment, OS Reset

Description

This work shall consist of removing, storing, and reinstalling existing guardrail end treatments in accordance with 105.03.

Materials

Materials shall be in accordance with 601.02.

Construction Requirements

This work shall consist of the removal of existing guardrail end treatments, and if necessary, storing it, and then re-erecting it where shown on the plans or as directed.

Resetting of guardrail end treatments shall be supervised or performed at all times by an installed trained and certified by the unit's manufacturer and shall be in accordance with the manufacturer's recommendations. The installer shall be included on the Department's list of Qualified Guardrail End Treatment and Impact Attenuator Installers prior to the start of work.

Method of Measurement

Resetting guardrail end treatments will be measured per each for the type specified, complete in place.

Grading at guardrail end treatments and concrete used in anchoring guardrail end treatments will not be measured for payment.

Basis of Payment

The accepted quantities for resetting guardrail end treatments will be paid for at the contract unit price per each assembly, complete in place.

Payment will be made under:

Pay Item	Pay Unit Symbol
Guardrail End Treatment, OS Reset	EACH

The cost of resetting guardrail end treatments shall include the removal, necessary storage, resetting and replacement of damaged or missing parts and new posts as required.

SECTION 604 – SIDEWALKS, CURB RAMPS, STEPS, AND HANDRAILS

MATERIALS

604.02 Materials

10 Materials shall be in accordance with the following:

Coarse Aggregate, Class D or Higher, Size No. 53 ..	904
Concrete, Class A	702
Detectable Warning Surfaces.....	905.05
Fine Aggregate, Size No. 23, No. 24, or No. 15.....	904
Joint Filler	906.01
Joint Sealing Materials.....	906.02
Reinforcing Bars	910.01
Silica Sand	ASTM C 778

20

Hand railing shall be aluminum pipe in accordance with ASTM B 221, alloy 6063, temper T52 or galvanized steel pipe in accordance with ASTM A 53, grade B, all as specified.

The detectable warning surface in concrete curb ramps shall be selected from the ~~Department's~~ **City's** list of approved Detectable Warning Surfaces in accordance with 905.05.

30

~~The mortar bed material shall be high-strength mortar in accordance with ASTM C 387. Part of the mix water shall be replaced with a Type II polymer modifier meeting the requirements of ASTM C 1438. The proportioning of water and polymer modifier shall be as recommended by the manufacturer of the polymer modifier.~~

~~A type C certification in accordance with 916 shall be furnished for the masonry mortar and polymer modifier prior to use of the material.~~

~~A type C certification in accordance with 916 for the silica sand shall be furnished prior to use of the material.~~

40

CONSTRUCTION REQUIREMENTS

604.03 Portland Cement Concrete Sidewalks, Curbface Sidewalks and Curb Ramps

(a) General Requirements

The location of curb ramps shall take precedence over the location of drainage structures and signal, utility, or light poles, unless those items have existed before the ramp locations have been proposed. Drainage structures and poles shall not be located within the limits of the curb ramp, if at all possible, exclusive of flared sides. Poles located within a sidewalk shall not reduce the clear width to less than 4.0 ft. Crosswalk markings shall be located such that the curb ramps and curb ramp clear spaces are contained within the markings unless otherwise specified. The flared sides need not fall within the crosswalk lines. The normal gutter flow line shall be maintained throughout the curb ramp area, and appropriate drainage structures shall be used, as needed, to intercept the flow prior to the curb ramp area. Positive drainage shall also be provided to carry water away from the intersection of the curb ramp and the gutter line.

70 (b) Excavation

Excavation shall be made to the required depth and to a width that will enable the installation and bracing of the forms. The foundation shall be shaped and compacted to a firm even surface in accordance with the section shown on the plans. All soft and yielding material shall be removed and replaced with acceptable material. Two (2) inches of bed course material shall be placed as a leveling course before the concrete is poured.

(c) Finishing

90 Immediately after striking off, the grade, running slopes and cross slopes shall be checked by an approved method either using a mechanical four (4) foot level, or a four (4) foot level and straightedge that completely spans the surface. ~~2-ft level and a long handled straightedge of light construction that can completely span the surface.~~ The level and straightedge shall be laid parallel and perpendicular to the grade or running slope at intervals of no more than 2 ft on curb ramps and 10 ft along sidewalks. All high spots shall be removed and depressions filled with fresh concrete and then leveled. Checking and leveling shall continue until the surface has the required grade, running slope and cross slope and is free of voids.

The surface shall be finished with an approved ~~wooden~~ float. No plastering of the surface will be allowed. The final surface shall be free from porous spots caused by the disturbance of coarse aggregate particles. Curb ramp surfaces shall be coarse broomed transverse to the running slope as shown on the plans.

All exposed edges shall be finished with a 1/4 in. radius.

(f) Joints

The type and location of joints and the size of preformed joint filler shall be as shown on the plans.

All concrete joints shall be finished with a 1/4 in. radius.

110

Preformed 1/2 in. joint filler shall be placed around all appurtenances, such as manholes and utility poles which extend into and through the sidewalk, and between the sidewalk and any fixed structure, such as a building or bridge. The preformed joint filler shall extend for the full depth of the sidewalk or curb ramp, and shall be flush with the surface of the adjacent concrete. Flexible joint filler can be used around manholes, poles, water valve boxes, and along walls in order to get a better seal between the concrete and those items.

(g) Detectable Warning Surfaces

~~2. Cast Surfaces~~

~~Cast iron surfaces shall be installed in accordance with the manufacturer's recommendations. When required, cutting of the cast iron shall be in accordance with the manufacturer's recommendations. Cut edges shall be ground to a smooth shape consistent with the manufactured edges.~~

604.05 Reconstructed PCC Sidewalk, Curbface Sidewalk and Curb Ramp

Where existing concrete sidewalk or curbface sidewalk is to be reconstructed, all disintegrated concrete, brick, stone, or other material shall be completely removed and replaced with new concrete sidewalk in accordance with 604.03.

170

Such sidewalk or curbface sidewalk shall be constructed to a minimum depth of 4 in. unless another depth is designated, and to the width of the adjoining walk, or to a width of no less than 48 in. from the back face of curb, or to such other width as directed.

The removal of concrete sidewalk or curbface sidewalk shall be to uniform lines as directed. The sidewalk or curbface sidewalk to be removed shall be cut in a straight line with an approved power driven concrete saw. The sawing shall be such that the portion of sidewalk to remain in place shall not be damaged. All portions which are damaged or removed back of the established line shall be replaced.

180

Unless otherwise directed, sidewalk or curbface sidewalk which must be removed shall be removed between tool marks or joints. At locations where the sidewalk and curb are adjacent and the curb is deteriorated, the curb shall also be replaced ~~as directed.~~ if noted on the plans or if directed by the Project Manager.

The new sidewalk or curbface sidewalk shall have a joint pattern similar to the surrounding sidewalk. Sidewalk or curbface sidewalk placed at drives shall be 6 in. thick, or the same depth of the existing drive, whichever is greater.

190 Where existing curb ramp is to be reconstructed for placement of detectable warning surfaces, all concrete, brick, stone, or other material shall be completely removed and replaced in accordance with 604.03.

604.06 Re-Laid Sidewalk

NOT USED BY CITY OF FORT WAYNE

604.07 HMA Sidewalk and Trail

(a) **Excavation and Forms**

Excavation and forms, when required, shall be in accordance with 604.03(b) and 604.03(c).

(b) **Bed Course**

Bed course material shall be coarse aggregate No. 53 and shall be placed in lifts not exceeding 4 in. in depth. Each lift shall be thoroughly compacted and laid to the specific depth noted on the plans.

210

(c) **Placing HMA Sidewalk and Trail**

HMA sidewalk material shall be placed on a compacted bed course in one or more courses. The mixture shall consist of HMA base, intermediate, or surface, type B in accordance with 402, except the 9.5 mm surface gradation can go above or below the PCS control point in accordance with 401.05. A MAF in accordance with 402.05 will not apply. Aggregate requirements of 904.03(d) do not apply. Compaction shall be accomplished by means of a hand operated or power roller of an acceptable type and weight in accordance with 402.15. In areas inaccessible to the roller, hand tamping will be allowed. In any case, the HMA sidewalk and trail material shall be uniformly compacted. The grade and cross slope shall be checked with a \pm 4ft or approved other level in accordance with 604.03(e).

220

~~If the finished compacted surface is too open or remains sticky, the surface shall be given a coating of fine aggregate, well broomed over the surface, leaving no excess.~~

604.10 Method of Measurement

260 Concrete sidewalk, curbside sidewalk, reconstructed concrete sidewalk, reconstructed curbside sidewalk and concrete bench pad ~~re-laid concrete sidewalk~~ will be measured by the square yard of finished surface. HMA for sidewalk and trail will be measured by the ton of mixture placed. Bed course material will be measured by the ton.

Concrete curb ramps will be measured by the square yard and will include the ramp, turning space, flared side, and setback. Turning spaces shared by more than one curb ramp will be measured only once. Detectable warning surfaces and retrofitted detectable warning surfaces will be measured by the quantity of each put in place, or can also be measured by the square yard, whichever is noted on the bid tab.

604.11 Basis of Payment

The accepted quantities of concrete sidewalk, reconstructed concrete sidewalk, and concrete bench pad will be paid for at the contract unit price per square yard for sidewalk, concrete. Curbside Sidewalk and reconstructed curbside sidewalk will be paid for at the contract unit price per square yard for curbside sidewalk, concrete. HMA for sidewalk trail will be paid for at the contract unit price per ton, complete in place. Bed course material will be paid for at the contract unit price per ton. Concrete steps will be paid for at the contract unit price per cubic yard for steps, concrete. Reconstructed sidewalk and ~~re-laid sidewalk~~ will be paid for at the contract unit price per square yard for sidewalk ~~or reconstruct or sidewalk, re-lay. Detectable warning surfaces and retrofitted detectable warning~~
290 ~~surfaces will be paid for at the contract unit price per the quantity of each put in place or measured by the square yard.~~

300 Reinforcing bars, if used, will be paid for in accordance with 703.08. Curb, if directed to be replaced, will be paid for in accordance with 605.10.

Sidewalk Trench Drain Payment will be paid under each unit placed.

Payment will be made under:

Pay Item	Pay Unit Symbol
Bed Course Material	TON
Curb Ramp, Concrete	SYS
Detectable Warning Surfaces	EA

	SYS
	Detectable Warning Surfaces, Retrofit	EA
	SYS
310	Hand Rail, _____	LFT
	type	
	HMA for Sidewalk and Trail	TON
	Sidewalk, Concrete.....	SYS
	Sidewalk, Concrete, Reconstruct	SYS
	Sidewalk, Concrete, Re-Lay.....	SYS
	Steps, Concrete.....	CYS
	Trail, Asphalt	TON
	Trail Bench Pad, Concrete-.....	SYS
	Curbface Sidewalk, Concrete.....	SYS
	Curbface Sidewalk, Concrete, Reconstruct	SYS
	Sidewalk Trench Drain	EACH

320 The cost of the ramp, including border, turning space, flared side, return curb, and setback shall be included in the cost of the curb ramp.

 The cost of excavation, backfill, joint material, and necessary incidentals shall be included in the cost of the pay items in this section.

 The removal and disposal of concrete sidewalk which is unsuitable for re-laying and which has not been damaged due to negligence will be paid for in accordance with 202.14. ~~Concrete sidewalk which is specified to be re-laid or to remain in place and which is damaged shall be removed and disposed of and replaced with no additional payment.~~

330 If directed, concrete sidewalk or curbfac sidewalk shall be constructed to a depth greater than that shown on the plans. Such additional thickness will be converted into the equivalent square yards quantity of concrete sidewalk of the thickness shown on the plans and will be paid for as such.

~~The cost of furnishing and applying sand to finished compacted surfaces shall be included in the cost of HMA for sidewalk.~~

 The cost of all labor, materials, equipment and all incidental work shall be included in the cost of the pay item for Sidewalk Trench Drain.

604.12 Sidewalk, Trip Hazard Elimination, 0.25” to 2”

Description

The City is requesting bids/quotations for elimination of sidewalk vertical separations throughout the city per the specifications below. The Contractor shall horizontally saw cut all sidewalk joint deflections (also known as vertical separations or trip hazards) over 0.25” high up to and including 2” high in designated work areas. This is in accordance with FWR Section 600 - Concrete

Materials

Materials for this job shall consist of diamond tip cutting blades, a dry HEPA rated dust abatement system or for wet cuts grinding may be acceptable by approved rotating cutting drum

Construction Requirements

- 1) Contractor must repair all sidewalk vertical separations (trip hazards) over 0.25” high up to and including 2” high in the designated work areas.
- 2) Corrections, also known as joint cuts, shall be made horizontally with equipment designed for that purpose to eliminate trip hazards. Joint cuts shall be made to provide a maximum slope of 1:8 (vertical:horizontal). The cutting equipment must be able to cut flush to ground and capable of working at any angle to perform trip hazard removal in hard-to-reach areas, around obstacles (signs, posts, benches, etc), on narrow walkways, next to fences, and along retaining walls or buildings.
- 3) Pulverization of the concrete is NOT allowed as it causes micro-cracks and weakens the concrete panel. Also, the contractor’s trip hazard repairs may not leave ridges or grooves that could hold water and prevent drainage of rain water or irrigation.
- 4) Panel lifting or “Slab Jacking” is NOT acceptable or allowed as it separates adjoining panels at control joints with a vertical cutting process that results in seasonal vertical separations.
- 5) Joint cuts shall not leave ridges or grooves in the sidewalk that could inhibit or prevent drainage. Joint deflections shall be removed completely, from one end of the raised sidewalk to the other, leaving zero vertical deflection between adjacent slabs, in either direction. Any panels inspected and deemed not to be at a zero point of differential will be repaired to the required specifications or they will not be paid for.
- 6) Joint cuts shall have a uniform appearance and texture. The finished surface shall have a coefficient of friction of at least 0.6. Contractor must guarantee that the

removed trip hazard will have a uniform appearance and texture and show via previous testing that the technique used yields the specified coefficient of friction.

7) Contractor must repair each sidewalk trip hazard without damage or visible markings to adjacent slab(s) or curb(s).

8) Contractor may not use any type of “fill” material that deteriorates or breaks apart over time.

9) Contractor must not cause any damage to vegetation, landscaping, retaining walls, curbs, sprinklers, utility covers, or other objects adjacent to the sidewalk. If the contractor and/or contractor’s equipment does cause damage to above, the City must be notified immediately. Anything disturbed by the joint cutting operations shall be restored or repaired to the satisfaction of the City, at the Contractor’s sole expense.

10) Contractor must completely and immediately clean up all debris after each hazard is repaired. All cutting shall be done in a manner that minimizes dust by utilizing a dry HEPA rated dust abatement system, as approved by the City. Upon completion of a cut, the area shall be thoroughly cleaned to the satisfaction of the City. Power washing and/or water-cooling is not allowed as it creates slurry that contaminates storm drains and soils. All debris must be removed immediately and properly disposed of.

11) Contractor must provide proof that all concrete and debris is recycled in a proper, environmentally safe manner.

12) Sidewalk repair equipment and all other items incidental to the work shall not be left or stored on the sidewalk or on adjoining private property while not in use.

13) All Contractor vehicles and/or trailers deployed to the work site(s) must be permanently labeled with the approved company name and contact information. A single point of vendor contact is required when working in residential areas.

14) Contractor must provide a written Safety Plan and provide an employee safety manual that is specific to this type of work that adheres to current OSHA standards.

Other items;

Contractor to provide a list of field supervisory personnel and their experience with horizontally cutting concrete in accordance with the City specification. At least one of the field supervisors listed must be at the site and be responsible for all work at all times when horizontally cutting concrete operations are in progress.

Contractor shall schedule their operations so as to cause a minimum of interruption, interference, or disturbance to the operations of the adjacent properties, and

shall allow access by pedestrians, emergency vehicles, and delivery/service vehicles at all times.

Contractor shall submit monthly a detailed invoice setting forth the services performed in accordance with the City data requirements using a formula for saw cutting calculations.

Contractor must have a data collection solution that records the details of the work in the field with the ability transmit the data electronically at any time from the field. The recording device must be able to record sizes of hazards, GPS coordinates, hazard locations plotted to a map, address, and be able to provide this data in an electronic format for the City to integrate into a GIS system.

Contractor must log all work items completed on a daily basis including the names of field technicians and the work locations.

All invoices must show the cut quantity by day per work area. Invoice must also be capable of listing the depth, size, length, width, address location, descriptions, and cutting calculations.

Contractor must guarantee the corrections of sidewalk trip hazards (vertical separations) will remain within the 1/4" high vertical separation limit for a period of three (3) years. If the trip hazard correction is found to be out of specification within three years, the Contractor will cut the sidewalk again to resolve or credit the City back for the full amount of the original correction. Guarantee does not apply to prior repairs where individual slabs have been replaced, ground, or lifted via slab jacking.

Contractor must be able to respond to any emergency work within 48 hours of notification. Contractor must be able to respond to City generated work orders for sidewalk/drive remediation work within 5 working days.

Contractor must provide a Safety Plan per the Manual of Standard Specifications or must provide an employee safety manual that is specific to this type of work.

Contractor must have an OSHA-30 certified Supervisor onsite during the correction process.

Contractor Technicians performing sidewalk corrections need to be OSHA-10 certified.

Method of Payment

The pay quantity for this item shall be the number of cuts per joint on the sidewalk at the time of billing.

Basis of Payment

Trip Hazard Elimination will be paid under a EACH for the number of cuts made per every concrete joint made in the sidewalk from a length of 3-7' in length.

Pay Item	Pay Unit Symbol
Trip Hazard Elimination, 0.25" to 2".....	EA

The cost of all labor, equipment, materials and all incidental work shall be included in the cost of the pay item.

SECTION 605 – CURBING

MATERIALS

20 **605.03 Precast Cement Concrete Curbing**

(a) Installation

30 The curb shall be set in accordance with the line and grade required. The face and top of the curb shall be checked with a 4 ft to 10 ft straightedge. Portions showing irregularities of 1/4 in. or more shall be removed and replaced with no additional payment. All spaces under the curbing shall be filled with a two (2) inch bed course material. The bed course material shall be coarse aggregate No. 53 and shall be thoroughly tamped.

(c) Backfilling

50 After the curb has set, any remaining excavated areas shall be filled with approved material. This material shall be placed and thoroughly tamped in layers not exceeding 6 12 in. in depth.

605.04 Cast in Place Cement Concrete Curbing

(c) Proportioning and Placing

80 The face and top of the curb, integral curb, and gutter shall be checked with a 4 ft to 10 ft straightedge. Portions showing irregularities of 1/4 in. or more shall be removed and replaced.

Consolidation of concrete placed in the forms shall be by vibration or other acceptable methods. Forms shall be left in place for a maximum of 24 h or until the concrete has set sufficiently so that they can be removed without injury to the curbing. Upon removal of the forms, the exposed curbing face shall be rubbed immediately to a uniform surface. Rubbing shall be accomplished by the use of water and a carborundum brick. For the purpose of matching adjacent concrete finishes or for other reasons, other

90 methods of finishing may be allowed. No plastering will be allowed.

(d) Curing

110 Immediately upon completion of the rubbing, the curbing shall be moistened and kept moist for three days, or cured by the use of membrane forming material. The method and details of curing shall be subject to approval.

(e) Backfilling

After the concrete has set sufficiently, the spaces in front and back of the curb shall be refilled with suitable material to the required elevations in layers of not more than 6 12 in. and be tamped thoroughly.

140 **605.06 Concrete Center Curbing**

The subgrade shall be prepared the same as for the adjoining pavement. If subbase is provided for the adjoining pavement, it shall be carried through for the full width of the curb and at the same thickness as that for the pavement.

The temperature limitations of 502.11 shall apply to placing the concrete. The surface shall be troweled smooth with a metal trowel. Curing shall be in accordance with 504.04.

150 Forms shall be removed within 24 h after the concrete has been placed. Plane surfaces and exposed sides of the curb shall be checked with a 4 ft to 10 ft straightedge. Portions showing irregularities of 1/4 in. or more shall be removed and replaced in compliance with these specifications.

605.10 Basis of Payment

260 The accepted quantities of curb work will be paid for at the contract unit price per linear foot for curb; curb and gutter; curb, reset; or center curb, of the type specified. Variable width center curb will be paid for at the contract unit price per square yard for center curb, of the width specified. Bed course material will be paid for at the contract unit price per ton, complete in place.

Curb turnout will be paid for at the contract unit price per linear foot of the type of curb specified. Combined curb and gutter will be paid for at the contract unit price per linear foot for curb and gutter of the type specified.

270 Payment will be made under:

Pay Item	Pay Unit Symbol
Bed Course Material	TON
Center Curb, _____	SYS
type	LFT
Curb and Gutter, _____	LFT
type	
Curb, _____	LFT
type	
Curb, Remove	LFT
Curb, Reset, _____	LFT
type	

The cost of tack coat, reinforcing bars or welded wire reinforcement for curb, curb and gutter, or center curb shall be included in the cost of the pay items. The cost of replacement curb portions for those which show irregularities or 1/4 in. or more shall be included in the cost of curb.

The cost of backfilling will not be paid for separately, unless otherwise specified on the Bid Tab.

605 FWR01 –CURB, CONCRETE - TYPE III MODIFIED

Description

Contractor shall provide all labor, materials, equipment, and incidentals as shown, specified, and required to furnish and install Portland Cement Concrete (PCCP) curbs for the project in accordance with FWR Section 605.

Materials

Materials shall be Concrete, Class A in accordance with INDOT Standard Specifications latest edition, Section 502 for PCCP and 702 for Concrete, Class A.

Construction Requirements

The Work shall consist of the construction of PCCP curbs in conformance with the lines and grades shown on the Drawings or established by the Engineer/Project

Manager. Install per Detail #4 and #11 on Sheet C-501-01 of Superior Street Urban Trail Drawings.

Method of Measurement

Concrete curb will be measured by the linear foot along the front face of the section at the finished grade elevation of the type specified.

Basis of Payment

The accepted quantities of concrete curb will be paid for at the contract unit price per linear foot, complete in place.

Payment will be made under:

Pay Item	Pay Unit Symbol
FWU06 - CURB, CONCRETE, TYPE "III", MODIFIED (12" WIDE) (INCLUDES CONCRETE/ASPHALT PATCHING).....	LFT
FWU07 - CURB, CONCRETE, TYPE "III", MODIFIED (6" WIDE BANDING - POURED FLUSH).....	LFT

Concrete, excavation, forms, furnishing and installing materials, labor, equipment, cleanup, and all other operations necessary for installation of concrete curb shall be included in the cost of the pay item.

605 FWR06 – Curb, Concrete Type III, With Asphalt/Concrete Patching

626.01 Placement

This item shall consist of a uniform 2 inch depth of 9.5mm Type B asphalt surface over 8 inches of Portland cement base, over properly prepared sub-base, to match existing lines and grades of existing adjacent pavements.

626.10 Basis of Payment

The accepted quantities of curb work will be paid for by the linear foot of curb placed, which includes asphalt/concrete patching, sawing, excavation, labor, materials, and all incidental required to complete said work, unless otherwise stipulated.

Payment will be made under:

located where it is accessible for mail delivery but placed as far as possible from the traveled roadway. The apparent owner of the existing mailbox shall be contacted and allowed to take possession of the existing mailbox and assembly. If the owner refuses to take possession, the existing mailbox and assemblies shall be removed.

30 Mailbox assemblies shall be furnished and installed as shown on the plans. ~~Alternate mailbox assemblies which have been crash tested and approved in accordance with NCHRP 350 requirements may be considered upon receipt of a written request.~~ Alternate mailbox assemblies approved for use shall be furnished and installed in conformance with the manufacturer's recommendations.

40 Mailboxes complying with the requirements of the United States Postal Service, including markings and sizes, shall be furnished and installed with the mailbox assembly. The mailbox shall be of comparable size to the existing mailbox previously removed from the ~~highway~~ City right-of-way. The markings shall include "approved by U.S. Postmaster" stamped on the mailbox by the manufacturer and the address number, box number, or house number, in 2 in. or larger reflective material placed on the side of the mailbox in view of motorists in the nearest travel lane.

611.04 Method of Measurement

50 Mailbox assemblies will be measured by the number of units of the type installed. ~~Resetting of mailbox assemblies will be measured by the number of units of the type reinstalled.~~

611.05 Basis of Payment

Mailbox assemblies will be paid for at the contract unit price per each per type, complete in place. ~~Resetting of mailbox assemblies will be paid for at the contract unit price per each per type, complete in place.~~

Payment will be made under:

	Pay Item	Pay Unit Symbol
60	Mailbox Assembly, Double.....	EACH
	Mailbox Assembly, Single	EACH
	Mailbox Assembly, Reset, Double.....	EACH
	Mailbox Assembly, Reset, Single	EACH

The cost of wood or pipe posts, support hardware, mailbox, and removal of existing mailbox and its assembly shall be included in the cost of the mailbox assembly.

70 The cost of all materials, labor, equipment and incidentals required to remove and reset the existing mailboxes shall be included in the cost of mailbox assembly, reset.

SECTION 612 – UNDERSEALING

NOT USED BY THE CITY OF FORT WAYNE

SECTION 616 – RIPRAP AND SLOPEWALL

616.13 Basis of Payment

The accepted quantities of dumped, revetment, class 1, and class 2 riprap obtained from outside the right-of-way will be paid for at the contract unit price per ton. Dumped, revetment, class 1, and class 2 riprap obtained from within the project limits will be paid for at the contract unit price per square yard ton. Uniform riprap will be paid for at the contract unit price per ton. Grouted riprap will be paid for at the contact unit price per square yard of the specified depth. Precast concrete riprap, and concrete slope wall will be paid for at the contract unit price per square yard, all complete in
170 place. If slag is used as dumped riprap and payment will be made per ton, the pay quantity will be adjusted in accordance with 904.01.

SECTION 617 –PERMANENT & REMOVABLE BOLLARDS

617.01 Description

This work shall consist of installing either permanent or removable bollards in accordance with 105.03.

MATERIALS

617.02 Materials

10 Removable bollard materials shall be in accordance with the following:

Bollard Post ASTM A513 Type 1

Bollard Ground Sleeve	ASTM A513 Type 5
Stainless Steel Plate – Ground Sleeve Top & Lid	ASTM A240
Concrete, Class A.....	702

20 Removable bollards supplied should be free from surface blemishes and defects where exposed to view in the finished installation

After fabrication all units are prepared by removing scale and slag through the sand blasting process.

All surfaces are primed with rust & corrosion resistant, zinc rich primer w/ 5,000 hour salt spray performance. 2.4.2 Standard finish, TGIC Polyester outdoor finish RAL1028 Yellow. TGIC Polyester powder definition; meets decorative and functional requirements for gloss retention, physical properties, chemical resistance and weatherability.

30 Acceptable manufacturer for removable bollards is TrafficGuard, Inc. Round Post Lock Removable Bollards (RPL3) or approved Engineer equal.

Permanent bollard materials shall be in accordance with the following:

Bollard Steel Post	ASTM A513 Type 1
Stainless Steel Anchor Pin or Rod.....	ASTM A240
Smooth Wall PVC	907.16
Concrete, Class A.....	702

40 Permanent bollards supplied should be free from surface blemishes and defects where exposed to view in the finished installation

Steel posts will be 3-in diameter post painted yellow with rustproof paint. The post shall have a dome cap.

CONSTRUCTION REQUIREMENTS

617.03 Bollard Installation

50 Comply with removable bollard manufacturer provided instructions and drawings.

Removable bollard ground sleeves should be installed with the top of the sleeve set flush with the finished surface. The permanent bollard PVC pipe sleeve will be set at 1-in above the finished grade

Ensure that a minimum of a 3 inch gravel base is put down prior to installation to ensure drainage of the bollard.

Permeant bollard posts will be set into 3-1/2-in diameter vinyl sleeves that are anchored with a pin or rod into 4,000 psi concrete. These post will be set 30-inches into the PVC pipe sleeve and will be between 42 to 48-inches in height above the finished grade. The concrete base will be a minimum diameter of 10-inches.

60 Bollard should not be inserted into the ground sleeve until it is leveled and fully cured. For the removable bollard, attach bollard per manufacturer instructions.

If touch up painting in the field, be careful not to paint moving parts which may restrict the bollard’s proper function.

617.04 Method of Measurement

Bollard installation will be measured by the number of units of the type installed.

70

617.05 Basis of Payment

Bollard installation will be paid for at the contract unit price per each per type, complete in place.

Payment will be made under:

	Pay Item	Pay Unit Symbol
80	Removable Bollard.....	EACH
	Permanent Bollard.....	EACH

The cost of excavation, gravel base, PVC pipe sleeve, steel anchor pin/rod and concrete to set bollard shall be included in the cost of the bollard installation.

SECTION 618 – TRAIL AMENITIES

618.01 Description

This work shall consist of installing trail amenities such as steel ornamental fencing, wood rail fencing and benches in accordance with 105.03.

MATERIALS

618.02 Materials

10 Trail steel ornamental fencing materials shall be in accordance with the following:

Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process.	ASTM A653/A653M
Practice for Operating Salt-Spray (Fog) Apparatus.	ASTM B117
Method for Specular Gloss	ASTM D523
Test Method for Evaluating Degree of Blistering in Paint.	ASTM D714
Practice for Conducting Tests on Paint and Related Coatings and Materials using Filtered Open-Flame Carbon-Arc Light and Water Exposure Apparatus	ASTM D822
Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments.	ASTM D1654.
Test Method for Calculation of Color Differences from Instrumentally Measured Color Coordinates.	ASTM D2244
Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)	ASTM D2794
Test Method for Measuring Adhesion by Tape Test.	ASTM D3359
Ornamental Fences Employing Galvanized Steel Tubular Pickets.	ASTM F2408

20 Steel material for fence panels and posts shall conform to the requirements of ASTM A653/A653M, with a minimum yield strength of 45,000 psi (310 MPa) and a minimum zinc (hot-dip galvanized) coating weight of 0.60 oz/ft² (184 g/m²), Coating Designation G-60.

30 Material for pickets shall be 3/4" square x 18 Ga. tubing. The rails shall be steel channel, 1.5" x 1.4375" x 14 Ga. Picket holes in the rail shall be spaced (specify 4.675" o.c. for standard picket space or 3.500" o.c. for 3" air space). Fence posts and gate posts shall meet the minimum size requirements of Table 1.

Table 1 – Minimum Sizes for Posts	
<u>Fence Posts</u>	<u>Panel Height</u>
2-1/2" x 16 Ga.	Up to & Including 6' Height
<u>Gate Leaf</u>	<u>Gate Height</u>
	Up to & Including 4' Over 4' Up to & Including 6'

Up to 4'	2-1/2" x 14 Ga.	3" x 12 Ga.
4' 1" to 6'	3" x 12 Ga.	3" x 12 Ga.
6' 1" to 8'	3" x 12 Ga.	4" x 12 Ga.

- 40 Pickets, rails and posts shall be pre-cut to specified lengths. Rails shall be pre-punched to accept pickets.

Pickets shall be inserted into the pre-punched holes in the rails and shall be aligned to standard spacing using a specially calibrated alignment fixture. The aligned pickets and rails shall be joined at each picket-to-rail intersection fusion welding process, thus completing the rigid panel assembly.

- 50 The manufactured panels and posts shall be subjected to an inline electrode position coating (E-Coat) process consisting of a multi-stage pretreatment/wash, followed by a duplex application of an epoxy primer and an acrylic topcoat. The minimum cumulative coating thickness of epoxy and acrylic shall be 2 mils (0.058 mm). The color shall be black. The coated panels and posts shall be capable of meeting the performance requirements for each quality characteristic shown in Table 2 (Note: The requirements in Table 2 meet or exceed the coating performance criteria of ASTM F2408).

Table 2 – Coating Performance Requirements		
Quality Characteristics	ASTM Test Method	Performance Requirements
Adhesion	D3359 – Method B	Adhesion (Retention of Coating) over 90% of test area (Tape and knife test).
Corrosion Resistance	B117, D714 & D1654	Corrosion Resistance over 1,500 hours (Scribed per D1654; failure mode is accumulation of 1/8" coating loss from scribe or medium #8 blisters).
Impact Resistance	D2794	Impact Resistance over 60 inch lb. (Forward impact using 0.625" ball).
Weathering Resistance	D822 D2244, D523 (60° Method)	Weathering Resistance over 1,000 hours (Failure mode is 60% loss of gloss or color variance of more than 3 delta-E color units).

- 60 The manufactured fence system shall be capable of meeting the vertical load, horizontal load, and infill performance requirements for Commercial weight fences under ASTM F2408.

Acceptable manufacturer for steel ornamental fencing is Ameristar Montage Plus – Majestic Style 42-inches 3-Rail or 54-inches 4-Rail or approved Engineer equal.

- 70 Trail wood rail fences shall be in accordance with the following:
- Posts shall be 4' x 4' treated lumber
 - Rails shall be 2' x 6' treated lumber
 - Lag bolts shall be 1/2" x 6 1/2" galvanized

- 80 Park benches shall be in accordance with the following:

- Benches are 6-foot black benches, rib pattern & surface mount.
- Heat fused poly—vinyl coating, finished on inner—metal structure, to an approximate 3/16" thickness.
- Framework assemblies are finished with powder coating; electrostatically applied and oven cured according to powder manufacturer's specifications.
- Fasteners are stainless steel to resist corrosion.
- BENCH LEG: Low profile seat legs are constructed of 319 cast aluminum. The leg thickness is 1 1/2" and the foot pads are 5 1/8" long x 2 3/8" wide. The overall height is 21". Bench leg thickness is 1 1/2" and the foot pads are 5 1/8" long x 2 3/8" wide. The overall height is 33 1/2".
- BENCH SEAT: Expanded metal seat uses fabricated 3/4" #9 steel mesh. Rib uses 10 gage and perforated uses 12 gage sheet steel. The frame/mounting brackets are 10 gage sheet steel. The ends of the low profile use a 1/2" diameter steel rod to add support on the 4' and 6' low profile benches. All other benches use 1/4" x 1 1/4" steel flat bar for support at the rolled sides.
- Courtyard 6' bench ground requirements are 27 3/4" x 75 1/8". The bench seat is 72 1/8" long x 25 3/4" wide and 16 5/8" to the top of the lowest part in the bench's seat. Low profile 6' bench ground requirements are 30 3/8" x 75 1/8". The bench seat is 72 1/8" long x 30 3/8" wide and 16 3/8" to the top of the bench's seat.
- The Memorial Plaque consists of 304 brushed stainless steel.

Acceptable manufacturer for park benches is Wabash Valley Memorial Park Bench Model SP410R or approved Engineer equal.

CONSTRUCTION REQUIREMENTS

618.03 Installation of Trail Steel Ornamental Fencing

All new installation shall be laid out by the contractor in accordance with the construction plans.

Comply with manufacturer's instructions and details.

Install concrete footers per spacing as shown on the plans with properly extended modular block reinforcing per manufacturer's recommendation. Concrete footers must be placed to minimum depth of 36".

Fence panels are to be attached to posts with hardware supplied by the Contractor.

Follow manufacturer's recommendation for hardware placement and cleaning.
Perform touch up painting according to manufacturer's recommendations.

618.04 Installation of Trail Wood Rail Fencing

All new installation shall be laid out by the contractor in accordance with the construction plans.

Posts shall be securely embedded into the ground to meet the proper alignment and elevations. Posts shall be embedded in concrete as shown on the Detailed Drawings.

Posts and rails shall be held in proper positions by secure bracing until such time as the concrete has set sufficiently to hold the posts. Materials shall not be installed on posts, or stress placed on bracing until the concrete has set sufficiently to withstand the stress.

The complete fence shall be plumb and in straight alignment as shown on the detailed drawings or as directed by Engineer.

618.05 Installation of Trail Benches

Comply with manufacturer's instructions and details.

Install bench on top of trail concrete pad (Section 604). Benches are to be attached to concrete pad with hardware supplied by the Contractor.

Follow manufacturer's recommendation for hardware placement and cleaning.
Perform touch up painting according to manufacturer's recommendations.

618.06 Method of Measurement

Trail steel ornamental fencing and wood rail fencing will be measured by the linear feet installed and measured in the field.

Bench installation will be measured by the number of units of the type installed.

618.07 Basis of Payment

Trail steel ornamental fencing and wood rail fencing will be paid for at the contract unit price per linear foot installed.

Trail bench installation will be paid for at the contract unit price per each per type, complete in place

Payment will be made under:

Pay Item	Pay Unit Symbol
Trail Steel Ornamental Fencing	LFT
Trail Wood Rail Fencing	LFT
Trail Bench	EACH

The cost of all labor, materials and equipment required to construction the trail fencing including excavation, gravel base, hardware and concrete shall be included in the cost of the installation.

The cost of all labor, materials and equipment required to install trail benches including hardware shall be included in the cost of the installation

SECTION 620 Brick Pavers

620.01 Description

This work shall consist of removing existing brick road within the limits of the contract, and using it in reconstruction of the road in accordance with these specifications or as directed.

620.02 Materials

Approved materials will be existing salvaged bricks removed and cleaned from this contract and previously salvaged bricks that have been stock piled at City facilities.

620.03 Construction Requirements

Existing Brick is to be salvaged, cleaned and stored in stockpiles outside the construction limits and adjacent thereto, or it may be incorporated directly into the work without stockpiling if conditions allow. The contractor shall furnish all labor, material, and supervision necessary to construct this item as shown on the drawings. Existing brick salvaged from the roadway shall be placed from one end until it runs out. Each row shall consist of only one type of brick pavers. After all salvaged brick are exhausted, the contractor shall be responsible for loading and transporting salvaged brick pavers from the City's Storage Facility where bricks are stockpiled. The contractor shall clean brick properly before placing. Brick pavers, Polymeric sand shall be swept in to the brick joints to complete full depth of the pavers to the satisfaction of the Project Manager.

The quantities removed, if available, shall be sufficient to complete the item of work or certain portions thereof for which it is intended. The depth of excavation shall

be as directed.

620.04 Method of Measurement

The Completed Road will be measured by the square yard in its original position.

620.05 Basis of Payment

The accepted quantities of salvaged road material for the use shown on the Schedule of Pay Items will be paid for at the contract unit price per cubic yard, complete in place.

Payment will be made under:

Pay Items	Pay Unit Symbol
------------------	------------------------

Reset Brick Pavement, Utilizing Existing Brick _____	SYS
------------------------------------------------------	-----

The cost of removal of the material, storage, incorporating it into the work, and necessary incidentals shall be included in the cost of the pay item.

SECTION 622 – PLANTING TREES, SHRUBS, AND VINES

622.17 Grass and Weed Control

320 Weeding and mowing of grass in and around all group plantings, beds, and individual trees and shrubs shall be performed until final acceptance. The grass and weed control areas shall be the areas within 2 ft of the outer limits of all group plantings and shrub beds and within 2 ft of the outer limits of the mulch area of individual shrubs. For the care of individual trees, the area shall extend to a perimeter centered from the point itself to 2 ft beyond the stub stakes of the guy wires or 2 ft beyond the mulched area. In general, these areas shall be in accordance with the plans.

All working areas until final restoration shall be maintained by the contractor in accordance with city ordinances – i.e. No grass or weeds taller than 9 inches.

SECTION 623-VEGETATIVE INSTALLATION AND MANAGEMENT

In INDOT section 900 and 300, anything referencing section 621 (Seeding and Sodding) or 622 (Planting Trees, Shrubs, Vines) shall be changed to Reference 623 Vegetative Installation and Management related items.

623.01 Description

The work covered by these Specifications consist of providing all plants, labor, equipment, supplies, materials, transportation, handling and storage, and performance of all operations required for the construction of the landscaping improvements as provided for in this Section.

Landscape planting is inclusive, but not limited to finished grading, incidentals, supplying and spreading of soil, plant layout, seeding or sodding, water, ground cover plantings or installations, shrub or tree plantings, landscape edges, maintenance period and warranty, and all other necessary services for completing the planting operation. Equipment or motorized vehicles shall not be stationed or driven onto finished landscaped areas unless approved by Public Works Representative.

(a) Reference & Regulatory Requirements

The publications listed below are referred to in the text by designation only. The Contractor shall comply with all Federal, State and local laws, ordinances, rules and regulations applicable to the work, and safety practices. Nothing in the Specifications shall be construed to permit work not conforming to the regulations and codes set forth which include, but are not limited to the following:

1. American National Standards Institute (ANSI)
2. Indiana Department of Environmental Management (IDEM)
 - a. Indiana's Spill Rule: 327 IAC 2-6.1-7 Reportable spills; responsibilities.
3. Manual On Uniform Traffic Control Devices (MUTCD)
4. Office of the Indiana State Chemist (OISC)
 - a. Indiana Pesticide Use and Application Law. 1975
5. Occupational Safety and Health Administration (OSHA)
6. United States Environmental Protection Agency (U.S. EPA)
 - a. Federal Insecticide, Fungicide and Rodenticide Act of 1947

(b) Submittals

1. Seed Mixture
 - a. Product Data: certification labels, etc.
2. Hyrdoseed Mixtures
3. Fertilizer Product Data
4. Seed Supplier Certification
5. Sod Supply Information
 - a. Packaging information

623.02 Construction Requirements

Contractors shall be responsible for and follow all MUTCD, OSHA and ANSI requirements for safety and personal protective clothing in the work zone.

The Contractor shall be responsible for the location, installation and maintenance of erosion and sediment control devices for the project. Erosion and sediment control shall be in accordance with Section 205 on Stormwater Management's standards and specifications. Contractor shall also comply with 327 IAC 15-5 Stormwater Run-Off Associated with Construction Activity" permit, as specified in the construction documents. The Contractor shall also follow the Indiana Storm Water Quality Manual. Contractor shall minimize granular deposits on the street surfaces and sidewalks open to the public. Excess material shall be removed at the end of each workday by approved methods such as a street sweeper.

It shall be the Contractor's responsibility to maintain all vegetation across the entire project area. This may include but is not limited to weeds or grasses. Vegetation shall not exceed 9 inches in height. Mechanical and/or hand maintenance shall be done as needed to maintain vegetative height below 9 inches throughout the duration of the entire project or until final acceptance.

Contractor shall have a supervisor or foreman onsite at all times who has knowledge of the scope of the work in order to ensure the work flow is being performed properly. A site visit to go over scope of work for each project may be required. The supervisor or foreman performing the work shall be onsite during this time to understand the scope of work being performed.

Unnecessary site visits by the Public Works Representative requested by the contractor may result in a deduction from the project cost of up to \$200 per visit.

Contractor shall supply cell phone numbers, and daytime office numbers of supervisors handling the contract onsite. They shall return all calls within 24 hours of the Project Manager/Engineer placing the call.

Contractor shall call in all locates for each location when digging or stump grinding occurs. Any damage to underground utilities is the responsibility of the Contractor. The Contractor shall notify the Project Manager/Engineer a minimum of 24 hours prior to any work being done and at the final completion of the project or work. Contractor shall notify the Project Manager/Engineer of any obstructions of public or private infrastructures within 48 hours prior to any work being done.

- a. This includes but is not limited to: energized power lines, street lights, cable wires, etc. Contractor shall provide the appropriate number of workers for each location in order to perform the work in a timely uninterrupted manner.

Contractor shall assess site for potential hazards prior to work to ensure a safe working environment for themselves and general public. The Contractor shall block and identify their work zone with cones, barricades or signage in order to prevent pedestrian or vehicular traffic from entering the work area. Contractor shall wear proper personal protective equipment (PPE) that is required by the manufacturer to operate commercial or residential equipment and the application of herbicides (ex: ANSI Z-87.1 approved safety glasses).

Contractor shall adhere to ANSI (American National Standards Institute) A-300 (Tree Care Operations), Z-133, which are the Safety Requirements for Arboricultural Operations and any other Federal or State laws required for the project. The Contractor shall follow all OSHA laws and regulations required for tree care operations. Mandatory first aid kits shall be located on site near the work area. (OSHA 1910.266 App A)

- a. Line clearance tree trimming operations shall follow OSHA's 3 qualification levels for line-clearance tree trimmers. (See OSHA 1910.269(r))
 - i. Unqualified individuals must maintain the minimum approach distances (MAD) of at least ten (10) feet from overhead power lines. (See OSHA 1910.333(c)(3)(i)).

The Contractor shall supply their own barricades, signs, cones and flags if the project requires such items. The Contractor shall follow MUTCD, City and State standards or laws on traffic control if lane restrictions are necessary, the Contractor shall notify the Project Manager/Engineer immediately. Contractor shall park equipment in a safe location inside the right-of-way at all times so that it is not obstructive to the view or flow of pedestrian or vehicular traffic.

Contracts within the right of way: the contractor shall use traffic cones and signage to safely identify truck and trailer or work zone. The Contractor shall yield equipment operations if pedestrian or vehicular traffic is within the identified work area. The Contractor is required to disengage or stop cutting apparatus until pedestrian traffic has exceeded this parameter.

During any operation, Contractor shall take every precaution to avoid residual damage to surrounding property, automobiles and motorists, utilities, infrastructure, pedestrians and plant material. If damage occurs due to Contractor negligence, inability or error, repair and/or replacement of all damaged material and/or all other associated costs will be the sole responsibility of the Contractor. Any equipment operated in a way that is detrimental to public safety or intently causing damage to city, private, or public property may result in termination of contract.

If, at any time, in the opinion of the Project Manager/Engineer, the work is not properly lighted, barricaded, or safe in respect to public travel, persons on or about the work site, the Project Manager/Engineer shall have the right to order such

safeguards to be erected and such precautions to be taken as he/she deems advisable, and the Contractor shall promptly comply with such orders.

The Contractor must act and respond in a professional manner to any public questions or complaints that may arise on site. The Contractor shall maintain written documentation of all claims and information shall include but is not limited to contact information (first/last name, phone number) of those present, approximate time, and brief description of issue. The Contractor shall immediately inform the Project Manager/Engineer of any complaints, claims, property damage, personal injuries, emergency situations or any other similar occurrences.

Contractor shall provide Public Works Representative with any licenses and certifications that are required by State or Federal agencies to perform specialized work. This shall include but is not limited to pesticide license and line clearance certification. Failure to provide the requested documentation may result in disqualification of bid. All certifications and licenses shall be current at the time of the contract award and shall remain current and up to date throughout the contract.

The Contractor shall be responsible for all property damage, including damage resulting from chemicals, caused by any operation. The Contractor shall resolve, in an expeditious manner, all claims arising from their work at no extra cost to the City.

(a) Quality Assurance

Contractor shall have all required items listed in the Bid packet. The Contractor shall provide necessary precautions at all time for the protection of the public, employees and surrounding areas as outlined by federal, state and local regulations. These include, but are not limited to: OSHA, USDA, EPA, INDOT, IDEM, and the City of Fort Wayne.

Contractor shall follow all MUTCD, City and State standards or laws on traffic control if lane restrictions are required. Contractor shall supply all permits. City permits shall be obtained from City of Fort Wayne Public Works Office.

Contractor shall follow the required Warranty Period for plant, shrub or seed replacement and maintenance.

Contractor must submit for approval, proposed seed mixture if not stated in planting plans. Submission of manufacturer's certificates of purity and guarantees of germination in accordance with Indiana Seed Law may be required. All planting material shall meet or exceed the specifications of Federal, State and Local laws requiring inspection for disease and insect control.

Contractor shall provide proof of all certificates or licenses that may be required during the project. The contractor shall provide the project engineer certifications.

All equipment shall be suitable for the project and in good operational condition. It shall be operated by a qualified and trained personnel according to ANSI, the manufacturer's instructions, and OSHA published standards. Equipment must have all required safety devices in place and in operation as required by the manufacturer, OSHA, federal, state and local regulations.

Pesticides used on site shall be registered within the State and have a current EPA registration number. Applications of pesticides shall be done by a licensed applicator or registered technician and follow all Office of Indiana State Chemist (OISC) laws and regulations. Applications of all pesticides must be in strict accordance with the label.

(b) Herbicide Application Requirements, Restrictions and Guidelines

1) Herbicide License Requirements

Herbicides shall be applied by a State of Indiana Licensed Applicator or Registered Technician working under the direct supervision of a licensed applicator. Licensed applicator shall have appropriate herbicide category based on site conditions (*ie Category 5 aquatic pest management for wetland, standing or running water and riprap applications*). Contractor must provide copies of all current licenses/certifications to the Public Works Representative prior to the start of any work being done.

2) Herbicide Application Restrictions and Guidelines

The Contractor shall provide all necessary herbicide materials and equipment which shall comply with applicable Federal, State and local laws regarding application, storage, and handling. Contractor shall have AND wear the appropriate personal protective equipment and clothing as specified on the herbicide manufacturer's label. Contractor must have portable emergency kits and eye wash facilities at the project site. Foliar application equipment shall be calibrated prior to application and in accordance with manufacturer's recommendations.

Contractor shall apply pesticides according to manufacturer's label/instructions and maintain current Safety Data Sheet (SDS) on site at all times for all pesticides utilized. Contractor shall not apply a pesticide in a manner that allows it to drift from the target site in which it causes harm to a non-target area, see Indiana Pesticide Drift Rule (357 IAC 1-12) for full definitions. The Contractor shall avoid off target damage; all damage incurred is the responsibility of the Contractor. If in doubt of application area, contact Public Works Representative.

Herbicide application will be prohibited if plants show physical signs of stress due to environmental conditions such as drought, flooding, nor

prior to or immediately following heavy frost. Herbicide application will be restricted during certain adverse weather conditions such as rain, wind, ice, or snow. Environmental conditions will be determined by Public Works Representative.

The Contractor shall only use herbicides labeled for aquatic use when applications are in or adjacent to standing water, flowing water, or high ground water. This shall include but is not limited to wetlands, ponds, or drainages containing water.

The Contractor is responsible for the proper disposal of all excess materials and mixtures in accordance with Federal, State and local laws, regulations and guidelines. The Contractor is responsible for adhering to any and all other requirements or laws not mentioned above by OISC, OSHA and the EPA.

The Contractor shall maintain a daily written or digital record of all spray applications performed in accordance with the current OISC requirements. Daily records shall include the following data on all herbicide applications and must be given to the Public Works Representative after the completion of the initial treatment and any follow up treatments, Contractor may use chart in appendix D or an approved alternative.

Herbicide brand name	Date, Applicator name, License number
Manufacturer	Air temperature
EPA registration number	Wind speed and direction
Rate of herbicide (oz/gal)	Sun exposure
Total mixture use (gallons)	

3) Mixing and Storing Herbicides

Herbicides shall be stored in a well ventilated, cool, dry area where food and drinks are never stored or prepared. Herbicides should not be stored for any length of time below 40 degrees F. Herbicides shall be stored in an area that has an impermeable surface in order to prevent leaks from reaching the soil. All herbicides shall be inaccessible to the public in a locked container except when they are being removed or used. All herbicide containers shall be labeled to indicate the following:

- a. Herbicide Brand
- b. Active Ingredient

- c. Ratio of mixture
- d. EPA Registration Number

Extreme caution shall be used when mixing herbicides. Contractor/Applicator shall read the label before mixing or using any herbicides.

Contractor/Applicator shall establish a mixing area, which should be preferably either in an industrial sink near the storage site or in an area near the treatment site where damage from small spills would be minimal. Mixing on-site should have relatively few desirable species, not be susceptible to runoff, or be visited by the public. This area should also provide easy access for containment and clean-up of spills.

(c) Spill Response Guidelines

Contractors shall immediately notify the Project Manager/Engineer in the event of a spill.

Contractor must have the appropriate clean-up equipment or spill kits available for use at all times where chemicals are stored, handled, mixed and loaded. Spill kits should include items such as: absorbent pads or dry absorbent, empty bags and shovels.

Contractor must contain and confine the spill, if possible, to prevent additional spilled material from entering waterways or other undesirable areas. Contractor must follow the appropriate protocol IDEM lists for major/minor spills from spill response, notifications and clean up as defined by Indiana Spill Rule 327 IAC 2-6.1-6.

IDEM Emergency Response Hotline: (888)-233-7745.

Minor spills that involve much smaller quantities of hazardous materials shall be treated with just as much caution in terms of personal exposure. For more information see Indiana's Spill Rule: 327 IAC 2-6.1-7 Reportable spills; responsibilities.

Safety precautions and clean up protocol information is usually listed on the herbicide label, SDS sheet or by calling the herbicide manufacture.

(d) Safety

Contractor shall follow all MUTCD, City and State standards or laws on traffic control if lane restrictions are required. Permits shall be obtained from City of Fort Wayne Public Works Office. Contractor shall park truck and trailer in a safe location that is not obstructive to the view or flow of pedestrian or vehicular traffic. Contractor shall use traffic cones to safely identify truck and trailer.

Contractor shall wear proper personal protective equipment (PPE) that is required by equipment manufacturer to operate equipment (ex: ANSI approved safety glasses).

All equipment shall be suitable for the project and in good operational condition. It shall be operated by a qualified and trained personnel according to ANSI, the manufacturer's instructions, and OSHA published standards. Equipment must have all required safety devices in place and in operation as required by the manufacturer, OSHA, federal, state and local regulations.

The Contractor is required to disengage or stop cutting apparatus until pedestrian and vehicular traffic has exceeded the manufacturers recommended distance. Excessive clippings shall not be directed towards pedestrian or vehicular traffic. Excessive clippings shall not be left in curb and channel, roadway, or sidewalk.

Any equipment operated in a way that is detrimental to public safety or intently causing damage to city, private, or public property will result in termination of contract.

(e) Equipment

The Contractor shall have the appropriate commercial equipment; kept in good operating condition. Contractor shall perform a thorough inspection of all equipment before beginning work on City property. This shall include but is not limited to: factory installed safety features, brakes, belts, blades, fluids, accumulated grass, tires, attachments and strings.

If equipment malfunction occurs, the contractor is responsible for the immediate containment and clean-up of any liquid spill (i.e. herbicides, lubricants, oils, etc.). Project Manager/Engineer shall be notified immediately. All vehicles, equipment, and supplies may be stored at a staging area approved by the Project Manager/Engineer.

623.03 VEGATATIVE MOBILIZATION AND DEMOBILIZATION

(a) Description

This item shall consist of all work necessary for the movement of personnel and equipment to and from the project site and for the establishment and removal of all vegetation for the project.

Limitations - For the purpose of payment, the mobilization portion of this item will be limited to 50% of the Unit Cost. The remainder of the item will be considered demobilization. The exact amount will be a portion of the lump sum price which is an even percentage of the bid item, and the balance of the lump sum price will be paid when the contract has been completed and accepted.

(b) Measurement

No measurement will be made.

(c) Basis of Payment

This work will be paid for at the contract lump sum price for vegetative mobilization and demobilization, operations and all work incidentals thereto. This will be paid as a percentage of the progression of the job.

When no price for vegetative mobilization and demobilization is asked for on the proposal form, the cost of the work described above shall be included in the general cost of the contract, with no direct payment for the work.

Payment will be made under:

PAY ITEM	PAY UNIT
Vegetative Mobilization and Demobilization.....	Lump Sum

623.04 PLANTING PLAN

(a) General

Work under this section consists of providing all operations pertaining to furnishing, transporting, and installation of plant material, tree stabilization, and landscape edgings.

PROJECT CONDITIONS

1. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.
2. Interruption of Existing Services or Utilities: Do not interrupt services or utilities to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary services or utilities according to requirements indicated:
 - a. Notify Construction Manager no fewer than two days in advance of proposed interruption of each service or utility.
 - b. Do not proceed with interruption of services or utilities without Construction Manager's written permission.
3. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.
Spring Planting: March 15th – June 30th.
Fall Planting: August 15th – Freeze up.
4. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.
5. Coordination with Turf Areas (Lawns): Plant trees, shrubs, and other plants after finish grades are established and before planting turf areas unless otherwise indicated.

- a. When planting trees, shrubs, and other plants after planting turf areas, protect turf areas, and promptly repair damage caused by planting operations.

(b) Materials

1. DELIVERY, STORAGE, AND HANDLING

- a. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of conformance with state and federal laws if applicable.
 - b. Bulk Materials:
 - i. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
 - ii. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
 - c. Deliver bare-root stock plants freshly dug. Immediately after digging up bare-root stock, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting.
 - d. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.
 - e. Handle planting stock by root ball.
 - f. Store bulbs, corms, and tubers in a dry place at 60 to 65 deg F (16 to 18 deg C) until planting.
 - g. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.
 - i. Heel-in bare-root stock. Soak roots that are in dry condition in water for two hours. Reject dried-out plants.
 - ii. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
 - iii. Do not remove container-grown stock from containers before time of planting.
 - iv. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly-wet condition.

2. PLANT MATERIAL

General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant Schedule or Plant Legend shown on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and

free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.

- a. Trees with damaged, crooked, or multiple leaders; tight vertical branches where bark is squeezed between two branches or between branch and trunk ("included bark"); crossing trunks; cut-off limbs more than 3/4 inch (19 mm) in diameter; or with stem girdling roots will be rejected.
- b. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.
- c. Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if acceptable to Landscape Architect, with a proportionate increase in size of roots or balls.
- d. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.
- e. Labeling: Label at least one plant of each variety, size, and caliper with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for the plant as shown on Drawings.
- f. If formal arrangements or consecutive order of plants is shown on Drawings, select stock for uniform height and spread, and number the labels to assure symmetry in planting.

3. WEED-CONTROL BARRIERS

- a. Nonwoven Geotextile Filter Fabric: Polypropylene or polyester fabric, 3 oz./sq. yd. (101g/sq. m) minimum, composed of fibers formed into a stable network so that fibers retain their relative position. Fabric shall be inert to biological degradation and resist naturally-encountered chemicals, alkalis, and acids.
- b. Composite Fabric: Woven, needle-punched polypropylene substrate bonded to a nonwoven polypropylene fabric, 4.8 oz./sq. yd. (162 g/sq. m).

4. TREE STABILIZATION MATERIALS

- a. Stakes and Guys
 - i. Upright and Guy Stakes: Rough-sawn, sound, new hardwood free of knots, holes, cross grain, and other defects, 2-by-2-inch nominal (38-by-38-mm actual) by length indicated, pointed at one end.

5. MISCELLANEOUS PRODUCTS

- a. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions.

- b. Planter Drainage Gravel: Washed, sound crushed stone or gravel complying with ASTM D 448 for Size No. 8.
- c. Planter Filter Fabric: Woven geotextile manufactured for separation applications and made of polypropylene, polyolefin, or polyester fibers or combination of them.
- d. Mycorrhizal Fungi: Dry, granular inoculant containing at least 5300 spores per lb (0.45 kg) of vesicular-arbuscular mycorrhizal fungi and 95 million spores per lb (0.45 kg) of ectomycorrhizal fungi, 33 percent hydrogel, and a maximum of 5.5 percent inert material.

(c) Construction Requirements

1. EXAMINATION

- a. Examine areas to receive plants for compliance with requirements and conditions affecting installation and performance.
 - i. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
 - ii. Do not mix or place soils and soil amendments in frozen, wet, or muddy conditions.
 - iii. Suspend soil spreading, grading, and tilling operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
 - iv. Uniformly moisten excessively dry soil that is not workable and which is too dusty.
 - v. Proceed with installation only after unsatisfactory conditions have been corrected.
 - vi. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Landscape Architect and replace with new planting soil.

2. PREPARATION

- a. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.
- b. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- c. Lay out individual tree and shrub locations and areas for multiple plantings. Stake locations, outline areas, adjust locations when requested, and obtain Landscape Architect's acceptance of layout before excavating or planting. Make minor adjustments as required.
- d. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks (before wrapping), branches, stems, twigs, and foliage to protect during digging, handling, and transportation.

- i. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.
- ii. Wrap trees and shrubs with burlap fabric over trunks, branches, stems, twigs, and foliage to protect from wind and other damage during digging, handling, and transportation.

3. PLANTING BED ESTABLISHMENT

- a. Loosen subgrade of planting beds to a minimum depth of 6 inches. Remove stones larger than 1-1/2 inches in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
 - i. Apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix.
 - a) Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
 - ii. Spread planting soil mix to a depth of 8 inches but not less than required to meet finish grades after natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
 - a) Spread approximately one-half the thickness of planting soil mix over loosened subgrade. Mix thoroughly into top 4 inches of subgrade. Spread remainder of planting soil mix.
- b. Finish Grading: Grade planting beds to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.
- c. Restore planting beds if eroded or otherwise disturbed after finish grading and before planting.

4. TREE AND SHRUB EXCAVATION

- a. Pits and Trenches: Excavate circular pits with sides sloped inward. Trim base leaving center area raised slightly to support root ball and assist in drainage. Do not further disturb base. Scarify sides of plant pit smeared or smoothed during excavation.
 - i. Excavate approximately three times as wide as ball diameter for balled and burlapped stock.
 - ii. Excavate at least 20 inches for trees and 10 inches for shrubs, wider than root spread.
- b. Tree Grate Wells: Excavate entire area under tree grate to a depth no greater than the height of the rootball plus 6 inches to allow for pea gravel and tree grate. Remove stone and other construction debris. Base of excavated area shall remain as existing soil or will need to be recompacted to support the rootball. Scarify sides of plant pit smeared or smoothed during excavation.
- c. Obstructions: Notify Landscape Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
 - i. Hardpan Layer: Drill 6-inch diameter holes into free-draining strata or to a depth of 10 feet, whichever is less, and backfill with free-draining material.

- d. Drainage: Notify Landscape Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub pits.
 - i. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

5. TREE, SHRUB, AND VINE PLANTING IN PITS OR BEDS

- a. Before planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.
- b. Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.
- c. Set balled and burlapped stock plumb and in center of planting pit or trench with root flare 1 inch (25 mm) above adjacent finish grades.
 - i. Use a mix of 50% topsoil and 50% soil excavated from planting pit for backfill.
 - ii. After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, rope, and wire baskets from tops of root balls and from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
 - iii. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
 - iv. Continue backfilling process. Water again after placing and tamping final layer of soil.
- d. Set container-grown stock plumb and in center of planting pit or trench with root flare 1 inch (25 mm) above adjacent finish grades.
 - i. Use a mix of 50% topsoil and 50% soil excavated from planting pit for backfill.
 - ii. Carefully remove root ball from container without damaging root ball or plant.
 - iii. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
 - iv. Continue backfilling process. Water again after placing and tamping final layer of soil.
- e. When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.

6. TREE, SHRUB, AND VINE PLANTING IN TREE GRATES

- a. Before planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.
- b. Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.
- c. Set balled and burlapped stock plumb and in center of tree grate well with root flare 6 inches below adjacent finished sidewalk grade.
 - i. Use imported topsoil for backfill.
 - ii. After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, rope, and wire baskets from tops of root balls and from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
 - iii. Backfill around root ball in 6 inch layers, tamping to settle soil and eliminate voids and air pockets. Do not over compact. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
 - iv. Continue backfilling process until soil fills the tree grate well completely and is 1 inch below the root flare. Water again after placing and tamping final layer of soil.
 - v. Continue backfilling process. Water again after placing and tamping final layer of soil.
 - vi. Install weed barrier fabric over backfilled soil turning edges up 1 inch on all sides and at trunk. Overlap seams 6 inches.
 - vii. Install 4 inches of clean, washed pea gravel on top of the weed barrier fabric.
 - viii. Install the tree grates so that the seam runs parallel with the street. The grates shall be flush with adjacent sidewalk.

7. TREE, SHRUB, AND VINE PRUNING

- a. Remove only dead, dying, or broken branches. Do not prune for shape.
- b. Prune, thin, and shape trees, shrubs, and vines according to standard professional horticultural and arboricultural practices. Unless otherwise indicated by Landscape Architect, do not cut tree leaders; remove only injured, dying, or dead branches from trees and shrubs.
- c. Prune to retain natural character.
- d. Do not apply pruning paint to wounds.

8. TREE STABILIZATION

- a. Do not stake or guy trees unless specifically required by the Contract Documents, or in the event that the Contractor feels that staking is the only alternative way to keep particular trees plumb.

- i. The Owner's Representative shall have the authority to require that trees are staked or to reject staking as an alternative way to stabilize the tree.
 - ii. Trees that required heavily modified root balls to meet the root quality standards may become unstable. The Owner's Representative may choose to reject these trees rather than utilize staking to temporarily support the tree.
- b. Trees that are guyed shall have their guys and stakes removed after one full growing season or at other times as required by the Owner's Representative. Removal of these support systems shall be at no cost to the owner. Failure to remove the support system may result in rejection at the end of warranty final inspection.
- c. Tree guying shall utilize the tree staking and guying materials specified. Plants shall stand plumb after staking or guying.
 - i. Stakes shall be driven to sufficient depth to hold the tree rigid.

9. PRE-EMERGENT HERBICIDE

- a. Apply pre-emergent herbicide granules to planting areas, per manufacturer's recommendations, immediately prior to mulching.

10. GROUND COVER AND PLANT PLANTING

- a. Set out and space ground cover and plants other than trees, shrubs, and vines as indicated in even rows with triangular spacing.
- b. Use planting soil for backfill.
- c. Dig holes large enough to allow spreading of roots.
- d. For rooted cutting plants supplied in flats, plant each in a manner that will minimally disturb the root system but to a depth not less than two nodes.
- e. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
- f. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
- g. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

11. PLANTING AREA MULCHING

- a. Mulch backfilled surfaces of planting areas and other areas indicated.
 - i. Trees and Tree-like Shrubs in Turf Areas: Apply organic mulch ring of 3-inch (75-mm) average thickness, with 24-inch (600-mm) radius around trunks or stems. Do not place mulch within 2 inches of trunks or stems.
 - ii. Organic Mulch in Planting Areas: Apply 3-inch (75-mm) average thickness of organic mulch over whole surface of planting area, and finish level with adjacent finish grades. Do not place mulch within 2 inches (75 mm) of trunks or stems.

12. EDGING INSTALLATION

Shovel-Cut Edging: Separate mulched areas from turf areas with a 45-degree, 4- to 6-inch- (100- to 150-mm-) deep, shovel-cut edge.

13. PESTICIDE APPLICATION

- a. Apply pesticides and other chemical products and biological control agents in accordance with authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.
- b. Pre-Emergent Herbicides (Selective and Non-Selective): Apply to tree, shrub, and ground-cover areas in accordance with manufacturer's written recommendations. Do not apply to seeded areas.
- c. Post-Emergent Herbicides (Selective and Non-Selective): Apply only as necessary to treat already-germinated weeds and in accordance with manufacturer's written recommendations.

14. CLEANUP AND PROTECTION

- a. During planting, keep adjacent paving and construction clean and work area in an orderly condition.
- b. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.
- c. After installation and before Substantial Completion, remove nursery tags, nursery stakes, tie tape, labels, wire, burlap, and other debris from plant material, planting areas, and Project site.

15. DISPOSAL

Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.

16. PLANT MAINTENANCE

- a. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings. Spray or treat as required to keep trees and shrubs free of insects and disease.
- b. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
- c. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.

17. MAINTENANCE SERVICE

- a. Initial Maintenance Service for Trees and Shrubs: Provide maintenance by skilled employees of landscape Installer. Maintain as specified above. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established but for not less than maintenance period below.
 - i. Maintenance Period: 12 months from date of Substantial Completion.
- b. Initial Maintenance Service for Ground Cover and Other Plants: Provide maintenance by skilled employees of landscape Installer. Maintain as specified above. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established but for not less than maintenance period below.
 - i. Maintenance Period: 12 months from date of Substantial Completion.

18. FINAL ACCEPTANCE

When plantings have been maintained and established after the 12 month maintenance period. Plantings shall be healthy, well-rooted, fully branched, even-colored, free of weeds and pests. If more than 25% of the plant is unhealthy or dead, the plant shall be replaced under warranty.

- a. Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.
 - i. Failures include, but are not limited to, the following:
 - a) Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner, or incidents that are beyond Contractor's control.
 - b) Structural failures including plantings falling or blowing over.
 - c) Faulty performance of tree stabilization and/or tree grates.
- b. Warranty Periods from Date of Substantial Completion:
 - i. Trees: 2 years.
 - ii. Shrubs, Vines, and Ornamental Grasses: 12 months.
 - iii. Ground Covers, Biennials, Perennials, Bulbs and Other Plants: 12 months.
 - iv. Include the following remedial actions as a minimum:
 - a) Immediately remove dead plants and replace unless required to plant in the succeeding planting season.
 - b) Replace plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
- c. A limit of one replacement of each plant will be required except for losses or replacements due to failure to comply with requirements.
- d. Provide extended warranty for period equal to original warranty period, for replaced plant material.

(d) Method of Measurement

The measurement of plantings shall be per each plant. This shall include all materials, transportation, installation, and maintenance. Prices for material shall include delivery. No additional delivery charges will be allowed.

(e) Basis of Payment

Plantings will be paid for at the contract unit price per cubic yard for the type specified.

Payment will be made under:

Pay Items	Units
4" caliper B&B tree.....	EA
3" caliper B&B tree.....	EA
2" caliper B&B tree.....	EA
1.5" caliper B&B tree.....	EA
6' min. height evergreen tree.....	EA
8' min. height evergreen tree.....	EA
10' min. height evergreen tree.....	EA
15' min. height evergreen tree.....	EA
5 gallon container shrub.....	EA
3 gallon container shrub.....	EA
2 gallon container shrub.....	EA
2 gallon herbaceous plant.....	EA
1 gallon herbaceous plant.....	EA
1 quart herbaceous plant.....	EA
Plug-sized herbaceous plant.....	EA
Bulb.....	EA

623.05 TOPSOIL

(a) Description

Work under this section consists of providing all operations pertaining to furnishing, transporting, and spreading of topsoil.

(b) Materials

- 1) Brown topsoil shall be used unless otherwise specified by the project plans or by the Project Manager/Engineer. Brown topsoil shall be classified as a clay loam soil based on the soil textural classification provided by USDA-NRCS. Topsoil shall contain the following; 25-40% clay, 25-40% silt, and 20-40% sand. The pH value shall be between 6.2 to 7.6 and have organic matter content value of 2% to 5%. Testing for pH value shall be performed in accordance with AASHTO T 289.

Brown topsoil shall consist of loose friable soil, free of refuse, stumps, large roots, rocks over 1.0 inch in diameter, brush, weeds, sticks, litter

or other material which would be detrimental to the proper development of vegetative growth. It shall be capable of supporting normal vegetation as demonstrated by the growth of healthy vegetation on it. It shall not be taken from a source known to contain any of the noxious weeds defined as such in the Indiana State Seed Law, IC 15-4-1. The topsoil shall be inspected and tested by the Project Manager/Engineer before approval will be granted for its use. The Contractor shall furnish soil analysis test reports if requested.

- 2) Agricultural limestone: May be added to topsoil upon approval, in order to raise the pH to meet specification requirements. The addition of agriculture limestone shall be determined based on tests performed by a laboratory approved by the Office of Geotechnical Services.

Topsoil shall not be worked when frozen or when moisture exceeds soil infiltration capacity. If requested the contractor shall submit samples of the topsoil for approval and analysis at the expense of the contractor.

(c) Construction Requirements

All hard surface construction shall be completed prior to topsoil placement. Prior to placing material, the contractor must clear site of all rocks, sticks, stumps, soil fragments and clods larger than one and a half inches in diameter, and all other foreign material or irregularities.

Areas that topsoil is to be incorporated shall be tilled or disc to a depth of four to eight inches before placing material. On slopes steeper than 3:1, depth of cultivation may be reduced as directed by the Project Manager/Engineer.

Contractor shall apply an even and uniform layer of topsoil layer that settles to the depth specified by the project plans or by the Project Manager/Engineer. The top soil shall then be spread to a sufficient depth to produce the thickness specified after it has been compacted lightly with an approved roller, tamping device, or other method. It shall be in accordance with the finished grade and cross section shown on the plans or as otherwise designated by the Project Manager/Engineer. Soil shall not be spread when the ground is frozen, excessively wet, or otherwise in a condition detrimental to the work.

Contractor shall clean up any debris or soil that has been spilled or accidentally blown into areas other than the specified work area. This may include but is not limited to: the roadway, the curb, sidewalk, trail, driveway, and yard. Soil shall not cover or smother landscaped plants/vegetation. Soil shall be kept 6.0-10.0 inches away from the base of trees and shrubs. Contractor shall not place soil on trunk or trunk flare of trees.

1) Blown/Slung Topsoil

When required or when applicable, topsoil shall be blown or applied using a slinger truck for efficiency purposes.

a) Application: Contractor shall spread soil by machine, uniformly across the landscaped area or project area. If machine equipment is unable to access landscape/project area, other methods shall be approved by the Public Works Representative. Contractor shall follow all other soil requirements for this application method.

(d) Method of Measurement

The measurement of topsoil shall be per cubic yard or tons as noted. This shall include all cultivating, materials, and transportation. Prices for material shall include delivery. No additional delivery charges will be allowed.

(e) Basis of Payment

Topsoil will be paid for at the contract unit price per cubic yard for the type specified.

Payment will be made under:

Pay Items	Units
Topsoil.....	CYS
Topsoil.....	TONS

623.06 HARDWOOD MULCH

(a) General

Mulching is the application of a uniform layer of organic material over areas to reduce certain environmental factors including but not limited to weed suppression, soil moisture management, and prevention of soil erosion. Mulch shall consist of shredded hardwood mulch as specified by the project plans. Material shall be uniform in size, color, quality and overall appearance.

(b) Materials

Hardwood mulch shall be double shredded hardwood. It shall range in size, from three (3) inches maximum length, (1/2) inch minimum. Mulch shall be natural in color and shall not be colored or dyed unless specified by the project specifications or by the Project Manager/Engineer. Mulch shall be free of weeds and invasive plant species parts or seeds listed in Indiana Seed Law (IC 15-15-1). Mulch shall also be free of sawdust, dirt, twigs, excessive bark, litter, rocks or any other debris.

(c) Construction Requirements

Mulch shall not cover or smother landscaped plants/vegetation. Contractor shall apply and spread a layer that settles to a uniform depth indicated by the project plans or Project Manager/Engineer. Mulch shall be kept (6.0-10.0) inches away from the base of trees and shrubs. Contractor shall not place mulch on trunk or trunk flare of trees. Contractor shall clean up any debris or mulch that has been spilled or accidentally blown into areas other than the specified work area. This may include but is not limited to: the roadway, the curb, sidewalk, trail, driveway, and yard.

Contractor shall clean up any debris or mulch that has been spilled or accidentally blown into areas other than the specified work area. This may include but is not limited to: the roadway, the curb, sidewalk, trail, driveway, and yard. Mulch shall not cover or smother landscaped plants/vegetation.

1) Blown Hardwood Mulch

Mulch shall be applied using a mulch blowing truck for efficiency purposes.

a) Application: Contractor shall spread mulch by machine, uniformly across the landscaped area or project area. If machine equipment is unable to access landscape/project area, other methods shall be approved by the Public Works Representative. Contractor shall follow all other hardwood mulch requirements for this application method.

(d) Method of Measurement

The measurement of hardwood mulch shall be per cubic yard. This shall include all cultivating, materials, and transportation.

(e) Basis of Payment

Hardwood mulch will be paid for at the contract unit price per cubic yard for the type specified. Payment will be made under:

Pay Items	Units
Hardwood Mulch.....	CYS

623.07 SEEDING

(a) Description

Contractor shall perform all operations under this section which shall consist of all labor, equipment, and materials necessary to complete the specified task.

The Contractor shall handle all seed in a manner that will insure protection from moisture, heat, or other conditions that would jeopardize viability or cause germination before installation.

Turf Grass and Native seed in the quantities and varieties required shall be furnished full-tagged and delivered in properly designated packages or bags as directed. Seeds shall be in accordance with the following requirements. Seeds shall contain none of the prohibited noxious weeds listed in 360 IAC 1-1-5 or any that are listed in the Acts of the General Assembly of the State. Restricted noxious weed seed listed in 360 IAC 1-1-6 shall not exceed 0.25% by weight in accordance with IC 15-15-1-32.

To seed at times other than the ones listed below, requires approval by Engineer/Project Manager.

(a) Regular Seeding Season

- Spring-March 1-June 1
- Fall- August 15-October 30
- Optimum seeding time is September to mid-October
- Summer seeding between June and August 15 are at the contractor's risk. Dry and hot weather difficulties are the responsibility of the Contractor.

(b) Materials

1) Seed Types

PARK MIX

The intended use for this mix is to establish a durable turf that tolerates common roadside pollutants, sidewalk salt, moderate use, and frequent mowing management. This mix is typically planted in park strips near residential housing or park areas. Seeding rate is 6 lbs. per 1,000 sq. ft. The contractor shall use Park Mix or approved proprietary equivalent. All seed must follow set seed requirements by law for the State of Indiana pertaining to but not limited to noxious weeds, germination, and testing requirements.

- 40% 'IQ' Perennial Ryegrass
- 30% 'Boreal' Creeping Red Fescue
- 30% 'Appalachian' Kentucky Bluegrass

NO-MOW MIX

The intended use for this mix is to establish a durable turf that tolerates common roadside pollutants, road salt, and mown twice a year. This mix is typically utilized on gradual slopes, level ground, or areas that infrequent mowing is tolerated. Seeding rate is 6 lbs. per 1,000 sq. ft. The contractor shall use Links Mix or approved proprietary equivalent. All seed must follow set seed requirements by law for the State of Indiana pertaining to but not limited to noxious weeds, germination, and testing requirements.

- 25% 'Jetty' Hard Fescue
- 25% 'Heathlands' Chewings Fescue
- 25% 'Marco Polo' Sheeps Fescue
- 25% 'Orbit' Creeping Red Fescue

INDIANA ROADSIDE MIX

The intended use for this mix is to establish a durable turf that tolerates common roadside pollutants, road salt, and a monthly mowing management schedule. This mix is typically used along non-residential and non-curb areas. Seeding rate is 4 lbs. per 1,000 sq. ft. The contractor shall use IN DOT R seed mix, IN Roadside Mix or approved proprietary equivalent. All seed must follow set seed requirements by law for the State of Indiana pertaining to but not limited to noxious weeds, germination, and testing requirements.

55%	'Kentucky 31' Tall Fescue
38%	'IQ' Perennial Ryegrass
6%	'Orbit' Creeping Red Fescue

SOD OVERSEED MIX

The intended use for this mix is aid in establishment of installed sod. This mix is only to be utilized as an over seeding to establishing sod, and is not intended as an alternative to other seed mixes. Seeding rate is 3 lbs. per 1,000 sq. ft. The contractor shall use Execu-Turf Premium Sod Blend or approved proprietary equivalent. All seed must follow set seed requirements by law for the State of Indiana pertaining to but not limited to noxious weeds, germination, and testing requirements.

20%	'Jackpot' Kentucky Bluegrass
20%	'Beyond' Kentucky Bluegrass
20%	'Arrowhead' Kentucky Bluegrass
20%	'Midnight' Kentucky Bluegrass
20%	'Impact' Kentucky Bluegrass

TEMPORARY SEED

Temporary seed shall be addressed in areas that remain inactive for more than 15 days, or as agreed to by the Contractor and the Engineer/Project Manager. The area will be considered inactive when no meaningful work toward accomplishing a pay item has been performed at a site of disturbed soil. Temporary seed will be approved for use by visual inspection of the Engineer/Project Manager. Temporary seed may be purchased from any commercial source provided the seed's package is clearly marked and labeled by the manufacturer as to its content and weight. Stabilization methods shall be as shown in the SWQCP. It shall be used for surface stabilization and temporary ground cover. It is not intended to be used as permanent seed mixture. This mixture shall not be used to satisfy the requirements of the warranty bond. Temporary seed and ground cover shall be used in accordance with the requirements below. **When installing Native seed, seed oats shall be the only cover crop used.**

- A. Special Projects (High Visibility)-At the discretion of the Engineer/Project Manager, the specified Park Mix or approved equivalent shall be used.

Park Mix	Application Rate, PLS
40% 'IQ' Perennial Ryegrass	3lbs/acre
30% 'Boreal' Creeping Red Fescue	
30% 'Appalachian' Kentucky Bluegrass	

B. Spring Cover Crop (March 15th-May 15th)

Common Name	Botanical Name	Application Rate, PLS	
Common Oat (Seed Oats)	<i>Avena sativa</i>	Slope >4:1 = 32lbs/acre	Slope < 4:1 = 64lbs/acre
Annual Rye	<i>Lolium multiflour</i>	Slope > 4:1 = 15 lbs/acre	Slope < 4:1 = 15lbs/acre

C. Summer Cover Crop (May 15th-September 15th)

Common Name	Botanical Name	Application Rate, PLS	
Common Oat (Seed Oats)	<i>Avena sativa</i>	Slope >4:1 = 32lbs/acre	Slope < 4:1 = 64lbs/acre

D. Fall Cover Crop (Sept. 15th- October 31st)

Common Name	Botanical Name	Application Rate, PLS	
Common Oat (Seed Oats)	<i>Avena sativa</i>	Flat= 64lbs/acre	Slope < 4:1 = 64lbs/acre
Annual Rye	<i>Lolium multiflour</i>	Flat= 15 lbs/acre	Slope < 4:1 = 15lbs/acre

E. Winter Cover Crop (Nov. 1st- March 15th)

Common Name	Botanical Name	Application Rate, PLS	
Winter Wheat	<i>Triticum sp.</i>	Flat= 64lbs/acre	Slope < 4:1 = 64lbs/acre
Annual Rye	<i>Lolium multiflour</i>	Flat= 11 lbs/acre	Slope < 4:1 = 15lbs/acre

WETLAND MIXTURE

This seed mixture is intended for specific areas that are seasonally or regularly inundated with water for extended periods of time. It acts as a naturally occurring filtration system and slows immediate flooding within a given area. This seed mixture will be determined by the Right of Way Manager. This seed mixture will be designed based on site specific soil type, soil moisture, sun exposure, and desired plant community of the project. If certain species in this mix are

unavailable, substitutions may be allowed when approved by the Right of Way Manager.

NATIVE FLOODPLAIN MIXTURE

This seed mixture is intended for areas that require natural habitat restoration below the 100 year floodplain in conjunction with IDNR Construction in a Floodway permit and Floodway Habitat Mitigation. If certain species in this mix are unavailable, substitutions may be allowed with prior approval of the Project Manager. This mix quantity shall be measured in pure live seed, PLS, pounds per acre. Fertilizer shall not be applied with this seed mixture.

NATIVE FLOODPLAIN SEED MIX		
GRAMINOIDS		
Botanical Name	Common Name	Oz/Acre
<i>Carex frankii</i>	Frank's Sedge	3
<i>Carex granularis</i>	Meadow Sedge	1
<i>Carex lupulina</i>	Common Hop Sedge	2
<i>Carex muskingumensis</i>	Palm Sedge	1
<i>Carex grayi</i>	Burr Sedge	2.5
<i>Carex normalis</i>	Spreading Oval Sedge	0.5
<i>Carex vulpinoidea</i>	Pointed Oval Sedge	1
<i>Elymus riparius</i>	Riverbank Wild Rye	16
<i>Elymus virginicus</i>	Virginia Wild Rye	48
<i>Glyceria striata</i>	Fowl Manna Grass	2
<i>Leersia oryzoides</i>	Rice Cut Grass	2
<i>Panicum virgatum</i>	Switch Grass	1
<i>Scirpus atrovirens</i>	Dark Green Rush	1
Total		81
FORBS		

Botanical Name	Common Name	Oz/Acre
<i>Asclepias incarnata</i>	Swamp Milkweed	1
<i>Asclepias syriaca</i>	Common Milkweed	2
<i>Bidens cernua</i>	Nodding Beggarstick	2
<i>Helenium autumnale</i>	Autumn Sneezeweed	3
<i>Heliopsis helianthoides</i>	False Sunflower	2
<i>Lobelia siphilitica</i>	Great Blue Lobelia	0.5
<i>Lycopus americanus</i>	Water Horehound	1
<i>Mimulus ringens</i>	Monkey Flower	0.5
<i>Rudbeckia laciniata</i>	Green-Headed Coneflower	1
<i>Senna hebecarpa</i>	Wild Senna	2
<i>Silphium perfoliatum</i>	Cupplant	3
<i>Solidago gigantea</i>	Late Goldenrod	1.5
<i>Symphyotrichum novae-angliae</i>	New Englad Aster	1
<i>Symphyotrichum puniceum</i>	Swamp Aster	2
<i>Verbena hastata</i>	Blue Vervain	2
<i>Verbesina alternifolia</i>	Wingstem	2
Total		26.5
COVER CROP		
Botanical Name	Common Name	Oz/Acre
<i>Avena sativa</i>	Annual Seed Oats	512

2) Fertilizer

Fertilizer shall be of standard commercial types supplied separately or in mixtures and furnished in moisture-proof containers. Each container shall be marked

with manufacture's label of the contents and percentages of ingredients contained therein. Fertilizer shall be of a 19-19-19 analysis or approved equal uniform in composition, free flowing, and suitable for application with approved equipment. Tests will not be required, but fertilizer standards shall be governed by the rulings of the Indiana State Seed Commissioner. Any fertilizer, which becomes unsuitable for use, for whatever reason, will not be accepted.

3) Straw Mulch

Contractor shall mulch all seeded areas within 24 hours with weed free straw mulch that has been approved by the North American Weed Free Forage Certification Program and/or Indiana Crop Improvement Association, or an approved equivalent. It shall be dry, clean, and mildew-free. Contractor shall mulch evenly across the seeded area leaving no excessive bare spots or mulch greater than a depth of ½". The straw mulch shall cover approximately 75% of seeded area. Once mulch has been applied, all areas seeded should be firmly pressed into soil using a cultipacker or equivalent equipment.

4) Wood Cellulose Fiber (Hydro Mulch)

Wood cellulose fiber mulch shall be made from wood chip particles manufactured particularly for discharging uniformly on the ground surface when disbursed by a hydraulic water sprayer. It shall remain in uniform suspension in water under agitation and blend with grass seed, and fertilizer when allowed, to form homogeneous slurry. The mulch fibers shall intertwine physically to form a strong moisture holding mat on the ground surface. The mulch shall be heat processed so as to contain no germination or growth inhibiting factors. It shall be non-toxic and colored green. The percent of moisture content shall be determined below, except material containing more than 15% will be rejected. The ash content shall not exceed 1.5%. One hundred grams of oven dried material saturated in water, drained, and weighed shall hold a minimum of 1,000 grams of water.

Wood / Cellulose Fiber Blend Hydraulic Mulch (HM) with Tackifier - HM shall be 100% biodegradable, made in the United States and composed of 100% recycled processed wood fibers, cellulose fibers and wetting agents (including high-viscosity colloidal polysaccharides). Wood Fiber / Cellulose Fiber Blend with Tackifier (such as Second Nature® Wood Fiber Blend PLUS or approved equivalent) shall be pre-packaged by the Manufacturer to assure both material performance and compliance. Do not apply if moisture has exceeded the infiltration capacity of the soil or substrates. Do not apply if excessive precipitation is anticipated within 24-48 hours.

The percent of moisture shall be determined at the time the mulching material is weighed. Facilities shall be provided for weighing in accordance with 109.01(b). Arrangements shall be made in advance so that the percent of moisture will be determined at the time of weighing and that the weight of the material will be

checked. Moisture content of the mulch will be determined on the basis of air dry weight as follows:

$$\text{Moisture Content \%} = \frac{\text{Wet Weight of sample} - \text{Air Dry Weight of sample}}{\text{Air Dry Weight of Sample}} \times 100$$

The gross, or wet, weight of mulching material furnished and placed will be paid for if the moisture content does not exceed 10%. If the moisture content exceeds 10%, the weight to be paid for will be the gross, or wet, weight minus the weight of excess moisture computed as follows:

$$\text{Weight to be paid for} = G \times \frac{110}{(100 + M)}$$

G = Gross, or wet, weight of mulching material

M = Moisture content, %, in the mulching material to the nearest 0.5%.

Mulching material which contains more than 50% moisture will be rejected. Wood cellulose fiber mulch containing more than 15% moisture will be rejected.

5) Erosion Control Blanket

The Contractor shall use an erosion control blanket specified in project plans or by the Project Manager/Engineer that meets soil stabilization requirements based on slope, inundation and rate of drainage flow. On slopes steeper than 3:1, or when specified, the following methods or an approved equal shall be used. Erosion control blanket shall be anchored by 11 gauge U-shaped staples. Staple length shall be determined by soil type. Staple installation and staple pattern shall follow manufacturer's recommendation based on site slopes, soil types, and water flow.

a. EroNet S75 Erosion Control- Soils that are level to nearly level or equal to or less than 3:1

i. The short-term single net erosion control blanket shall be a machine produced mat of 100% agricultural straw with a functional longevity of up to 12 months. (NOTE: functional longevity may vary depending upon climatic conditions, soil, geographical location, and elevation). The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with a lightweight photodegradable polypropylene netting having an approximate 0.50 x 0.50 in. (1.27 x 1.27 cm) mesh. The blanket shall be sewn together on 1.50 inch (3.81 cm) centers with degradable thread. The blanket shall be manufactured with a colored

thread stitched along both outer edges (approximately 2-5 inches [5-12.5 cm] from the edge) as an overlap guide for adjacent mats.

b. EroNet S150 Erosion Control Blanket- Soils that are level to nearly level or equal to or less than 2:1.

i. The short-term double net erosion control blanket shall be a machine produced mat of 100% agricultural straw with a functional longevity of up to 12 months. (NOTE: functional longevity may vary depending upon climatic conditions, soil, geographical location, and elevation). The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top and bottom sides with a lightweight photodegradable polypropylene netting having an approximate 0.50 x 0.50 in. (1.27 x 1.27 cm) mesh. The blanket shall be sewn together on 1.50 inch (3.81 cm) centers with degradable thread. The blanket shall be manufactured with a colored thread stitched along both outer edges (approximately 2-5 inches [5-12.5 cm] from the edge) as an overlap guide for adjacent mats.

c. VMAX C350 Turf Reinforcement Mat -Soils that are on slopes equal to or greater than 1:1 or experience rapid and significant inundation.

i. The composite turf reinforcement mat (C-TRM) shall be a machine-produced mat of 100% coconut fiber matrix incorporated into permanent three-dimensional turf reinforcement matting. The matrix shall be evenly distributed across the entire width of the matting and stitch bonded between super heavy duty UV-stabilized nettings with 0.50 x 0.50 in. (1.27 x 1.27 cm) openings, an ultra heavy duty UV-stabilized, dramatically corrugated (crimped) intermediate netting with 0.5 x 0.5 in. (1.27 x 1.27 cm) openings, and covered by a super heavy duty UV-stabilized nettings with 0.50 x 0.50 in. (1.27 x 1.27 cm) openings. The middle corrugated netting shall form prominent closely spaced ridges across the entire width of the mat. The three nettings shall be stitched together on 1.50 in. (3.81 cm) centers with UV-stabilized polypropylene thread to form permanent three-dimensional turf reinforcement matting. All mats shall be manufactured with colored thread stitched along both outer edges as an overlap guide for adjacent mats.

d. Erosion Control Blanket Anchor

i. A 6" u-shape sod staple or an approved alternative shall be used in soils that are considered to be Clay or loam. A 8" u-shape sod staple or an approved alternative shall be used in soils considered to be sand. Other anchor types shall be approved by Project Manager/Engineer prior to installation.

6) Water

- a. Water used for plant establishment shall be from a clean water source, not a free flowing system such as a drainage ditch, river, or creek. Water shall be free of impurities, debris, excessive silt, sand, or clay. Water shall contain no pollutants, excessive salts, or excessive sodium that are detrimental to plant health and growth.
- b. The contractor may also apply for a temporary water meter through City Utilities. An online application is available at:

<https://eforms.acfw.net/iFiller/iFiller.jsp?fref=8ec7098186e9419c403c12f817ffff09>

(c) Construction Requirements

1) Seed

Turf Seed

Turf seeding shall be done at the time designated by the Project Manager/Engineer; the recommended seeding dates are from March 1st to June 1st and from August 15th to October 30th. Seeding during any other time shall be considered as a temporary seeding; unless specified by Engineer/Project Manager. All seeded areas shall be straw mulched within 24 hours after seeding. No seed shall be installed during high winds or if the soil infiltration capacity has been exceeded and surface ponding is observed. Seed shall be installed on a firm seedbed and applied at the specified seeding rate. Should the Engineer or Project Manager determine that the site conditions are not suitable for planting, the Contractor shall postpone work until site conditions improve.

Turf seed germination occurs from 14 to 21 days after initial installation. If seeding area has less than 85% vegetative cover 30 days after initial installation the contractor shall amend with additional seed. Prior to amending the seeding areas the soil surface shall be lightly scarified, then seed applied at specified seeding rate, and firmly pressed into soil for soil seed contact. If seed amending is to occur past September 30th, then contractor shall amend areas the following approved seeding start date. Turf grass conditions will not be accepted if there is a poor or thin stand; improper application of sod, dead grass or sod, improper fertilizer application, and the presence of persistent weeds established in turf areas.

The Contractor shall guarantee a good stand of turf in seeded areas by watering, regrading, and reseeding eroded areas and otherwise maintaining all seeded areas until final acceptance. Any areas which do not show a uniform stand or have bare spots shall be reseeded at the Contractor's expense with the same seed mixture as originally used thereon and such reseeding shall be repeated until all affected areas are covered with a uniform stand of turf.

Turf seed will be considered expired 15 months after the date it was tested.

Expired seed shall not be installed.

Native Seed

Native seed mixtures are intended for areas that require natural habitat restoration or natural enhancement. This may include but is not limited to pond edges, wetlands, prairie, woodland, and riparian areas. The seed mixtures will be determined by the Project Manager and will be designed based on site specific soil type, soil moisture, sun exposure, and desired plant community of the project. Native seed shall be purchased from lot for which test results are provided. If certain species in this mix are unavailable, substitutions may be allowed with prior approval by the Project Manager. Native seeding shall be done at the time designated by the Engineer/Project Manager; the recommended seeding dates are prior to June 30th.

The Contractor shall use only native seed mixtures that DO NOT contain hybrids or cultivars of species specified. The Contractor shall use local genotype seed whenever possible due to its adaptation to local soil and climate. The Contractor shall use native seed source identified through the Indiana Crop Improvement Association, Yellow Tag Certification Program ([www .indianacrop .org](http://www.indianacrop.org)). If specified species are not available through the Yellow Tag Certification Program, seed lots may be used if seed origin, NOT production origin, is within a radius of 350 miles from Fort Wayne, Indiana and is approved by the Project Manager prior to installation. The Contractor shall provide written documentation from the Indiana Seed Commissioner that all seed lots meet Indiana Seed Laws prior to installation. Each bag or container of seed shall have a printed tag or label providing all of the information required by IC 15-15-1-32. Seed from bags with no labels, illegible labels, or with labels not giving all of the required information will not be accepted. The seed supplier shall provide certification that lists the seed lots used in the mixture and shall indicate that the seed mixture supplied meets the contract requirements for the specific contract that the particular seed mixture is supplied. Also, as part of the certification, the seed supplier shall provide a copy of the State Seed Commissioner's letter for the seed mixture that shows that each seed lot has been tested and found to be satisfactory. The specific test results for each seed lot shall also be attached to certification.

The Contractor shall ensure that seed amounts be specified as PLS (pure live seed) . Actual amounts used on the project will vary with the actual percent of PLS of the seed lot. The Contractor shall provide documentation from seed vendor for each seed mixture stating the botanical and common name, percentage by weight of each species and proof of PLS testing and adjustment of the seed weights to provide the amount of pure live seed specified.

The Contractor shall provide seed tests per seed lot of each species used and

must follow the State of Indiana seed law requirements for native seeds (<https://www.oisc.purdue.edu/index.html>). The Contractor shall supply seed shipped, stored, and handled in a manner that will insure protection from moisture, heat, or other conditions that would jeopardize viability or cause germination before installation. The Contractor shall apply all native seed mixes with seed oats (*Avena sativa*) as a cover crop. The Contractor shall not use winter rye, grain rye, or winter wheat as a cover crop, under any circumstances. These plants produce toxins that inhibit native seed germination.

Fertilizer or lime shall NOT be applied when installing native seed under any circumstances. No seed shall be installed during high winds or if the soil infiltration capacity has been exceeded and surface ponding is observed. Seed shall be installed on a firm seedbed and applied at the specified seeding rate. Should the Engineer or Project Manager determine that the site conditions are not suitable for planting, the Contractor shall postpone work until site conditions improve.

Native seed will be considered expired 12 months after the date it was tested. Expired seed shall not be installed.

2) Application

Soil Preparation

The area to be seeded shall be made smooth and uniform and shall be in accordance with the finished grade and cross section shown on the plans or as otherwise designated by the Project Manager/Engineer. All hard surface construction shall be completed prior to soil preparation.

Areas that topsoil is to be incorporated shall be tilled or disc to a depth of four to eight inches before placing material. On slopes steeper than 3:1, depth of cultivation may be reduced as directed by the Project Manager/Engineer. Prior to placing material, the contractor must clear site of all rocks, sticks, stumps, soil fragments and clods larger than one and a half inches in diameter, and all other foreign material or irregularities, which may prevent or interfere with all seeding operations(i.e. erosion control blankets).

If as a result of rain, erosion occurs, ruts or depressions exist; the soil shall be worked again until level and smooth. In addition as a result of rain, a crust forms on soil surface, or if eroded places, ruts or depressions exist, the contractor shall rework the soil until it is smooth. Areas that are reworked shall be re-seeded.

The contractor shall incorporate specified fertilizer prior to the addition of topsoil. The application of new topsoil will then be applied. The contractor shall provide 3 inches of topsoil for entire area to be seeded. The topsoil shall be spread to a sufficient even depth specified in accordance with the finished grade and cross section shown on the plans or as otherwise designated by the Project Manager/Engineer. The top soil shall then be spread to a sufficient depth to produce the thickness specified after it has been compacted lightly with an approved roller, tamping device, or other method.

3) Fertilizer

Fertilizer shall be of standard commercial types supplied separately or in mixtures and furnished in moisture-proof containers. Each container shall be marked with manufacture's label of the contents and percentages of ingredients contained therein.

The contractor shall incorporate fertilizer during the soil preparation into the top 4" inches. The fertilizer shall be applied at the rate of 5 lbs per 1,000 sq. feet. Fertilizer shall be of a 19-19-19 analysis or approved equal uniform in composition, free flowing, and suitable for application with approved equipment. Tests will not be required, but fertilizer standards shall be governed by the rulings of the Indiana State Seed Commissioner. Any fertilizer, which becomes unsuitable for use, for whatever reason, will not be accepted.

If directed by the Project Manger/Engineer or is required, another fertilizer application of a 19-19-19 analysis or approved equal shall be done as a top dressing between September 15th through October 15th at a rate of 5 lbs per 1,000 sq.ft.

4) Application Methods

a. Hydraulic Method

All hydroseeding shall comply with manufacturer's installation instructions and recommendations. It shall contain a tack additive to help prevent erosion of topsoil, mulch, and seed material. Wood cellulose fiber may be used where mulched seeding is specified. Wood cellulose fiber mulch shall be placed at the rate of 1 ton/ac within 24 h after seeding operations have been completed. Application shall be by hydraulic mulching and consist of mixing wood cellulose fiber mulch and grass seed with water. It shall be mixed in standard hydraulic mulching equipment to form a homogeneous slurry. The slurry shall be sprayed, under pressure, uniformly over the soil surface. The hydraulic

mulching equipment shall contain a continuous agitation system that keeps all materials in uniform suspension throughout the mixing and distribution cycles.

If hydraulic mulch is installed on or after May 1 and on or before August 15, the contractor is responsible to irrigate hydraulic mulch area. The contractor shall irrigate four to seven days after initial installation and continue to irrigate, as needed, until uniform emergence has occurred and turf is approximately two inches in height.

b. Mechanical Methods

An approved mechanical method which shall place the seed in direct contact with the soil may be used. This may include a broadcast seeder, drill seeder or cultipacker seeder. Broadcast seeding is preferred over drill seeding on graded, bare soil sites. The Contractor shall calibrate all seeding equipment, whether broadcast or drilled, to deliver the seed at the rates and proportions specified in the plans. The Contractor shall acquire bulk weight per acre from the seed vendor for calibration. The Contractor shall calibrate or check calibrations at least twice a day to ensure seed is being applied at proper rate per acre. Seed shall be applied uniformly over the entire project area. Following the seeding, the Contractor shall then press seed into the surface using a cultipacker, roller, or other approved equipment.

For drill seeding native seed, the Contractor may use a rangeland type no-till drill designed to plant native grasses and forbs in bare soils. Acceptable drills are manufactured by Truax, Great Plains, and John Deere, Inc. Where determined by the Engineer/Project Manager, cultipacking or rolling before seeding may be required by the Contractor to prevent seed placement depths exceeding $\frac{1}{4}$ inch. The Contractor shall NOT substitute Hydro-seeding for drill seeding.

c. Hand Method

In places inaccessible to mechanical equipment, or where the area to be seeded is small, a hand operated seeder or other approved equipment may be used. Rates shall be twice that of other methods and the application shall be applied with a minimum of two passes over the areas to be seeded in order to assure uniform coverage of all seeded surfaces.

5) Erosion Control Blanket Installation

a. Slope Installation (See Figure 1&2)

- i. Prepare soil before installing Rolled Erosion Control Products (RECPs), including any necessary application of lime, fertilizer and seed.

- ii. Begin at the top of the slope by anchoring the RECPs in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench with approximately 12 in. (30 cm) of RECPs extended beyond the upslope portion of the trench. Anchor the RECPs with a row of staples/stakes approximately 12 in. (30 cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12 in. (30 cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately 12 in. (30 cm) apart across the width of the RECPs.
- iii. Roll the RECPs down or horizontally across the slope. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations.
- iv. The edges of parallel RECPs must be stapled with an approximately 2 in.-5 in. (5-12.5 cm) overlap depending on the RECP type.
- v. Consecutive RECPs spliced down the slope must be end-over-end (shingle style) with an approximate 3 in. (7.5 cm) overlap. Staple through overlapped area, approximately 12 in. (30 cm) apart across entire RECPs width.*

NOTE: In adverse soil conditions longer staples/stakes or earth anchors may be necessary to properly secure the RECPs.

b. Bioswale Installation (See Figure 1&3)

- i. Prepare soil before installing RECPs, including any necessary application of lime, fertilizer and seed.
- ii. Begin at the top of the channel by anchoring the RECPs in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench with approximately 12 in. (30 cm) of RECPs extended beyond the upslope portion of the trench. Anchor the RECPs with a row of staples/stakes approximately 12 in. (30 cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12 in. (30 cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately 12 in. (30 cm) apart across the width of the RECPs.
- iii. Roll center RECPs in direction of water flow in bottom of channel. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
- iv. Place consecutive RECPs end-over-end (shingle style) with a 4 in.-6 in. (10-15 cm) overlap. Use a double row of staples staggered 4 in. (10 cm) apart and 4 in. (10 cm) on center to secure RECPs.

- v. Full-length edge of RECPs at top of side slopes must be anchored with a row of staples/stakes approximately 12 in. (30 cm) apart in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench. Backfill and compact the trench after stapling.
- vi. Adjacent RECPs must be overlapped approximately 2 in.- 5 in. (5-12.5 cm) (depending on RECP type) and stapled.*
- vii. In high flow channel applications a staple check slot is recommended at 30 to 40 ft (9-12 m) intervals. Use a double row of staples staggered 4 in. (10 cm) apart and 4 in. (10 cm) on center over entire width of the channel.
- viii. The terminal end of the RECPs must be anchored with a row of staples/stakes approximately 12 in. (30 cm) apart in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench. Backfill and compact the trench after stapling.

NOTE: In adverse soil conditions longer staples/stakes or earth anchors may be necessary to properly secure the RECPs.

c. Streambank Installation (See Figure 1&4)

- i. For easier installation, lower normal water level before installation to allow bottom trenching.
- ii. Prepare soil before installing RECPs, including any necessary application of lime, fertilizer and seed.
- iii. Begin at the top of the shoreline by anchoring the RECPs in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench with approximately 12 in. (30 cm) of RECPs extended beyond the upslope portion of the trench. Anchor the RECPs with a row of staples/stakes approximately 12 in. (30 cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12 in. (30 cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately 12 in. (30 cm) apart across the width of the RECPs.
- iv. Roll RECPs either down the shoreline for long banks (top to bottom) or horizontally across the shoreline slope. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
- v. The edges of all horizontal and vertical seams must be stapled with an approximately 2 in.-5 in. (5-12.5 cm) overlap. In streambank applications, seam overlaps should be shingled in the predominant flow direction.
- vi. The edges of the RECPs at or below normal water level must be anchored by placing the RECPs in a 12 in. (30 cm) deep x 6 in. (15 cm) wide anchor trench. Anchor the RECPs with a row of staples/stakes spaced approximately 12 in. (30 cm) apart in the

trench. Backfill and compact the trench after stapling (stone or soil may be used as backfill). For installation at or below normal water level.

NOTE: In adverse soil conditions longer staples/stakes or earth anchors may be necessary to properly secure the RECPs.

6) Maintenance

a. General

The Contractor shall protect seeded areas from damage from equipment or traffic which may cause damage to the newly seeded surface. Areas that are damaged shall be repaired by re-grading, re-seeding, as directed by the Project Manager/Engineer, at no additional cost to the City. The Contractor shall otherwise maintain seeded areas in a satisfactory condition until Final Acceptance of the Work. The seed/sod shall be maintained for 30 consecutive days, excluding the winter dormant periods between November 15 and April 15. Re-seeding of bare spots shall be done as many times as necessary until an acceptable stand of turf is established.

Mowing of seeded areas shall be the Contractor's responsibility until final acceptance of the project. No mowing shall remove more than one-third of the grass blade length. Heavy mowing, resulting in grass piles shall be mowed twice or piles shall be removed. Mowing maintenance shall occur when vegetation exceeds 6 inches in height for the residential, sod and temporary seed mixtures. Mowing maintenance shall occur when vegetation exceeds 12 inches in height for no-mow and roadside mixtures. The contractor shall maintain an established vegetative minimum height of six inches. Vegetation shall NOT be cut below a six inch height. Mow maintenance shall be done as needed to maintain the vegetative height of six to eight inches during first growing season or until project is complete.

b. Watering

The Contractor shall be responsible for the watering during the maintenance period. Water shall not exceed the infiltration capacity of the soil during application. Excessive irrigation or puddling of seedbed will create poor root develop and cause erosion issues. Irrigation shall be applied by a wide fan spray nozzle with medium size droplets and shall not dislodge seed or seedlings. Irrigation shall not be applied in winds excess of 10 mph, temperatures exceeding 85°, or between 11:30am and 5:00pm. The ideal time for irrigation is 4:00 am to 9:00 am; this reduces disease, sun scaled, and evaporation. Water used for plant establishment shall be from a clean water source, not a free flowing system such as a drainage ditch, river, or creek. Water shall be free of impurities, debris,

excessive silt, sand, or clay. Water shall contain no pollutants, excessive salts, or excessive sodium that are detrimental to plant health and growth.

The contractor may also apply for a temporary water meter through City Utilities. An online application is available at:

<https://eforms.acfw.net/iFiller/iFiller.jsp?fref=8ec7098186e9419c403c12f817ffff09>

c. Clean-Up

As seeding operations proceed, all rope, wire, burlap, empty containers, rocks, clods, and all other debris shall not be allowed to accumulate and shall be removed daily. Debris shall not be burned. The Contractor shall keep the work area as tidy as possible at all times. Any soil, peat, seeding materials, manure, or similar items which have been brought onto paved areas by work operations, shall be removed promptly by sweeping, and, if necessary, by washing, keeping the area clean. Other excess soil shall be disposed of off-site. All ground areas disturbed as a result of planting operations shall be restored to their original condition or to the desired new appearance.

7) Warranty Bond

Permanent seeding that requires a warranty bond to meet requirements shall be warranted against failure resulting from lack of germination or method of application. The seeding shall be warranted to germinate and shall be free of obvious erosion occurrences. The intent of the warranty bond shall be to enable the final acceptance of the contract and payment of the retainage. All seeding which has significantly failed to attain approximately 90% germination shall be replaced with no additional payment. A properly executed maintenance bond with a surety shall be provided prior to the completion of the work. A warranty shall be made, with no additional payment, to replace all seeding in areas which has not effectively performed useful service as specified, as well as for the repair of designated erosion areas caused by seeding failure. Such warranty shall be in writing with proper execution of the maintenance bond with a proper surety. The warranty shall be equivalent to 1 1/2 times the cost of the seeding work completed after October 15 with a minimum bond amount of \$25,000. All requirements for seeding work will still apply during the warranty period unless otherwise directed.

For the terms of the warranty, a reseeded unit shall be defined as an area equal to or larger than 2,000 sq ft in size. An erosion unit may be of an area of significance as determined.

The warranty shall cover work completed from October 16 through January 31. The Department will determine if the Contractor shall be released from the warranty. This determination will be made within 10 calendar days after documented request for inspection is made by the Contractor. Such determination will not be made prior to April 1. All replacement work shall be finished prior to June 15 with no additional payment. The Project Manager/Engineer will certify in writing as to the completion of the work and will make proper notification for the releasing of the bond.

If the Contractor does not complete the necessary repairs before June 15, and there are no justifiable reasons for the Department to grant an extension, the Contractor shall forfeit the bond for the seeding work only. If a bond is forfeited, the Contractor will be required to explain to the Department why the Contractor's experience reduction factors do not warrant an increase.

(d) Method of Measurement

Seed mixtures will be paid for at the contract unit price per pound for the class and type specified. Mulched seeding will be paid for at the contract unit price per square yard for the class and type specified, complete in place. Fertilizer will be measured by the pound per 1,000 square feet. Water will be measured by the gallon. Clearing and grubbing will be paid for at the contract unit price per acre respectively for each of the pay items shown below.

(e) Basis of Payment

Payment for all seeding includes payment for the thirty day establishment period. Upon Final Acceptance, the remainder of the contract will be paid. If areas are damaged or have insufficient coverage, they must be repaired or replaced as requested by the Project Manager/Engineer.

a. Area Basis-The work to be measured will be the number of acres and fractions thereof acceptably cleared and grubbed within the limits shown on the plans or staked for clearing and grubbing. Areas not shown on the plans or not staked for clearing and grubbing will not be measured for payment.

b. Lump Sum Basis- If clearing and grubbing is specified as a lump sum pay item, no measurement of area will be made.

Payment will be made under:

Pay Items	Units
Seed.....	LBS
Hydro Seed.....	LBS

Fertilizer.....	LBS
Mulching Material.....	CYS
Mulched Seeding.....	SYS
Clearing and Grubbing.....	ACRE/LUMP SUM
Scalping.....	ACRE
Clearing Right-of-Way.....	LUMP SUM
Water.....	GAL

The cost of preparing seed beds, sowing, raking, and all other necessary incidentals shall be included in the cost of seed mixtures. The cost of furnishing and placing fertilizer, seed mixtures, and mulching material, in addition to the incidentals listed above for seed mixtures shall be included in the cost of mulched seeding.

The cost of furnishing, hauling, and placing the material, including material used as tie-down, repair of areas for which mulch fails to stay in place, all labor, equipment, and necessary incidentals shall be included in the cost of mulching material. Water will be paid for only when ordered after the 30 day period.

623.08 SOD

(a) Description

1) Contractor shall perform all operations under this section which will include installation, cultivating and maintenance of sod.

2) Submittals

Sod: Contactor shall provide sales receipt or certificate describing sod blend.

3) To seed or sod at times other than the ones listed below, requires approval by Engineer/Project Manager.

i. Regular Sodding Season

- Spring-March 1-May1
- Fall-October 1-November
- Summer sodding between June and August 15 are at the contractor’s risk. Dry and hot weather difficulties are the responsibility of the Contractor.

(b) Materials

1) Sod shall consist of fibrous, well rooted variety or blend of Kentucky bluegrass, fescue, or other approved grass cut to a height of 2 to 3 inches. Edges of sod shall be cut cleanly, to a uniform minimum thickness of ¾ inch or more. It shall be a uniform width of no less than 16 inches and no less than 3 feet in length. Sod shall be free from all debris and weeds in accordance with Indiana State Seed Law, IC 15-4-1.

2) Nursery sod shall meet applicable requirements as set out above and shall be a variety or blend of Kentucky bluegrass or fescue. It shall comply with nursery

inspections and plant quarantine regulations of the states of origin and destination as well as with Federal regulations governing interstate movement of nursery stock.

3) Sod shall show no signs of leaf discoloration, desiccation of leaves or roots, or excessively dry soil and shall have vibrant healthy appearance. It shall be grown specifically for sod purposes. Sod shall be free of disease, chlorotic conditions, weeds, or infestations.

4) Sod placed in areas with grades steeper than 1% and on slopes 3:1 shall be secured with sod staples. Sod staples shall be at least 6 inches in length.

5) The contractor may apply for a temporary water meter through City Utilities. This would be at the expense of the Contractor. An online application is available at:

<https://eforms.acfw.net/iFiller/iFiller.jsp?fref=8ec7098186e9419c403c12f817ffff09>

(c) Construction Requirements

1) Soil Bed Preparation

The area to be sodded shall be smooth, uniform, and shall be in accordance with the required grades and cross sections shown on the drawings or as directed by the Project Manager/Engineer. In areas that will receive topsoil, Contractor shall scarify and till to a depth of 2 inches. All areas shall be raked and cleared of stones 1 inch in diameter or larger; all other irregularities that might interfere with the placement or maintenance of sod shall be removed from the site. This may include but is not limited to: clods, clumps, trash or sticks. This work shall be approved by the Project Manager/Engineer prior to the placement of topsoil.

2) Top Soil Placement in Sod Areas

Following the grading and cultivation of all areas to be sodded, place a uniform layer of topsoil. Topsoil shall be evenly spread on all designated areas to finish depth of 4 inches. Prior to sod installation, soil surface shall be lightly irrigated if soils are dry or air temperatures are excessively high. Soil shall not be spread when the ground is frozen, excessively wet, or otherwise in a condition detrimental to the work.

3) Sod Placement

i. General

- a. Sod shall be installed within 32 hrs. after cutting and shall be protected from moisture loss, exposure to wind, sun, and high temperatures. During the months of June, July and August, sod shall be installed within 24 hours after cutting. It shall be cut utilizing sharp blades mechanized equipment designed for cutting sod. It shall be cut so as to leave a full intact root mass with uniform thickness as specified by the project plans. Sod shall be cut in straight lines and to the specified uniform width and length. Sod strips shall be handled with care to

minimize root structure damage, tearing or excessive stretching. Sod that is dry or without soil firmly attached to the roots shall be removed from the project site.

- b. Winter sodding will be allowed when the temperature is above 35°F. No frozen sod shall be laid and no sod shall be laid on frozen soil. To prevent sod damage at lower air temperatures, sod shall not be handled, walked on, or driven on if a hard frost has occurred over night.
- c. The contractor shall fill any gaps of sod shrinkage overwinter with approved soil and add Sod Overseed mix to entire sod area.

ii. Placement

- a. Surfaces prepared for sod shall be of sufficient depth below unseated areas that newly laid sod shall be in accordance with the surrounding surface.
- b. Sod strips shall be laid adjacent to previous strip so that all edges are in contact not overlapping with another sod strip and staggered from strips above or below. Areas to be installed shall have clean, straight edges and cut exactly perpendicular to the soil surface.
- c. Where curves are necessary, the sod shall be cut to provide edges in full contact with adjacent sod. There shall be no gaps between adjacent pieces of sod. The contractor shall use weed-free soil to fill in any seams and exposed edges to prevent desiccation of sod.
- d. Sod placed in areas with grades steeper than 1% and on slopes 3:1 shall be secured with sod staples. Sod staples shall be at least 6 inches in length and be placed no more than 2ft a part in each strip. Staples are to be driven flush with sod. On sloping terrain (3:1 or steeper), where erosion may be a problem, sod should be installed perpendicular to slope when possible with staggered joints and secured by staples. Staples are to be driven flush with sod. Sod in swales shall be stapled.

iii. Finishing

- a. Areas where sod is placed shall be immediately tamped or rolled lightly to provide uniform contact with soil. Contractor is responsible for have adequate water available on site prior to and during the installation.
- b. Contractor shall provide new topsoil as required to fill low spots, and cracks between sod strips to meet new finish grade.

- c. Contractor shall water sod immediately after transplanting to prevent drying. The amount of watering shall be sufficient enough to saturate the sod and the upper few inches of the underlying soil.

4) Maintenance

i. General

- a. Sod shall be maintained until sod roots have established in new topsoil and for a minimum of four weeks from the time it is laid and upon approval from the Project Manager/Engineer.

ii. Watering

- a. Water used for plant establishment shall be from a clean water source, not a free flowing system such as a drainage ditch, river, or creek. Water shall be free of impurities, debris, excessive silt, sand, or clay. Water shall contain no pollutants, excessive salts, or excessive sodium that are detrimental to plant health and growth. During periods of ample rainfall, watering may be modified to simulate the above schedule.
- b. The Contractor shall be responsible for the watering during the maintenance period. Water shall not exceed the infiltration capacity of the soil during application. Excessive irrigation or puddling of seedbed will create poor root develop and cause erosion issues. Irrigation shall be applied by a wide fan spray nozzle with medium size droplets and shall not dislodge seed or seedlings. Irrigation shall not be applied in winds excess of 10 mph, temperatures exceeding 85°, or between 11:30am and 5:00pm. The ideal time for irrigation is 4:00 am to 9:00 am; this reduces disease, sun scaled, and evaporation.

iii. Clean-Up

- a. As seeding operations proceed, all rope, wire, burlap, empty containers, rocks, clods, and all other debris shall not be allowed to accumulate and shall be removed daily. The Contractor shall keep the work area as tidy as possible at all times.
- b. Any soil, peat, seeding materials, manure, or similar items which have been brought onto paved areas by work operations, shall be removed promptly by sweeping, and, if necessary, by washing, keeping the area clean. Other excess soil shall be disposed of off-site.
- c. All ground areas disturbed as a result of planting operations shall be restored to their original condition or to the desired new appearance.

5) Final Acceptance

When Sod has been maintained and established after the 4 to 8 week maintenance period. It shall be healthy, well-rooted, even-colored, free of weeds, open joints, bare areas and surface irregularities.

(d) Method of Measurement

Sod shall be measured per 1,000 square feet. The measurement of sod shall include all cultivating, materials, and fertilizer, if required. Clearing and grubbing will be paid for at the contract unit price per acre respectively for each of the pay items shown below. The measurement of water shall be gallons and fertilizer shall be measured in pounds.

(e) Basis of Payment

Sodding will be paid for at the contract unit price per square foot, complete in place. The cost of fertilizer, water, excavation of earth bed, disposal of surplus material, and all necessary incidentals shall be included in the cost of sodding or nursery sodding.

- 1) Area Basis-The work to be measured will be the number of acres and fractions thereof acceptably cleared and grubbed within the limits shown on the plans or staked for clearing and grubbing. Areas not shown on the plans or not staked for clearing and grubbing will not be measured for payment.
- 2) Lump Sum Basis- If clearing and grubbing is specified as a lump sum pay item, no measurement of area will be made.

Payment will be made under:

Pay Items	Units
Sod.....	1,000 S.F
Fertilizer.....	LBS
Clearing and Grubbing.....	ACRE/LUMP
SUM	
Scalping.....	ACRE
Clearing Right-of-Way.....	LUMP SUM
Water.....	GAL

623.09 GLOSSARY OF TERMS

Reference the following for terminology

Appendix A. –

American National Standards for Nursery Stock, ANSI Z60.1, latest edition.
American Nursery and Landscape Association, 1250 I Street N.W., Suite 500, Washington,

D.C., 20005.

ANSI A300- American National Standard Institute's accepted industry standards for tree care practices operations.

ANSI Z133- American National Standard Institute's accepted industry safety standards for tree care operations.

ANSI Z87.1- American National Standard Institute's accepted industry face and eye protection standards for tree care operations.

Basal Treatment- An application to the stems and root flare of woody vegetation from (12"-18") to the natural grade of soil.

Brush- Woody stems that are less than (4") inches in diameter.

Cambium- The layer of dividing meristematic cells beneath the bark giving rise to xylem and phloem, which account for a tree's growth in diameter.

City- refers to the municipal government of Fort Wayne, Indiana.

Clearing- The physical cutting and/or removal of vegetation.

Climbing Spurs- A piece of climbing equipment with sharp metal spikes used assist tree care professionals in climbing trees being removed or pruned.

Cut-Stump Treatment- An application of herbicide to cut vegetation covering the cambium layer, bark and root flare of the stump.

Debris-Vegetative and non-vegetative materials such as: branches, bottles, wires, or other residual materials from clearing operations.

Diameter at Breast Height (DBH) - Diameter of trees or brush measured at chest level, approximately four and half feet above the natural grade.

Drift- The movement of airborne particles by wind away from the intended target area.

EPA- Environmental Protection Agency regulates pesticides through several federal laws.

Foliar Treatment- An application to the leaves or foliage of the vegetation, but not to the point of runoff.

Hazard Vegetation- Vegetation that poses a risk to public or Contractor safety and impedes movement along public corridors. Hazard vegetation may obscure visibility, signs and vehicular movement.

Herbicide- chemicals used to control, suppress or kill unwanted vegetation.

IDEM- Indiana Department of Environmental Management implements federal and state regulations to protect human health and the environment while allowing environmentally sound operations of industrial, agricultural, commercial and governmental activities vital to a prosperous economy.

Invasive Vegetation- A plant species that displaces desired species, native or non-native.

Lateral Branch- Secondary or subordinate branch that is capable of sustaining the vegetation's natural growth patterns and processes.

Low Volume Application- A spray application of less than 20 gallons per acre.

Manual on Uniform Traffic Control Devices (MUTCD)- is a compilation of national standards for all traffic control devices, including road markings, highway signs, and traffic signals.

OISC- The Office of Indiana State Chemist who is in charge with administering several agricultural laws involving seeds, fertilizers, animal feeds and pesticides.

OSHA- Occupational Safety and Health Administration ensure safe and healthful working conditions for working men and women by setting and enforcing specific standards.

Pesticide- As defined by OISC-Chapter 4: IC 15-16-4-30: Any substance or mixture of substances intended for: preventing; destroying; repelling; or mitigating a pest and any substance or mixture of substances intended for use as a: plant regulator; defoliant; or desiccant.

Raising- The selective pruning of vegetation to provide vertical clearance.

Reduction Cut- Reduces the length of a branch or stem back to a live lateral branch large enough to assume apical dominance- this is typically at least one third the diameter of the cut stem.

Resprouts- Multiple suckering stems that vigorously elongate from an area that has been removed and/or pruned.

Sap Flow- The movement of fluid through roots, stems, and branches of plants.

Selective Pruning- The chosen removal of certain parts of the vegetation.

Standard- Industry accepted definitions and principles.

Vegetation- Above ground leafy plant growth. This shall include but not limited to trees, shrubs, grasses, vines, and forbs.

Appendix A: Preferred Herbicides

Herbicide Brand	Active Ingredient	EPA Registration #	Application Type
Pathfinder II	Triclopyr	62719-176	Cut-Stump
Garlon 4 Ultra	Triclopyr	62719-527	Cut-Stump or Foliar
Garlon 3A (Aquatic)	Triclopyr	62719-37	Cut-Stump or Foliar
Rodeo	Glyphosate	62719-324	Cut-Stump or Foliar
Accord XRT II	Glyphosate	62719-556	Cut-Stump or Foliar

Recurring Special Provisions

Division 700 - Structures

City of Fort Wayne

Public Works

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**732 FWR01 Retaining Wall, VERSA-LOK, Reinforced, Modular Block Wall System
(Complete in Place)14**

DIVISION 700 – STRUCTURES

20

702.03 Materials

60

Grout material for field drilled holes shall be selected from the QPL of Chemical Anchor Systems.

Concrete mix designs for the bridge floor shall incorporate E5 Internal Cure produced by Specification Products. Concrete in other locations may incorporate E5 Internal Cure. Dosage and mixing shall be in accordance with the manufacturer’s recommendations.

The cost for all associated material, labor, and incidentals for this work shall be included in the cost of other items.

704.09 Modified Deck Drains

Description

This work shall consist of furnishing and installing modified deck drains in accordance with 105.03.

Materials

Materials shall be in accordance with the following:

Castings	910.05
Corrugated Polyethylene Drainage Tubing.....	*
Flexible Coupler	ASTM D5926, C1173

* All thermoplastic pipes shall be from the QPL of Thermoplastic Pipe and Liner Pipe Sources in accordance with 907.16

Construction Requirements

Drainage grates and basins, necessary fittings, connections to drainage pipes, and drainage tubing shall be placed as shown on the plans or as directed.

Method of Measurement

Deck drains will be measured by the number of complete assemblies installed.

Basis of Payment

The accepted quantities for deck drains will be paid for at the contract unit price per each assembly, complete in place.

Payment will be made under:

Pay Item

Pay Unit Symbol

Deck Drain, _____, Modified EACH
(Type)

The cost of corrugated drainage tubing, flexible couplers, band clamps, and all other incidental materials shall be included in the cost of the Deck Drain.

714.11 Method of Measurement

380 Precast reinforced concrete box structures or structure extensions, precast coated reinforced concrete box structures or structure extensions, precast headwalls, precast wingwalls, cast-in-place reinforced concrete box structures or structure extensions, cast-in-place coated reinforced concrete box structures or structure extensions, cast-in-place headwalls, and cast-in-place wingwalls will not be measured. The accepted quantities for payment ~~will be the quantities shown on the plans.~~ will be the actual measured quantities that were installed within the field.

714.12 Basis of Payment

460 The costs of coring, testing, excavation, repairs, plugging core and handling holes, mortar, grout, sealer, cylinder molds, and necessary incidentals shall be included in the cost of the structure. The cost of wingwall footing and the aggregate base shall be included in the cost of the structure or structure extension. Bypassing pumping or flow diversion costs shall also be included in the cost of the structure or structure extension.

470 No additional payment will be made for the repair or replacement of existing concrete damaged by Contractor operations.

Lifting holes are not acceptable. If used, any lift holes shall be patched and repaired appropriately prior to backfilling.

SECTION 715 – PIPE CULVERTS, AND STORM AND SANITARY SEWERS

MATERIALS

10 **715.02 Materials**

40 **(a) Type 1 Pipe**

Type 1 pipe shall be used for culverts under mainline pavement and public road approaches and shall be in accordance with the following:

	Clay Pipe, Extra Strength.....	907.08
	Corrugated Aluminum Alloy Pipe and Pipe-Arches ..	908.04
	Corrugated Dual-Walled Polyethylene Pipe, Type S.. *	
	Corrugated Dual-Walled Polypropylene Pipe..... *	
	Corrugated Steel Pipe and Pipe-Arches	908.02
50	Non Reinforced Concrete Pipe, Class 3.....	907.01
	Polymer Precoated Galvanized Corrugated Steel	
	Pipe and Pipe-Arches	908.08
	Profile Wall Dual-Walled Polyethylene Pipe, Closed. *	
	Profile Wall Dual-Walled Polyethylene Pipe, Ribbed *	
	Profile Wall PVC Pipe	*
	Reinforced Concrete Horizontal Elliptical Pipe.....	907.03
	Reinforced Concrete Pipe	907.02
	Smooth Wall Dual-Walled Polyethylene Pipe..... *	
	Smooth Wall PVC Pipe..... *	
60	Spiral Rib Steel Pipe.....	908.02
	Structural Plate Pipe and Pipe-Arches	908.09

* All thermoplastic pipes shall be from the QPL of Thermoplastic Pipe and Liner Pipe sources in accordance with 907.16.

(b) Type 2 Pipe

Type 2 pipe shall be used for storm and sanitary sewers and shall be in accordance with Fort Wayne City Utilities Design Standards Manual under “Section MA5 Storm Materials and Testing Requirements” and “Section MA6 Sanitary Sewer Materials and Testing Requirements” (<https://www.cityoffortwayne.org/utilities/169-design-and-construction/3259-design-standards.html#Materials>) and the following:

	Clay Pipe, Extra Strength.....	907.08
70	Corrugated Dual-Walled Polyethylene Pipe, Type S.. *	
	Corrugated Dual-Walled Polypropylene Pipe..... *	
	Fully Bituminous Coated and Lined Corrugated Steel	
	 Pipe and Pipe-Arches.....	908.07
	Non Reinforced Concrete Pipe, Class 3.....	907.01
	Polymer Precoated Galvanized Corrugated Steel	
	Pipe and Pipe-Arches Type IA and Type IIA	908.08
	Profile Wall Dual-Walled Polyethylene Pipe, Closed. *	
	Profile Wall Dual-Walled Polyethylene Pipe, Ribbed *	
	Profile Wall PVC Pipe	*
80	Reinforced Concrete Horizontal Elliptical Pipe.....	907.03
	Reinforced Concrete Pipe	907.02
	Smooth Wall Dual-Walled Polyethylene Pipe	*
	Smooth Wall PVC Pipe..... *	

* All thermoplastic pipes shall be from the Department’s list of approved thermoplastic pipe and liner pipe in accordance with 907.16.

(c) Type 3 Pipe

Type 3 pipe shall be used for culverts under all drives and field entrances. All

Type 1 pipe materials are acceptable. If any type of plastic piping is used, appropriate backfill and end sections must be used.

90

(d) Type 4 Pipe

Type 4 pipe shall be used for drain tile and longitudinal underdrains and shall be in accordance with the following:

	Clay Pipe**	907.08	
	Corrugated Dual-Walled Polyethylene Drainage Tubing		*
	Corrugated Dual-Walled Polyethylene Pipe, Type S**		*
	Corrugated Dual-Walled Polyethylene Pipe, Type SP		*
	Drain Tile**	907.10	
100	Non Reinforced Concrete Pipe	907.01	
	Perforated Clay Pipe**	907.09	
	Perforated PVC Semicircular Pipe		*
	Profile Wall PVC Pipe		*

* All thermoplastic pipes shall be from the Department's list of approved thermoplastic pipe and liner pipe in accordance with 907.16. ** These materials shall be used for drain tiles only.

(e) Type 5 Pipe

Type 5 pipe shall be used for broken back pipe runs where coupled or jointed pipe is desirable and shall be in accordance with the following:

110

	Corrugated Aluminum Alloy Pipe and Pipe Arches	908.04	
	Corrugated Polyethylene Pipe, Type S		*
	Corrugated Polypropylene Pipe		*
	Corrugated Steel Pipe and Pipe Arches	908.0	
	2 Fully Bituminous Coated and Lined Corrugated Steel Pipe and Pipe Arches	908.0	
	7 Polymer Precoated Galvanized Corrugated Steel Pipe and Pipe Arches	908.08	

120

	Profile Wall Polyethylene Pipe, Closed		*
	Profile Wall Polyethylene Pipe, Ribbed		*
	Profile Wall PVC Pipe		*
	Smooth Wall Polyethylene Pipe		*
	Smooth Wall PVC Pipe		*
	Spiral Rib Steel Pipe	908.02	

* All thermoplastic pipes shall be from the Department's list of approved thermoplastic pipe and liner pipe in accordance with 907.16.

715.04 Excavation

Unless otherwise directed, the trench cross sectional dimensions shall be as shown on the plans. The trench bottom shall give full support to the pipe as shown on the plans. Trench cross sectional dimension shall be outside diameter (OD) of pipe plus 30-inches to allow for backfill to be filled within the pipe haunches. Recesses shall be cut to receive any projecting hubs or bells.

220

Where pipe is to be placed in fill sections, a portion of the fill shall be constructed prior to installation of the pipe as shown on the plans.

Where rock or boulder formation is encountered at or above the proposed trench bottom elevation, the trench shall be excavated at least 8 in. below the proposed grade, backfilled with structure backfill, and compacted in accordance with 211.04.

230

In case a firm foundation is not encountered at the required grade, the unstable material shall be removed to such depth that when replaced with suitable material, usually B borrow #8 or #9 stone, compacted, and properly shaped, it will produce a uniform and stable foundation along the entire length of the pipe. A timber mat shall be placed to hold the pipe to line and grade if it is necessary.

All trenches shall be kept free from water until any joint filling material has hardened sufficiently not to be harmed.

715.05 Laying Pipe

240

Each section of pipe shall have a full firm bearing throughout its length, true to the line and grade given. All pipes which settle or which are not in alignment shall be taken up and re-laid. Pipe shall not be laid on a frozen trench bottom. Fully bituminous coated and lined pipe and pipe arches shall only be placed when the ambient temperature is 35°F or above.

Concrete and clay pipe shall be laid with hub upgrade, with the spigot end fully extended into the adjacent hub, and with all ends fitted together tightly. Concrete pipe shall not be laid in muck or sulphate soils.

260

Connections of thermoplastic pipe to manholes, catch basins, and inlets shall be in accordance with the manufacturer's recommendations. Fort Wayne City Utilities Design Standards Manual under "Section MA5 Storm Materials and Testing Requirements" and "Section MA6 Sanitary Sewer Materials and Testing Requirements" (<https://www.cityoffortwayne.org/utilities/169-design-and-construction/3259-design-standards.html#Materials>).

715.06 Joining Pipe

All pipe joints shall follow Fort Wayne City Utilities Design Standards Manual under "Section MA5 Storm Materials and Testing Requirements" and "Section MA6 Sanitary Sewer Materials and Testing Requirements"

715.09 Backfilling

All pipes shall follow bedding requirements as listed under Fort Wayne City Utilities Design Standards Manual under “Section MA5 Storm Materials and Testing Requirements” and “Section MA6 Sanitary Sewer Materials and Testing Requirements” (<https://www.cityoffortwayne.org/utilities/169-design-and-construction/3259-design-standards.html#Materials>).

351 ~~All pipe trenches shall be backfilled with structure backfill or flowable backfill. Structure backfill shall be placed in accordance with 211. The use of “B” Borrow as defined under Sections 211 and 904, is prohibited and requires a variance for use on the City of Fort Wayne projects. Flowable backfill shall be placed in accordance with 213.07 as shown on the plans or as directed.~~

385 After the visual or video inspection, the Contractor shall check pipe deflection by performing a mandrel test as directed on pipes manufactured from materials listed in the following table. ~~The Engineer will determine the runs of pipe installations to be mandrel tested with a minimum of 10% of the total length of each material to be inspected.~~ All installed pipes shall be 100% mandrel tested.

~~If the minimum diameter of the deficient pipe is between 92.5% and 95.0% of the nominal pipe diameter, the Contractor shall provide an evaluation of the deficient pipe prepared by a professional engineer. The evaluation shall consider the severity of the deflection and its effects on structural integrity, environmental conditions, and the design service life of the pipe. A report summarizing the evaluation and including the professional engineer’s recommendation for acceptance, remediation, or replacement of the pipe shall be submitted to the Engineer for final determination.~~

If the minimum diameter of the deficient pipe is equal to or less than ~~92.5%~~ 95% of the nominal pipe diameter, the deficient pipe shall either be replaced or a remediation plan shall be prepared by a professional engineer and submitted to the Engineer for final determination.

715.14 Basis of Payment

Video inspections for pipe ~~will be paid for at the contract unit price per linear foot completed.~~ shall be included within the cost of the pipe.

Payment will be made under:

683 The cost of providing video inspection equipment, technician, and a copy of the video inspection shall be included in the cost of video inspection for pipe of the pipe.

No additional payment will be made for repair, remediation, or replacement of pipes, backfill, video inspection of the repaired, remediated, or replaced pipe, and all other work associated with the repair, remediation, or replacement of unacceptable pipes.

690 The cost of mandrel all testing shall be included in the cost of the pipe.

The cost for pipe bedding shall be included in the cost of the pipe.

SECTION 716 – TRENCHLESS PIPE INSTALLATION

716.01 Description

This work shall consist of installing pipes underground using construction techniques that eliminate reduce open cutting of the pavement or of the ground in accordance with 105.03. This specification addresses auger boring, guided boring, horizontal directional drilling using a reamer diameter up to and including 24 in., pipe jacking, and pipe ramming, as defined below.

MATERIALS

80 716.02 Materials

100 Steel pipe used as a carrier pipe shall have the following minimum wall thickness. Steel pipe used as a casing pipe, but not used as a carrier pipe, shall be selected by the Contractor to have minimum wall thickness sufficient to resist jacking forces. have a minimum yield strength of 35,000 psi and be at least 6” greater than the outside diameter (O.D.) of the carrier pipe joint or couplings. For installations where the casing is not used as a carrier but only as a casing for a carrier pipe, the thickness of the casing shall be determined by the Contractor as shown in the table below.

Outside Diameter, in.	Wall Thickness, in.
18 or less	1/4
19 – 20	5/16
21 – 26	3/8
27 – 30	1/2
31 – 42	1/2
43 – 48	9/16

<u>Casing Outside Diameter (inches)</u>	<u>Casing Wall Thickness Highway Crossings (inches)</u>	<u>Casing Wall Thickness Railroad Crossings (inches)</u>
8.625	0.250	0.250
10.750	0.250	0.250
12.750	0.250	0.250
14	0.250	0.281
16	0.250	0.281
18	0.250	0.312
20	0.250	0.344
24	0.250	0.406
30	0.375	0.469
36	0.375	0.532
42	0.375	0.563
48	0.500	0.625
54	0.625	0.688
60	0.625	0.750
66	0.625	0.813
72	0.750	0.875

CONSTRUCTION REQUIREMENTS

110 **716.03 General Requirements**

123 ~~Where the use of explosives is necessary for performing the work, their use shall be in accordance with 107.13.~~

130 Joints in steel pipe shall be watertight. Where welded joints are utilized, they shall be welded in accordance with 711.32. Joints in concrete pipe or other jacking pipe materials ~~including clay pipe~~ shall be designed to withstand the additional forces that are created in the joints during the installation process. The joints in concrete pipe or other pipe jacking materials shall be protected with a resilient material around the circumference of the pipe. Resilient material shall also be used between the pipe and the thrust ring.

145 When the installation is ~~4 in.~~ 8 in. or larger and the casing is used as the carrier pipe, a visual or a video inspection shall be performed using a high resolution, high sensitivity color video camera and recording equipment. The pipe shall be cleaned of debris prior to the inspection. Cleaning shall be accomplished by means of water jetting or other approved methods.

150

170 Where a gravity-flow carrier pipe is placed inside a casing pipe, the gravity-flow carrier pipe shall be shimmed to proper line, elevation, and grade. ~~and then the void between the two pipes shall be grouted with cellular grout.~~ The ends of the casing shall be sealed to prevent the entrance of foreign material.

SECTION 718 – UNDERDRAINS

MATERIALS

718.02 Materials

10 Materials shall be in accordance with the following:

Coarse Aggregate, Class E or Higher, Size No. 8 or 9	904
Concrete, Class A	702
Geotextile for Underdrains	918.02(b)
Reinforcing Bars	910.01
Sod, including Nursery Sod	621
Structure Backfill	904.05
Underdrain Outlet Pipe	*

20 Underdrain Pipe 715.02(d)

* All thermoplastic pipes shall be from the Department’s list of approved thermoplastic pipe and liner pipe in accordance with 907.16.

Any underdrains being used for storm drainage shall be either Perforated PVC Semicircular Pipe or Dual Walled Corrugated Polyethylene Pipe.

SECTION 720 – MANHOLES, INLETS, AND CATCH BASINS

720.02 Materials

10 Materials shall be in accordance with Fort Wayne City Utilities Design Standards Manual under “Section MA5 Storm Materials and Testing Requirements” and “Section MA6 Sanitary Sewer Materials and Testing Requirements” (<https://www.cityoffortwayne.org/utilities/169-design-and-construction/3259-design-standards.html#Materials>) the following:

Castings	910.05
Clay or Shale Brick	905.01
Clay Pipe	907.08
Concrete Brick	905.02
Concrete Masonry Blocks	905.03
Concrete	702

Hydrated Lime.....	913.04
Joint Filler	906.01
Joint Mortar.....	901.08,
Non Reinforced Concrete Pipe	907.01
Precast Concrete Manholes, Inlets, and Catch Basins	907.04
Reinforced Concrete Pipe.....	907.02
Reinforcing Bars	910.01
Water	913.01

CONSTRUCTION REQUIREMENTS

30 720.03 General Requirements

52 ~~Iron~~ **PVC removable** hood traps in catch basins shall be installed in walls as shown on the plans and so placed that a 6 in. seal is formed. Joints between hoods and walls shall be made gas tight.

60 ~~Mortar for laying brick and masonry units shall be composed of 1 part masonry cement and 2 parts mortar sand. Mortar for plastering may be the same or it may be composed of 1 part of a combination of portland cement and hydrated lime and 2 parts mortar sand. The lime shall not exceed 10% of the cement. In any case, proportioning shall be by volume. Ingredients, except water, shall be dry mixed, after which water shall be added to bring the mixture results.~~

 The manhole bottom shall be constructed of a precast bottom section, or of class A concrete **and steel reinforcement steel** formed in place. A precast cover shall be placed on a manhole in which headroom is limited.

110 ~~Only competent masons shall be employed in laying units. Brick or other masonry units shall be laid in courses with full and close joints of mortar and finished properly as the work progresses. No joint shall exceed 3/8 in. in width. All units shall be wetted thoroughly immediately prior to being laid. Broken or chipped units will not be allowed in the face of the structure. No spalls or bats shall be used except for shaping around irregular openings or where necessary to finish out a course. As nearly as practicable, adjoining courses shall break joints at a 1/2 unit. Courses shall be level except where otherwise necessary. If brick is used, at least one course in each seven shall be composed of headers.~~

142 The Contractor may precast inlets, catch basins, or manholes, subject to approval. If precast concrete inlets, catch basins, or manholes are used, a layer of structure backfill **with #8 or #9 stone** of minimum thickness of ~~4 in.~~ **6 in.** shall be used under each unit for ease in positioning. If holes are formed or field cut in precast inlets or

catch basins to receive the pipe structures, the pipes shall be connected directly to the precast unit, by means of a class A concrete collar of a minimum longitudinal and radial thickness of 6 in. Holes formed or cut in the wrong place shall be plugged satisfactorily with a class A concrete mixture.

161 **720.04 Grade Adjustment of Existing Structures**

When grade adjustment of existing structures is specified, the frames, covers, and gratings shall be removed and the walls reconstructed as required. The cleaned frames shall be reset at the required elevation. If so specified or if it is determined that the existing casting and supporting walls are in good condition, ~~an approved device~~ manhole adjusting rings may be used to adjust the manhole casting cover to the correct grade without reconstructing the walls or resetting the frame. Manhole adjusting rings shall be used in accordance with Fort Wayne City Utilities Design Standards Manual under “Section MA5 Storm Materials and Testing Requirements” and “Section MA6 Sanitary Sewer Materials and Testing Requirements” (<https://www.cityoffortwayne.org/utilities/169-design-and-construction/3259-design-standards.html#Materials>). Upon completion, each structure shall be cleaned of any accumulations of silt, debris, or foreign matter of any kind and shall be kept clear of such accumulation until final acceptance of the work.

SECTION 725 – SLIP LINING OF EXISTING PIPE

199 **725.08 Liner Pipe Installation**

220

After the liner pipe installation is complete and the liner pipe has cooled to the temperature of the existing pipe, the liner pipe shall be cut so that each end is 8 in. outside the end of the existing pipe. A visual walk-through inspection shall be performed after the liner pipe has been installed in order to assess the post-installation condition of the pipe. If visual inspection is not possible, a video inspection of the existing pipe shall be performed. A copy of the video inspection shall be provided to the Engineer.

725.10 Basis of Payment

280 The cost of repairing, trimming, or cutting jagged edges or deformities to existing pipe, filling cavities around the existing pipe with cellular concrete grout, pre and post inspection of the pipe, acquisition and restoration of right-of-entry areas, acquiring all necessary new permits or amendments to existing permits to work in areas accessible via Contractor-obtained right-of-entry, erection, maintenance, and removal of temporary fence, removal and disposal of debris and foreign material from the existing pipe, visual or video inspection of the existing pipe, deforming a circular liner pipe,

supplying and constructing the bulkheads, grouting the annular space between the existing pipe and the liner pipe, and other incidentals will not be paid separately, but shall be included in the cost of the pay items in this section.

290

SECTION 278 BLANK BIOSWALE CLEANOUT

728.01 Description

This work shall consist of installing bioswale cleanouts that are connected to dual-walled perforated pipe within the bioswale areas.

728.02 Materials

ADS Nyoplast cleanouts and fittings or approved equal.

728.03 Construction Requirements

Install in-line and end-of-line cleanouts flush with finish grade. Size of cleanout piping and riser shall match size of drainage line. Body material shall be PVC. Fittings shall be soil tight (ST).

Bends shall be 90-degree sweeps that are capped at grade. Caps shall be placed by hand and not glued.

728.04 Method of Payment

Payment will be measured by the number of bioswale cleanouts installed.

728.05 Basis of Payment

The accepted quantities of bioswale cleanouts will be paid for at the contract unit price per each, complete in place.

Payment will be made under:

Pay Item	Pay Unit Symbol
_____ in. Bioswale Cleanout	EACH

The price shall include all costs associated with installing per detail drawing as shown in plans: furnishing and installing materials, labor, equipment, cleanup, and all other operations necessary for installation of cleanouts.

**732 FWR01 – Retaining Wall, VERSA-LOK, Reinforced, Modular Block Wall System
(Complete-in-Place)**

Description

This work shall be all inclusive and constructed in-place as the plans indicate and shall include all items necessary to construct the reinforced modular block retaining wall; which includes: supply, delivery and installation of Versa-Lok reinforced modular retaining wall system per the manufacturers specifications and in compliance with the City of Fort Wayne standards and specifications, Versa-Lok square foot units, Versa-Lok cap units, Versa-Tuff pins, block to be placed at a ¼ in. setback, Versa-Grid 3.0 geo-grid layers placed as per plan, an 8 in. minimum compacted No. 53 aggregate base/leveling pad - placed at 4 in. maximum compacted lifts, 4 in. dia. perforated PVC pipe or corrugated HDPE pipe, 12 in. minimum to an 18 in. maximum depth of No.8 coarse aggregate drain layer, geotextile filter fabric, grate-drainage outlets - spaced at 20 ft. intervals to match sidewalk grade, a minimum (2) two-course block embedment over the base leveling pad, additional block for proper base stepping, type “O” compacted aggregate No. 53 structural backfill compacted-in-place at a maximum of 4 in. lifts - to surface elevation.

Materials

Materials shall be in accordance with the following:

Versa-Lok Square Foot Units.....	Versa-Lok Square Foot, Grey, Split Face Specifications
Versa-Lok Cap Units.....	Versa-Lok Cap Unit Specifications
Versa-Tuff Pins.....	Versa-Lok Versa-Tuff Pin Specifications
Versa-Grid 3.0.....	Versa-Lok Versa-Grid 3.0 Specifications
Structural Backfill, Coarse,	904.05 Aggregate, Size No. 53
Coarse Aggregate, Class E or	904 Higher, Size No. 8
Perforated PVC Pipe or	715-FWR Type 4 Corrugated HDPE Pipe
Filter Fabric.....	918.02
Grate Drainage Outlet.....	Wall Drain Pro Fitting

Construction Requirements

Construction shall follow what is shown on plans, be in accordance with Versa-Lok reinforced modular retaining wall system specifications for the Square Foot Block Wall System and in compliance with the City of Fort Wayne standards and specifications. The City of Fort Wayne shall be responsible for on-site field inspection.

Method of Payment

The pay quantity for this item shall be the percentage of Work completed at the time of billing (i.e., 10 percent of the lump sum amount for Retaining Wall, Versa-

Lok, Reinforced, Modular Block Wall System (Complete-In-Place) will be earned at 10 percent of earned contract amount).

Basis of Payment

Retaining Wall, Versa-Lok, Reinforced, Modular Block Wall System (Complete-In-Place) will be paid under a lump sum basis.

Payment Will be made under:

Pay Item Pay	Unit Symbol
Retaining Wall, Versa-Lok, Reinforced.....	LS
Modular Block Wall System (Complete-In-Place)	

The cost of all labor, equipment, materials, and all incidental work shall be included in the cost of the pay item.

Excavation will be paid for separately under pay item 'Excavation, Unclassified'.

Recurring Special Provisions

Division 800 – Traffic Control Devices and Lighting

City of Fort Wayne

Public Works

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SECTION 801 – TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE OPERATIONS

801.02 Materials

Non-ground mounted temporary traffic sign backing material and supports shall both be certified to meet NCHRP 350 crash test standards and approved for use by the FHWA. A copy of the FHWA acceptance letter shall be provided to the Engineer/Project Manager upon
40 request. Roll-up materials will not be allowed except as specified in 801.16.

50 Wood posts for temporary panel signs shall be dense southern yellow pine or design calculations shall be provided to the Engineer/Project Manager identifying the type of wood and verifying the location and size of the holes to be drilled through the posts to provide break-away capability.

CONSTRUCTION REQUIREMENTS

70

801.03 General Requirements

The applicable requirements of the MUTCD shall apply to the installation and materials for traffic control devices subject to the requirements of 107.08 and 107.12.

When the plans do not include a maintenance of traffic plan, the Contractor shall be responsible to place and maintain minimum construction signage to ensure proper traffic control and notification is in place for the workzone. Two-way traffic is to be maintained in workzones unless otherwise approved by the Engineer/Project Manager. Single traffic lanes shall not be implemented on two-way roadways that do not provide a clear line of sight for opposing vehicles unless traffic is being flagged.

If requested, the Contractor may need to provide to the Engineer/Project Manager a Maintenance of Traffic Plan for review and approval before work starts or a permit is issued on projects that do not include a detail Maintenance of Traffic Plan. Any special conditions for the Maintenance of Traffic Plan will be communicated to the Contractor or will be included with the Unique Special Provisions.

Unless otherwise detailed in the plans, all items and equipment for signage, including signs, placement and maintenance will be paid for and included under the item, **Maintenance of Traffic**. ~~will may provide such a plan to the Contractor or the Contractor may submit a plan for review.~~

The Contractor shall be responsible for the field layout, placement, operation, maintenance, and removal of temporary traffic control devices. A worksite traffic supervisor certified by the American Traffic Safety Service Association, ATSSA, or

approved equal certifying organization, shall direct all field layout, placement, operation, maintenance, and removal of temporary traffic control
80 devices. The certified worksite traffic supervisor, CWTS, shall ensure that all traffic control devices, except temporary concrete barrier, meet acceptable standards as outlined in the plans, specifications, and ATSSA's "Quality Standards for Work Zone Traffic Control Devices" prior to installation. The CWTS shall also, prior to installation, ensure that all traffic control devices can be installed in accordance with the plans, specifications, and the MUTCD. All problems shall be reported to the Engineer/Project Manager so a resolution can be worked out prior to installation. The field layout will be reviewed and concurred with by the Engineer/Project Manager prior to placement of any temporary traffic control devices. The CWTS shall be present for the initial setup and all phase changes during the life of the project. The CWTS may designate responsible

90 Contractor personnel to perform day to day operation and maintenance of the temporary traffic control devices. These responsible personnel shall work under the direction of the CWTS and their names shall be given to the Engineer/Project Manager on the project. A copy of the CWTS's certification shall be provided to the Engineer/Project Manager prior to the start of construction or placement of temporary traffic control devices or if the worksite traffic supervisor changes.

Temporary traffic control devices shall be maintained to ensure visibility and to protect the public. All reflective sheeting backgrounds and lights shall be kept clean of foreign matter. ~~The Contractor shall complete and submit a "Traffic Control Device Report" when a temporary traffic control device has been installed, removed, relocated, repaired, or at a minimum of once per week based on field observations. This report is supplied in the Proposal Book for the contract and is to ensure that the traffic control devices are looked at daily. The report shall be completed or reviewed~~
120 ~~by the CWTS. Each report shall be signed by the person who filled it out and initialed by the CWTS that it was reviewed. The Engineer will sign and date the report when received. The Engineer will not be responsible for the report's completeness and accuracy.~~

801.03.01 Coordination with INDOT Right of Way or Roadways

If not obtained by the City of Fort Wayne Division of Public Works, the Contractor shall apply for and obtain a permit from the INDOT for any work, maintenance of traffic or placing of equipment or excavations which may affect or alter the motoring public or existing conditions of INDOT Right of Way.

Notification and permitting of work shall be coordinated with INDOT prior to start of any work and should be communicated with City personnel. INDOT representatives will be invited to the pre-construction meeting.

For the cost of permitting to be waived, the contractor shall provide, as a part of the permit application, the City of Fort Wayne Project Number and City Project Manager associated with the project. Required Fee Bond and Waiver Form as well as Additional Disclosure Form must accompany any online permit submittal through the INDOT EPS.

801.10 Temporary Traffic Barriers

Temporary traffic barrier shall be one of the following four types as shown on the plans.

Type 2

Type 2 barriers may be used to separate traffic from the work zone. Type 2 temporary traffic barriers shall meet the appropriate test level 2 or 3 NCHRP 350 crash test standards and shall be approved for use by the FHWA. A 350 crash test letter of approval from the FHWA shall be provided the Engineer/Project Manager prior to placing the unit. The unit selected shall be appropriate for the location considering the maximum posted

360 speed limit on the project and the allowable area for deflection. The unit shall be installed according to the manufacturer's recommendations.

If concrete barriers are used as type 2 barriers, they shall be in accordance with the requirements for type 1 barriers.

Type 4

Type 4 temporary traffic barriers shall be those types that are intended to be readily moveable to accommodate the shifting of traffic lanes on a daily basis to better facilitate the changing volumes of traffic during the peak hours of a day. Type 4 temporary traffic barriers shall meet the appropriate test level 3 NCHRP 350 crash test standards and shall be approved for use by the FHWA. A 350 crash test letter of approval from the FHWA shall be provided the Engineer/Project Manager prior to placing the unit.

380

801.10.1 Construction Zone Energy Absorbing Terminal, CZ

490 The construction zone energy absorbing terminal, CZ, shall have passed NCHRP 350 level 3 crash test for all Interstate and other construction sites having a construction zone speed limit in excess of 45 mph and level 2 for non-Interstate construction sites having a construction zone speed limit of 45 mph or less. All energy absorbing terminal, CZ, shall have redirect capabilities and shall be approved by the FHWA. A copy of the crash test results and a copy of the FHWA approval letter shall be furnished to the Engineer/Project Manager prior to the installation of the unit. The Contractor may also use the Guard Rail Energy Absorbing Terminal CZ, manufactured by Energy Absorption Systems, Inc. until January 1, 2011. All units of this type in use shall be replaced with a compliant product immediately after this date regardless of the date of letting. No additional payment will be made for this replacement.

500 The unit's nose cover shall be reflectorized to provide improved visibility.

Assembly and installation of the unit shall be supervised or performed at all times by an installer trained and certified by the unit's manufacturer. The size, assembly, and installation shall be in accordance with the manufacturer's recommendations at the locations shown on the plans. When required for bi-directional traffic protection, transition panels and all other necessary hardware shall be included in the installation. A copy of the installer's certificate shall be provided to the Engineer/Project Manager prior to the start of work.

801.11 Temporary Crossovers

520 Temporary crossovers shall be either type A or type B as shown on the plans and shall be constructed in accordance with the applicable sections of 207, 402 or 502. If applicable, a CMDS shall be submitted to the Engineer/Project Manager for approval. Utilization of the Department provided spreadsheet is not required. When required to maintain median drainage, a 15 in. diameter pipe shall be placed at the centerline of the median under the crossover. If the crossover is to remain in place for future construction, the pipe shall have appropriate grated box ends in accordance with 715.

801.12 Temporary Pavement Marking

550 Temporary pavement markings shall be new materials placed in accordance with 808.04 and 808.05. However, when temporary markings are to be in place for 14 calendar days or less the dashed line pattern used on center line and lane lines may be 4 ft line segments on 40 ft centers and gore areas shall be marked by outline only and may be 5 in. wide lines. Temporary pavement markings shall be placed to maintain the pre-existing lane designations and number of lanes when appropriate, and shall be delineated with white or yellow tape for the correct lane lines. Spacing near intersections may require gap distances of 20 ft on center or less to properly designate the lanes. No-passing zones on all undivided two-way roadways shall be identified

with signs and centerline markings. All temporary markings shall be maintained and replaced until they are no longer applicable. Temporary markings shall be removed and not left in place longer than 5 days after placement of permanent pavement markings. Removal or adjustment of temporary pavement markings shall be done within 48 hours of notification from the Engineer/Project Manager.

580 Temporary pavement markings which are to be in service from December 1 through the following March 31 shall be painted markings. Such markings shall be placed in the standard pavement marking pattern and applied prior to the suspension of the work, or within seven work days after the Contractor is directed to place the markings. Adjustments to these dates to accommodate actual seasonal suspension and continuance of work are subject to approval by the Engineer/Project Manager upon written request.

801.15 Electronic Devices

(b) Portable Changeable Message Signs, PCMS

This shall consist of furnishing, installing, and maintaining a trailer-mounted, portable sign upon which varying electronically generated messages will be displayed to traffic. The message being relayed to traffic shall be legible and easily understood for a minimum distance of 650 ft.

710 The messages shall be as shown on the plans or as approved or directed by the Engineer/Project Manager. Messages shall be formatted in accordance with the Department's Guidelines for Portable Changeable Message Signs. Only upper case letters shall be used. Each message phase shall be displayed for at least 2 s. Display time for an entire message shall not exceed 8 s.

Placement of PCMSs shall be as shown on the plans or as directed by the Engineer/Project Manager. A minimum clearance of 7 ft from pavement to the bottom of the PCMS shall be provided. Units shall be level and PCMSs shall be turned away from traffic, placed in stand-by mode, or left blank until there is a valid message to be displayed.

720 When in use PCMSs shall be turned approximately 3° from perpendicular towards oncoming traffic to minimize glare. A drum shall be placed immediately in front of the PCMS trailer at both corners for delineation.

(c) Temporary Worksite Speed Limit Sign Assembly

740 A worksite speed limit authorized for intermittent use shall only be activated when workers are present at the site. The intermittent worksite speed limit shall only be used in the area of work. A worksite speed limit authorized for continuous use shall not include the flashing strobe lights or the S4-4 "WHEN FLASHING" plaque.

The worksite speed zone signage shall be placed and maintained by the Contractor. The worksite speed limit will be as shown on the plans or as directed by the Engineer/Project Manager and at least 10 mph below the posted speed limit for the roadway under construction.

(d) Temporary Traffic Signals

770 **1. Fixed Temporary Signals**

780 The Contractor shall obtain permits from local officials, companies, or individuals for the use of poles, right-of-way, or other property incidental to the installation of fixed temporary signals. Although entering into the contract implies permission and authority to install conduit under pavement, sidewalks, and alleys, all damage to underground utilities or interruption of such service shall be the responsibility of the Contractor.

The location, spacing, and timing of fixed temporary signals will be determined by the Engineer/Project Manager.

2. Portable Signals

800 Portable signals shall be selected from the Department's list of approved ~~Portable Signals~~ approved by the Engineer/Project Manager before installation. Prior to the activation, the Contractor shall provide a completed inspection checklist to the Engineer/Project Manager certifying that the portable signal is functioning properly and a copy of the signal timing plan.

The portable signal shall be equipped with remote monitoring. Unless otherwise shown on the plans, ~~Microwave or Doppler~~ Pre-timed or actuated vehicle detection as shown on the Department's list of approved ~~Portable Signals~~ shall be provided. A minimum of three drums shall be placed immediately in front of the portable signal trailer for delineation.

810 A technician certified by the manufacturer shall be available 24 h a day to respond within 2 h for the maintenance of the traffic signal equipment. ~~Copy of the certification shall be provided to the Engineer/Project Manager prior to the placement of the portable signals.~~ Maintenance of the portable signal includes adjustments to the phasing or timing as indicated on the plans or directed by the Engineer/Project Manager. The Contractor shall replace portable signals that cannot be returned to normal operation or that fail two times during the contract.

The Contractor shall provide a record of any modifications to the signal timing plan, failures, and all maintenance issues, to the Engineer/Project Manager prior to final acceptance and when otherwise requested. The report shall indicate the date, time, and nature of each event.

801.16 Temporary Traffic Control Zone

870

(b) Maintenance of Traffic for Mobile Operations

Signs, flagging, flashing arrow signs, and other required traffic control devices shall be furnished in accordance with the details shown on the plans or as directed. The Engineer/Project Manager reserves the right to stop work at any time to relieve traffic congestion.

Flagging operations shall be conducted under the supervision of either the designated CWTS or a flagger certified by ATSSA or approved equal certifying organization. The person supervising the flagging operation shall ensure that the flaggers are trained in proper flagging procedures and that the flagging operation is in compliance with the applicable sections of the MUTCD.

801.18 Basis of Payment

Add the following under 801.18 Basis of Payment:

Maintenance of Traffic will be paid under a lump sum basis. The pay quantity for this item shall be the percentage of Work completed at the time of billing (i.e., 10 percent of the lump sum amount for Maintenance and Protection of Traffic will be earned at 10 percent of earned Contract amount).

Add under the Pay Item list:

Pay Item	Pay Unit Symbol
Maintenance of Traffic.....	LS

Maintenance of Traffic shall include all labor, equipment and incidental work in the cost of the pay item.

SECTION 802 – SIGNS

802.01 Description

This work shall consist of furnishing the material for and erecting traffic signs in accordance with 105.03. Signs shall be installed as required unless written approval is obtained from the Engineer/Project Manager to make modifications at specific locations.

CONSTRUCTION REQUIREMENTS

802.03 Location of Signs and Sign Structures

40 Sign and sign structure locations shall be staked, and the Engineer/Project Manager will either approve the locations or give written notice of necessary changes. The provisions of 109.03 will not apply to posts ordered prior to approval of staked locations.

Two days notice shall be provided for inspection and approval of staked locations. All signs shall be adjusted to eliminate specular reflection.

802.05 Excavation and Backfill

The finished pavement or shoulder section shall not be damaged during excavation.

60 The Engineer/Project Manager shall be notified in writing of class X material in accordance with 206.02 encountered within the limits of the traffic sign supports foundation excavation. The Engineer/Project Manager will determine the design for the installation of the foundations. Excavation of class X material shall be in accordance with 206.

The excavation for sign posts shall be made as nearly as possible to neat lines. Sign post encasement shall not be formed except in sandy soil, or as directed.

802.07 Installing Supports

(c) V-LOC Anchoring System

V-Loc Anchoring systems shall be placed at locations noted on the plans. For placement on existing concrete surfaces, work shall consist of core-drilling to the correct size, installing socket flush with the surrounding surface and setting in new concrete. For installation during concrete placement, V-LOC shall be poured flush with the concrete surface at locations noted on the plans. V-LOC Anchoring Systems shall be included with the cost of the Sign Post Item.

Installation of V-LOC shall be oriented with the point facing towards traffic at a 45 degree angle away from the road for proper sign orientation.

Material shall be V-LOC Post Anchors for Square Posts, 2" x 2" with wedge.

Placement on Existing Concrete Installation, TAPCO 200-VS1
Placement with New Concrete Installation, TAPCO 200-VS1P

802.13 Bus (Citilink) Signs

Prior to the removal of any sign post or utility pole that has a Citilink sign on it, Citilink Operations must be notified of the removal. 260-432-4977.

If traffic is being maintained through the workzone, the Bus Stop signage shall be removed by the contractor and installed on a temporary sign post at or near the same location unless otherwise directed by the contract. Access to the temporary bus stop location shall be maintained if remaining in place.

If the project is closed to traffic or the bus stop is inaccessible until the project is completed, and the sign is required to be removed, the sign shall be removed and retained by the contractor. At the reopening of the new roadway, the contractor shall install the sign at the same location or as shown on the plans. If the sign is unable to be placed at the same location, the new sign placement must be coordinated through the project and Citilink Operations for final acceptance.

If Bus Stop signs are damaged or unreplaceable, the contractor shall notify the Project Manager and/or the City of Fort Wayne Signs & Markings Division at 260-427-1224.

Cost for maintaining access to the stop and related sign work shall be included in 801-06775 Maintaining Traffic.

SECTION 804 – DELINEATORS

804.01 Description

This work shall consist of furnishing and erecting delineators in accordance with 105.03 and 107.12. Delineators shall be installed as required unless approval is obtained from the District Traffic Engineer to make modifications.

SECTION 805 – TRAFFIC SIGNALS

CONSTRUCTION REQUIREMENTS

805.03 General Requirements

The Contractor shall maintain existing traffic signals in operation until the Engineer/Project Manager determines that the progress of the work necessitates their removal. The new installation shall not interfere with the operation of the existing signal. The work shall proceed in such a manner that the signals are not out of service at any two adjacent intersections at any time. When the operation of an existing traffic signal needs to be interrupted before the new signal is placed in operation, the traffic shall be controlled

60 at all times. The work shall be scheduled so that the interruption is limited to a minimum amount of time and at off peak hours. The new span and catenary installation shall not interfere with the operation of the existing traffic signal. Traffic shall be controlled at all times during the changeover when the existing traffic signal is turned off and the new signal is turned on. This changeover shall take place such that the interruption is limited to a minimum amount of time.

All existing painted metallic signal equipment to be reused, such as pedestals, bases, controller cabinets, signal weatherheads, pipe arms, shall be cleaned and painted with two coats of highway yellow enamel in accordance with 909.02(c). Existing metallic signal heads to be reused shall be painted with two coats of black or highway

90 yellow enamel as directed by the Engineer/Project Manager and in accordance with 909.02(c).

Aluminum poles and signal support structures shall not be painted.

Existing concrete foundations, which have not been used in the new installation, shall be removed to a minimum of 4 in. below the adjacent grade. The openings shall be filled with concrete and the surface finished and broomed, if they are located in sidewalk areas. Otherwise, they shall be filled with acceptable material conforming with the surrounding area.

100 Existing signal handholes to be removed, shall be filled after removing rings and covers, with B borrow with a minimum of 4 in. of concrete on top to bring it up to grade in a sidewalk area. Surfaces shall be finished and broomed. Otherwise, they shall be filled with acceptable material conforming with the surrounding area.

The signal controller timings will be provided and the Engineer/Project Manager shall be present when the signal intersection is to be placed in operation.

120 Before starting work, the Contractor shall provide the names of the Level II Traffic Signal Construction Technicians, the Level II Traffic Signal Field Technicians and Work Zone Temporary Traffic Control Technicians who have been assigned to perform signal related work, and a photocopy of each such person's certification card. If the Level II Traffic Signal Construction or Field Technicians or Work Zone Temporary Traffic Control Technicians are dismissed from the work, all signal related work requiring such certified personnel on the project site shall cease until the names and photocopies of certification cards for replacement personnel are provided to the Engineer/Project Manager.

Prior to activating any new traffic signal installation, the contractor must notify the Traffic Engineering & Operations Departments at least 2 days prior to operation. A representative from Traffic Operations must be present when the signal is first activated to ensure signal is working properly.

The traffic signal controllers shall be Siemens Eagle Signal Controller EPAC 300 M-60 Series TS2-Type 2. The communication interface panel shall be wired in accordance with the City of Fort Wayne instructions. The cabinet assembly unit and the City of Fort Wayne's Intelligent Transportation Management System running ITS Siemens' TACTICS Software.

805.05 Placing Signal Heads

Signal cantilever arm and span mounted signal heads shall have 17.5 ft minimum and 22.5 ft maximum clearance over the roadway unless there are visual obstructions which require lowering the signal head. A signal head over the roadway shall not have a clearance of less than 15 ft. Such signal heads shall be located over the intersection as shown on the plans. Such signal heads shall have a uniform clearance, which will be determined. Signal heads not mounted over a paved roadway, on the top or side of a pole, shall not be less than 10 ft or more than 15 ft above the sidewalk or, if none, above the pavement grade at the center of the roadway. Signal faces shall be directed to the proper approach lane in each direction. Flasher signal faces that supplement signs shall be mounted with the bottom of the housing at not less than 3 ft or more than 13 ft above the edge of pavement. Flasher signal faces that supplement signs shall be directed towards oncoming traffic. Pedestrian signal faces shall be mounted with the bottom of the housing at not less than 7 ft or more than 10 ft above the sidewalk. The pedestrian signal shall be in line with the pedestrian's vision at the appropriate crosswalk being used. Pedestrian push-buttons shall be mounted at a height of 3 1/2 to 4 ft above the sidewalk as shown on the plans. A pedestrian actuated signal sign shall be mounted immediately above the push-button. Push buttons shall have no more than a 10" side reach from the clearspace.

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805.08 Controller Cabinet, Signal Service, and Detector Housing

270 Installation

Three document packets shall be prepared in accordance with 922.02(b) for each cabinet. Each packet shall be labeled with the name of the contract number, the intersection, the commission number of the signal, and the date of installation. One paper packet shall be placed in the cabinet, one paper packet shall be submitted to the Engineer/Project Manager, and one electronic packet shall be submitted to the Electronic Technician Supervisor at the Department's Logistical Support Center within two days after the signal is turned on. Information in the packets shall include all approved changes to the signal installation. All detector loop lead-in tags and detector rack labels shall reflect all approved changes to the signal installation.

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Additional detector loop amplifier units and detector racks shall be supplied as directed by the Engineer/Project Manager. Additional detector racks shall include all cables or harnesses including, but not limited to a SDLC cable for each added rack, interface panels and a BIU to provide a complete and functional installation. Additional auxiliary BIU panels shall include all cables or harnesses including, but not limited to a SDLC cable for each additional auxiliary BIU panel, terminal strip on BIU panel and BIU to provide a complete and functional installation.

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For signal cabinets installed by the Contractor, where no detector loop or lead-in work is included in the contract, the Contractor shall perform detector loop tagging, testing and vehicle simulator testing in accordance with 805.09, only to the extent of documenting the test readings and confirming that all existing detector loops are connected correctly and all detector related equipment in the cabinet is operating correctly.

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The controller cabinet shall be mounted securely on a pole, pedestal, or concrete foundation. All cabinets on concrete foundations shall be installed with the anchor bolts inside. Controller cabinets on poles or pedestals shall be mounted at a height of 38 in. \pm 2 in. Pole mounted controller cabinets shall be fastened with two stainless steel bands as shown in the plans. Signal cables and lead-in cable shall be run in conduit from the controller cabinet to the signal support base and to detector housing as indicated on the plans. Galvanized steel elbows shall be used on the detector housing as shown on the plans.

The Contractor shall wire the entrance switch and bring service cable up the riser and out the weatherhead and leave 4 ft of cable outside the weatherhead. For aerial service drops, Single Strand THHN Black wire shall be used from the meter to the weatherhead. The utility company, at their option, may bring the service cables to the load side of the entrance switch. Meter bases, if required, shall be obtained from the power company.

805.09 Loop Wire Detector Installation

(a) Layout

Prior to installation, loop layout shall be approved in writing by the ~~District~~ District Traffic Engineer. The Contractor shall notify the ~~District~~ District Traffic Engineer a minimum of two business days prior to the date that loop layout approval is required. All roadway centerlines, edge-lines and stop-bars pertinent to loop layout shall be accurately and clearly identified at the time loop layouts are reviewed for approval. An outline shall be painted where the loops are to be placed. The Contractor shall ensure that the final installed location of each loop matches the intention and functionality of the approved layout for loop spacing, lane width and geometry.

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(b) Installation

All loops and lead-in cables shall be tagged according to the plans and 805.07.

The slots shall be saw-cut as shown on the plans. A diamond cutting blade shall be used for sawing all loops. All saw-cut loops shall have individual saw cuts to the detector housing. Joints shall be overlapped such that the saw cut at the corner is full depth. Prior to installing roadway loop wire in the roadway saw cuts, the saw cuts shall be cleaned in accordance with the manufacturer's requirements for the joint sealant to be used. After proper cleaning, the loop wire shall be installed. All loops shall be wired

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clockwise as viewed from above. Loops shall be wired with four turns or as specified then gently tamped with a blunt non-metallic tool. Backer rod 2 to 4 in. in length shall be spaced every 12 in. around the saw cut above the wire and gently tamped to hold the loop wire snug in the bottom of the saw cut. Backer rod shall not be continuous around the saw cut. After installation of the loop wire, the saw cut shall be sealed with a joint sealant material. The sealant shall be poured into the saw cut making a water tight seal. The joint sealant material shall be installed in accordance with the manufacturer's recommendations and 906.02. However, the joint configuration shall not apply. A copy of the sealant manufacturer's written application instructions shall be submitted to the Engineer/Project Manager prior to any sealant operations. If the Contractor elects

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to use a sealant complying with 906.02(a)2, the sealant material shall be heated in a kettle or melter constructed as a double boiler with the space between the inner and outer shells filled with oil or other heat-transfer medium. This melter shall have a positive temperature control and a mechanical agitator. A backer rod shall be used for both cold applied sealants and hot poured sealants. The sealant material shall fill the saw cut as shown on the plans. All excess joint sealant on the pavement surfaces shall be promptly removed.

(d) Testing and Acceptance

All testing and acceptance procedures performed by the Contractor shall be performed in the presence of the Department personnel assigned by the Engineer/Project Manager. The Contractor shall notify the Engineer/Project Manager a minimum of two business days prior to the date testing is to be performed.

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The Contractor shall meter all new loop wire detectors or a new bank of loop wire detectors by means of instruments capable of measuring electrical values for installed loop wires and lead-in cables. The instruments shall measure inductance in microhenries, resistance in ohms, induced AC voltage in volts, and leakage resistance in megohms. All measuring tests shall be performed at the detector housing before the loop wire is spliced to the lead-in cable, and at the cabinet after the loop wire is spliced to the lead-in cable.

3. Acceptance Criteria

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The Contractor shall record all test readings, in triplicate, on tabular forms provided by the Department or by copying the one included elsewhere herein. The Contractor shall complete, sign, and date the forms before submitting them to the District Traffic Engineer. The District Traffic Engineer will use these forms for recording the Department's readings on the corresponding space provided.

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805.12 PVC, HDPE, and Fiberglass Conduit

The method of installing PVC, HDPE and rigid fiberglass conduit underground shall be the same as for steel conduit where applicable except trenches for the conduit in areas with class X material as described in 206.02 shall be backfilled with 2 in. of natural sand before the conduit is placed in the trench. Materials excavated may be used for backfill, if approved. If the Engineer/Project Manager deems it necessary, approved B borrow shall be placed over the conduit to a depth of 12 in. and the remainder of the trench shall be filled with excavated material.

805.14 Final Clean Up & Inspections

When the installation is completed, all disturbed portions of sidewalk, pavement, shoulders, driveways, and sod, shall be cleaned and any excess excavation or other materials shall be disposed. All cutting in the sidewalk and pavement areas shall be done with a saw. Sidewalk removal and replacement shall be to the nearest tool joint. Unless otherwise directed, cuts in pavement areas shall be no greater than 12 in. in width.

Contractor shall complete signal installation, including all underground conduit, wiring, foundations, pole placement, signal detection, communications, signal heads, cabinet and hardware, testing, site restorations, etc. and notify the Engineer/Project Manager that work is complete and ready for a punch list inspection of work. Inspection will be made by the department and notification of any discrepancies from plans or standards will be communicated to the contractor for repairs or modifications. All work from the punch list inspection must be completed before notification that punch list items have been completed and a final inspection will be made. Any work not completed from the original punch list that is not completed at final inspection is subject to retainage being withheld for re-inspections not being completed and requiring additional site reviews of incomplete work.

805.15 Method of Measurement

805.15 Method of Measurement Controller and cabinet; controller cabinet foundation; disconnect hanger; handhole, signal; loop detector delay amplifier; loop detector rack; pedestrian push button; pedestrian signal head; signal cantilever structure, combination arm; signal cantilever structure, drilled shaft foundation type; signal cantilever structure, dual arm; 590 signal cantilever structure, single arm; signal cantilever structure, single arm, combination arm; signal cantilever structure, spread footing foundation type; signal detector housing; signal pole; signal pole foundation; signal service; span catenary and tether; traffic signal head; and traffic signal head, retrofit; will be measured by the number of units installed.

The pay length for a signal cantilever arm or combination arm will be the length shown in the Schedule of Pay Items.

Conduit of the type specified will be measured by the linear foot from outside to 600 outside of foundations. All signal cable will be measured by the linear foot, except IC wiring for signal loops which shall be paid as a part of the item..

Saw cut for roadway loop detector and sealant ~~will be measured by the linear foot for the full depth of slot cut in the pavement as shown on the plans or as directed~~ and IC wiring for loops up to the Detector Housings will not be paid for separately, but will be included in the item, Roadway Signal Loop.

If class X material is encountered during foundation excavation, measurement will be made in accordance with 206.10.

Traffic signal installation, flasher installation, miscellaneous equipment for traffic signals, and final cleanup in accordance with 805.14 will not be measured for payment. 610 Reinforcing bars will not be measured for payment.

Traffic signal equipment removal will be measured per each installation to be removed. Transportation of salvageable signal equipment will not be measured.

805.16 Basis of Payment

Traffic signal installation and flasher installation, all of the type, new or modernized, and the location number specified, will be paid for at a contract lump sum price.

440 If specified as pay items, controller and cabinet; controller cabinet foundation; disconnect hanger; handhole, signal; loop detector delay amplifier; loop detector rack; pedestrian push button; pedestrian signal head; signal cantilever structure, single arm; signal cantilever structure, combination arm; signal cantilever structure, single arm, combination arm; signal cantilever structure, dual arm; signal cantilever structure, drilled shaft foundation type; signal cantilever structure, spread footing foundation type; signal detector housing; signal pole; signal pole foundation; signal service; span 805.16 866 catenary and tether; traffic signal head; and traffic signal head, retrofit; will be paid for at the contract unit price per each.

450 Conduit of the type specified will be paid for at the contract unit price per linear foot. The cost of any backfill, ground wire, or expansion fittings shall be included in the cost of conduit.

Saw cut for roadway loop detector and sealant, and signal cable extending from the Detector Housing will be paid for at the contract unit price ~~per linear foot~~ each.

The removal of existing traffic signal equipment designated to be removed will be paid for at the contract unit price per each for traffic signal equipment, remove for each location removed. When designated as a pay item, the transportation of 640 salvageable signal equipment will be paid for at the contract lump sum price for transportation of salvageable signal equipment.

Class X excavation will be paid for in accordance with 206.11.

Miscellaneous equipment for traffic signals will be paid for at a contract lump sum price.

Payment will be made under:

460	Pay Item	Pay Unit Symbol
	Conduit, _____ type	LFT
	Controller and Cabinet, _____ type	EACH
	Controller Cabinet Foundation, _____ type	EACH
	Disconnect Hanger	EACH
	Flasher Installation, _____, Location No. _____ type	LS
470	Handhole, Signal, _____ type	EACH
	Loop Detector Delay Amplifier, _____, _____ Channel type no.	EACH
	Loop Detector Rack	EACH
	Miscellaneous Equipment for Traffic Signals	LS
	Pedestrian Push Button, _____ type	EACH
	Pedestrian Signal Head, _____, _____ type lens size	EACH 670
	Saw Cut for Roadway Loop Detector and Sealant	LFT
	Roadway Signal Loop	EACH
	Signal Cable, _____, Copper, _____ C/ _____ type conductors/size	LFT
	Signal Cantilever Structure, Combination Arm _____ ft length	EACH
	Signal Cantilever Structure, Drilled Shaft Foundation, _____ type	EACH
	Signal Cantilever Structure, Dual Arm _____ ft, _____ ft length length	EACH
480	Signal Cantilever Structure, Single Arm _____ ft length	EACH
	Signal Cantilever Structure, Single Arm _____ ft, length	
	Combination Arm _____ ft length	EACH
	Signal Cantilever Structure, Spread Footing Foundation, _____ type	EACH
	Signal Detector Housing	EACH
	Signal Pole, _____, _____ ft type length	EACH
490	Signal Service	EACH
	Signal Pole Foundation, _____ in. x _____ in. x _____ in.	EACH

Span, Catenary, and Tether	EACH
Span, Catenary, and Tether, Remove	EACH
Traffic Signal Head, Remove	EACH
Traffic Signal Equipment, Remove	EACH
Traffic Signal Head, _____, Section, _____ no. lens size	EACH
Traffic Signal Head, _____ Section, Retrofit	EACH
no.	
Traffic Signal Installation, _____, Location No. _____ type	LS
Transportation of Salvageable Signal Equipment	LS

The cost of the controller and cabinet, conduit, foundations, vehicle detection, pedestrian signals, signal heads, signal poles, signal service, signal cable and all equipment or materials required to complete the installation shall be included in the cost of traffic signal installation.

The cost of the controller and cabinet, conduit, foundations, signal heads, signal 710 poles, signal service, signal cable and all equipment or materials required to complete the installation shall be included in the cost of flasher installation. For a solar powered flasher, the cost of the solar panel, battery cabinet, program timing module, signal heads, wiring, and all hardware required to complete the installation shall be included in the cost of flasher installation.

The cost of the controller assembly, standard loop detector racks, all wiring, hardware, and associated equipment required to operate the intersection shall be included in the cost of controller and cabinet.

The cost of concrete, conduits, grounding bushings, ground rod, ground wire, drainage, anchor bolts, and all hardware required to complete the installation shall be included in the cost of controller cabinet foundation.

The cost of all work and hardware required to properly install loop detector delay amplifier, counting or non-counting, as shown on the plans or as directed shall be included in the cost of loop detector delay amplifier.

The cost of concrete reinforcing pipe and ring or polymer concrete box, cover and attachment hardware, handhole bottom if required, and aggregate as shown on the 730 plans shall be included in the cost of handhole, signal.

The cost of any supplementary loop detector rack, all wiring, hardware, detector panel, BIU, and associated equipment shall be included in the cost of the loop detector rack. The cost of the push button, pedestrian actuated signal sign, any accessible

pedestrian signal components, and all hardware required to complete the installation shall be included in the cost of pedestrian push button.

The cost of signal face hook-up wire, pole plates and arms for side mounts, pipe arms, signal brackets, bulbs, weatherhead, and all additional hardware required to assemble a combination of pedestrian signal indications as shown on the plans shall be included in the cost of pedestrian signal head.

550 The cost of the slot cut on the pavement, backer rod, loop sealant, and all testing in accordance with 805.09 shall be included in the cost of ~~saw cut for roadway loop and sealant~~ Roadway Signal Loop.

The costs of all work and hardware required to properly install overhead or underground signal cable as shown on the plans or as directed shall be included in the cost of signal cable and signal interconnect cable.

The costs of the independent shelf mount unit or card-rack unit, and power module shall be included in the cost of loop detector delay amplifier.

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The costs of concrete reinforcing pipe, ring and cover, eye bolts, hardware, handhole bottom, and aggregate under the handhole bottom as shown on the plans shall be included in the cost of handhole, signal.

The costs of aluminum casting, enclosure concrete, steel conduit and elbow, and all hardware required to complete the installation shall be included in the cost of signal detector housing.

The costs of steel pole bands or straight eye bolts, span, catenary, and tether of wire

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rope cables, cable rings, type A support cable, wire rope clips, safety cable, thimble, service sleeve, and all hardware required to complete the installation as shown on the plans shall be included in the costs of span, catenary, and tether for signal, or span and catenary for flasher.

The cost of all work required to complete the removal of both span, catenary and tether and signal heads shall be included in the cost of the pay item.

The costs of excavation, backfill, final cleanup in accordance with 805.14, and necessary incidentals shall be included in the costs of the pay items.

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The cost of the push button, pedestrian actuated signal sign, any accessible pedestrian signal components, including push button extensions if required, and all hardware required to complete the installation shall be included in the cost of pedestrian push button.

SECTION 807 – HIGHWAY ILLUMINATION

MATERIALS

807.02 Materials

All flexible conduit shall be galvanized steel, polyvinyl jacketed, and watertight.

Reinforcing bars shall be epoxy coated.

All lighting standards shall conform with The City of Fort Wayne Standard Details, and shall be sourced from an approved vendor to ensure compatibility with existing materials.

CONSTRUCTION REQUIREMENTS

807.03 Working Drawings

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When requested, sufficient design data shall be furnished with the drawings to verify that conventional lighting standards are in accordance with wind load, deflection, vibration, and breakaway requirements. All of the above shall be based on the lighting-standards details shown on the plans. After approval, the Engineer/Project Manager shall be advised of where changes to the Installation Summary sheets are being made because of existing roadside conditions. Where necessary, additional lighting standard working drawings shall be submitted for approval.

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If a lighting standard is designed to support a larger luminaire than that specified, such information shall be shown on the working drawings. A ~~Type C~~ certification from the manufacturer shall be furnished with the working drawings stating that the breakaway devices are in accordance with the breakaway criteria of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals.

807.05 Backfilling

Wherever practicable, all suitable materials removed from the excavated areas shall be used in refilling cable-duct and conduit trenches. No excavated materials shall be wasted without authorization. Materials authorized to be wasted shall be disposed of as approved. Backfill for trenches shall be placed in layers not to exceed 6 in., loose

measurement. The first layer shall be sand or earth containing no particles or lumps that would be retained on a 1/4 in. sieve. All open cut trench beneath road, trail, walk or ramp surfaces shall be backfilled with approved granular material, mechanically compacted in lifts no more than 1' in depth. The second layer shall contain no particles or lumps that would be retained on a 1 in. sieve. ~~Subsequent layers shall contain no particles or lumps that would be retained on a 3 in. sieve.~~ The second layer and each subsequent layer shall be compacted with pneumatic hand tamps to the satisfaction of the Engineer/Project Manager to prevent any future settlement of the backfilled area. Backfilling of cable-duct and conduit trenches around lighting standard foundations, handholes, manholes, and other structures shall be in accordance with the applicable provisions of 211. Finish grading of earthwork shall be accomplished in a satisfactory manner.

807.06 Placing Conduit

Conduit shall be placed as shown on the plans and in accordance with applicable provisions of 805.11. Conduit shall be of a size to readily enable the passage of the cable-duct being used.

Conduits shall be placed at a minimum depth of 24" – 30" or as directed. Contractor may use 1.5" or 2" HDPE bore tube designed for use in buried electrical applications, or Schedule 80 PVC conduit. Conduit service risers shall include an RMC sweep 90, and 10 LFT of RMC up the pipe. The remaining length of riser shall be RMC or Schedule 80 PVC.

All Wire placed between the service point and the first light assembly or handhole splice on the **circuit** shall be type XHHW-2.

Conduit installed under pavement shall extend a minimum of 2 ft beyond the edge of the paved surface or improved shoulder. The ends of such conduit shall terminate a nominal 2 ft below the ground surface. The ends shall be pitched so as to provide a positive drain to the surrounding soil. The ends shall be protected by threaded cap fittings until the time of installation of cable or cable-duct. Threaded bushing fittings shall be used on all ends before cable installation.

807.07 Connections in Base of Light Pole

Conductors shall be electrically bonded to each other, as required to satisfy circuit requirements, by means of compression type fittings of the style and type shown on the plans. Inhibitor compound shall be used on each compression connection. Conductor identification shall be maintained by connecting like color connectors.

200 A multiple conductor compression fitting shall be used to connect supply conductors and an insulating link used to provide an extension as shown on the plans. These fittings shall be covered with snap-on fiber or plastic covers designed to protect them from electrical contact. Taping will not be allowed. The bare extension of the supply conductor from the multiple fitting to the insulation link shall be no longer than necessary to admit the application of the snap-on cover for the multiple fitting.

The pole circuits shall be connected by means of easily separated, single conductor connector kits. The connector kit on the “hot” side of the pole circuit shall be fused. The connector kit for the neutral side shall not be fused. Fuses shall be of the “KTK” series with a rated capacity three times the operating amperage of the luminaire. If the required capacity is not a standard size, the next larger size fuse shall be used. Wire connector kits may be deleted if directed by the City of Fort Wayne’s Street Light Engineering Department.

807.08 Placing Wire and Cable

(a) Underground Through Cable-duct

260 All underground distribution conductors shall be continuous runs between splice points. Unless otherwise authorized, splice points shall be inside the bases of lighting standards, ~~inside handholes~~, in service distribution boxes, at point of connection to power supply in switch boxes, or in junction boxes. All splices shall be made with the proper connector in accordance with 807.07. Splices in handholes are prohibited unless authorized by Street Light Engineering.

807.08 (f) WIRE, 3C/6 XHHW-2 IN TRAY CABLE IN 1.5” HDPE BORE TUBE

Item shall include all parts, materials, labor, and equipment required to place bore tube or PVC conduit as planned or directed. Wire shall be XHHW Type 2.

Bore tube shall be SDR 11, 1.5” HDPE or approved equal, and meet ASTM F-2160. Tube shall be placed at a depth of 24”, unless otherwise directed. All coupled bore tube joints shall be joined with epoxy type adhesive or other approved method. If contractor elects to place PVC conduit, all joints shall be glued with “gray” PVC adhesive. All fittings and joints shall be cleaned and primed prior to assembly. PVC pipe shall be Schedule 80.

If contractor elects to open-cut for wire and conduit installation, bottom 12” of trench shall be backfilled with special borrow “B” or other approved granular material, compacted in place.

Pay quantity shall be measured from center of light pole to center of light pole or in-ground hand hole

Item shall include all required reseeding/sodding/restoration.

807.08 (g): RISER ASSEMBLY, 2", GALVANIZED, WITH 1800W P/C AND BRACKET

Item shall include all materials, equipment, and labor required to complete installation of 1.5" or 2" riser assembly as planned or directed. Riser shall include an RMC 90 degree sweep "ELL" at the base of pole. Item shall include grommet in ELL fitting, #6 solid copper ground wire with 1-10' ground rod. First 10' stick up the pole out of the ELL shall be RMC. The remainder of the riser pipe may be RMC or Schedule 80 PVC. All wire shall be type XHHW-2. Wire shall be Service Wire Company Brand, Type XHHW-2 (Type-2) or approved equal. Riser shall include weatherhead. Photocell shall be mounted on a bracket and accessible to ground crews for testing/activating with standard "stick". Photocell shall be rated at a minimum of 1800 watts. SLO shall complete terminations at top of pole.

807.10 Concrete Foundations For Light Poles

(b) Precast Foundations

400 Precast foundations shall be complete with reinforcing bars, tie bars, anchor bolts, and entry sleeves located to provide a level mounting for the lighting standard after installation. The grounding coil, as shown on the plans, may be used for grounding lighting standards set on precast foundations. Foundation backfill shall consist of coarse aggregate No. 53. Pre-Cast foundations shall be prohibited unless specified by Street Light Engineering.

807.11 Placing Light Poles

(a) Lighting Standards Under 80 ft in Height

The lighting standard assembly shall consist of a metal pole, a shoe base, a frangible breakaway base or coupling where shown on the plans, and a metal mast arm for attaching the luminaire. Breakaway bases shall only be used when/as directed. The unit shall be assembled on the ground. Pole circuit wiring shall be installed and the luminaire shall be attached prior to erection. The

420 factory finish of the pole assembly shall be protected from mars, blemishes, scratches, or other damage. Slings and chokers for lifting purposes shall be of nylon or other approved material. Chains, metal rope, or other abrasive materials shall not be used for lifting devices. If damage to the factory finish occurs, repair or replacement shall be as directed.

807.11 (c) New Light Pole & Luminaire Identification

A pole identification label shall be installed on each pole. Pole identification labels will be provided by the City and installed by contractor. Install labels at a mounting height of 6'-0" and face it toward the roadway. City will provide a plan identifying the poles and corresponding numbers to the contractor prior to installation.

807.12 Grounding

480 As an acceptable substitute to this process, a mechanical ground grid connection of an approved type may be used. Tap type clamps, parallel type clamps, U-bolt flat clamps, and crossover clamps will not be accepted. Mechanically-bonded grounding shall be approved by Street Light Engineering prior to installation.

807.13 Luminaires

(a) Installation

1. Roadway Luminaires

Item shall include all materials, equipment, and labor required to furnish and install luminaire(s) as specified on the plan sheets or on the bid tab pay item list.

540 Each luminaire shall be leveled in both directions in the horizontal plane after the light standard has been erected and adjusted. Rotary adjustment of the mast arm and vertical adjustment of roadway luminaires to obtain an installed level position in both directions shall be accomplished by means of the bolted saddle arrangement used to attach the luminaires to the mast arm. Lamp socket positions may be shown on the plans by type of Illuminating Engineering Society of North American, IES, and light pattern. The specified lamp socket position or comparable arrangement of LEDs shall be used to obtain the desired light pattern delivery. Proper connections shall be made to provide operation at the voltage being supplied. Replacements needed because of faulty or incorrect voltage connections shall be made with no additional payment. All

~~roadway luminaires provided for an interchange, or contiguous highway segment shall be the same model.~~

Poles and luminaires that need to be reset as part of the project will be reset, replumbed and terminated. The bid item shall include all labor, materials, and equipment to plumb and reset existing direct-bury luminaires and poles as planned or directed. Item shall include wire terminations as described in pay item. Street Light Engineering shall determine if/when this pay item applies to any work involving pay items. Poles out of plumb due to electrical work shall not qualify for payment under this pay item.

2. Sign Luminaires

Sign luminaires shall be connected to a phase conductor and a neutral conductor. The luminaires shall be alternately connected to opposite phase conductors to balance the load. The connections in the base of the sign structure shall be in accordance with 807.06. Conductor splicing shall be in junction boxes, in-ground handholes, inside handholes of sign structures, and circuit breaker enclosures. All sign luminaires provided for an interchange or contiguous highway segment shall be the same model.

All Sign lighting shall be of the "Down Lighting" variety. Illuminated sign boards shall be shielded to eliminate light passing above 90 degrees from the top of the sign. Sign lighting shall not cause light trespass levels in excess of 5 fc when measured 5 ft from residential property lines. Sign lighting shall not cause glare to passing motorists, or create a dangerous silhouette effect due to beam direction.

570

3. Underpass Luminaires

Underpass luminaires shall be mounted on the vertical side surfaces of bridge bent structures or suspended by means of pendants supported by angle-iron struts or clips fastened to the structural beam members of the bridge. All parts of the pendant pipe assembly shall be hot-dipped galvanized after threads are cut. Silicone caulking compound shall be applied to the threads during assembly of the pendant. Underpass luminaires may require separately mounted ballasts which shall be installed in close proximity to the luminaires.

580

Underpass luminaires shall be connected to a phase conductor and a neutral conductor. The luminaires shall be alternately connected to opposite phase conductors to balance the load. Conductor splicing will only be allowed in junction boxes, in-ground handholes, and circuit breaker enclosures. ~~All underpass luminaires provided for an interchange shall be the same model.~~

(b) Warranty

A non-prorated manufacturer's written warranty, against loss of performance, defects in materials and defects in workmanship, shall be provided to and in favor of the Department. For roadway, underpass, and high mast luminaires, the warranty shall cover a period of 10 years from the date of installation of the luminaire; for sign luminaires the period shall be five years. The warranty shall cover all components of

600 the luminaire, including but not limited to ballast, driver, and light source. Loss of
performance is defined to include, but is not limited to, the luminaire or any of its
components falling out of compliance with the specification in place at the time of
610 installation, which includes but is not limited to the following: there is no light output
from 10% or more of the LEDs, LED junction temperature exceeds 158°F under any
circumstance, the luminaire is operating below the lumen maintenance curve, or the
color temperature shifts more than 500K outside of the specified color temperature
range. The warranty shall stipulate that replacement luminaires shall be shipped to the
appropriate Department District Office, at no cost to the Department, within 30 days
after the manufacturer's receipt of failed luminaires. Warranty documents shall
include the manufacturer's name, address to which failed luminaires are to be shipped
for replacement, contact person and contact person's telephone number and e-mail
610 address. Warranty documents shall be submitted to the Engineer/Project Manager
~~with the type C certification.~~ Warranty documents shall provide the estimated life
cycle of the lamp, LEDs, plasma emitter and power driver, and will be specified in
agreement between the City of Fort Wayne and the manufacturer.

630 **807.14 Sign, Underpass, Roadway, High Mast Lighting Location, and Luminaire Identification**

A luminaire identification sticker shall be provided on each luminaire and on
the light pole or tower that supports the luminaire. Luminaire identification tags
will be provided by Street Light Engineering, and installed by the contractor. The
sticker shall be titled "LUMINAIRE" and contain the following information: light
source type, manufacturer, model, wattage, date of installation, and warranty
period. The pole/tower sticker shall be attached underneath the light pole ID tag,
shall face the roadway, and shall have 3/4 in. lettering, and be no greater than 8 in.
by 8 in.

807.15 Service Point Power Entry

650 The service voltages supplied by the local utility shall be checked for compliance
with the planned voltages. If a discrepancy exists, it will be resolved as directed
before work is started or any electrical equipment is purchased.

(a) Types of Service Points

Service point installations shall be of two types as shown on the plans. Service
points serving residential circuits shall be per City of Fort Wayne details and
specifications.

807.18 Method of Measurement

780 Cable-duct and conductor in underground duct or conduit will be measured by the linear foot as follows:

~~(a) From the face of the concrete foundation to the center of the handhole or face of the next concrete foundation. An allowance of 5 lft will be made for each entry at foundations. An allowance of 2 lft will be made at handholes for connection purposes.~~

~~(b) From lighting standard bases or handholes to switch boxes at underpasses. An allowance of 4 lft will be made at the switch box for electrical connections.~~

790

~~(c) From end to end of the conduit when the cable is in conduit under a roadway surface or shoulder. No measurement will be made of cable duct in conduit where it is part of a service point, sign installation, or underpass lighting system.~~

(a) Conduit and wire quantities shall be measured from center of pole foundation or handhole to center of pole foundation or handhole. Any allowances shall be per project special provisions.

SECTION 808 – PAVEMENT TRAFFIC MARKINGS

808.01 Description

This work shall consist of furnishing and installing, or removing, pavement traffic markings and snowplowable raised pavement markers in accordance with the MUTCD, these specifications and as shown on the plans. Markings shall be installed as required unless written approval is obtained from the District Traffic Engineer to make modifications at specific locations.

CONSTRUCTION REQUIREMENTS

808.03 General Requirements

30 Permanent pavement markings shall be placed on the surface course in a standard pavement marking pattern. Center lines shall be placed on two-way two-lane roads, lane lines shall be placed on multi-lane divided roads, and both center lines and lane lines shall be placed on multi-lane undivided roads.

The pavement shall be cleaned of all dirt, oil, grease, excess sealing material, excess pavement marking material and all other foreign material prior to applying new pavement traffic markings. New paint pavement markings may be placed over sound existing markings of the same color. New thermoplastic, preformed plastic, or multi-component markings may be applied over sound existing markings of a compatible type if allowed by manufacturer's recommendations, a copy of which shall be supplied
40 to the Engineer/Project Manager prior to placement; otherwise, existing markings shall be removed in accordance with 808.10 prior to placement of the new markings. Removal of pavement marking material shall be in accordance with 808.10. The pavement surface shall be dry prior to applying pavement traffic markings.

808.04 Longitudinal Markings and Milled Corrugations

All longitudinal lines shall be clearly and sharply delineated, straight and true on tangent, and form a smooth curve where required. Lines shall be square at both ends, without mist, drip or spatter.

A solid line shall be continuous. A broken line shall consist of 10 ft line segments with 30 ft gaps. A dotted line shall consist of 3 ft line segments with 9 ft gaps unless otherwise indicated on the plans.
60

All lines shall be gapped at intersections unless otherwise specified or directed.

The actual repainting limits for no-passing zone markings will be determined by the Engineer/Project Manager.

160 808.07 Pavement Marking Material Application, Equipment, and Performance Requirements

All double line markings, such as a no passing zone or the center line of an undivided multi-lane roadway, shall be applied in one pass. When a hand-propelled machine is used, the single pass application of double line markings will not be required and control points shall be spaced at a maximum of 10 ft longitudinally.

For contracts with completion dates when conditions do not enable application of the specified marking materials, or grooving for durable marking materials, other materials may be substituted with an appropriate unit price adjustment if approved by
170 the Engineer/Project Manager.

Markings shall be installed in accordance with the manufacturer's recommendations, except that the minimum requirements stated herein shall also

apply. Products specifically designed for application temperatures below the stated minimums herein are not required but may be used if approved by the Engineer/Project Manager. When directed, the Contractor shall provide the Department with original copies of all necessary current manufacturer's installation manuals prior to beginning installation work, and no installation work shall begin prior to the Department's receipt of these manuals. These manuals shall become the property of the Department.

The markings shall meet or exceed the following performance criteria:

1. Color. The daytime and nighttime color of the applied markings shall be in accordance with ASTM D 6628 when determined in accordance with ASTM E 811 and E 1349.
- 190 2. Durability. The pavement markings shall have a minimum resistance to wear of 97% in accordance with ASTM D 913.
- 200 3. Retro-reflectivity. Contracts with 50,000 ft or more of longitudinal paint line or 10,000 ft or more for each type of longitudinal durable marking line applied shall have retro-reflectivity measured, except markings placed on seal coat pavements placed in accordance with 404. Longitudinal lines shall meet required minimum initial and retained average retro-reflectivity measurements.

All other contracts and markings, except parking lines, shall meet the required longitudinal line minimum measurements and will be measured by the Department at the discretion of the Engineer/Project Manager, except that quality adjustments will not apply. Retained retro-reflectivity is the value at the time of the warranty expiration in accordance with 808.09 and will be measured by the Department at the discretion of the Engineer/Project Manager.

- 210 Retro-reflectivity testing equipment shall be furnished, calibrated, and operated in accordance with ITM 931. The markings shall be tested in a period of not less than 14 days to not more than 30 days after the materials are applied. The retro-reflectivity equipment shall remain the property of the Contractor. The measurement of retro-reflectivity shall be supervised or performed at all times by an operator trained and certified by the unit's manufacturer. A report as described in the ITM and including the specified test results and calculations shall be prepared and provided to the Engineer/Project Manager within three days of each day of testing.

808.10 Removal of Pavement Markings

530 All damage to the pavement caused by pavement marking removal shall be repaired by approved methods with no additional payment.

All temporary pavement markings shall be removed within 14 days of placement of permanent pavement markings.

808.13 Basis of Payment

660 ~~Payment for furnishing, calibrating, and operating retro reflectivity testing equipment will be paid for at the contract price for lump sum. The cost of report preparation shall be included in the cost of retro reflectivity testing. Adjustments to the contract payment with respect to retro reflectivity of performance based pavement markings will be included in a quality adjustment in accordance with 109.05.1. The Engineer may waive retro reflectivity testing due to weather limitations. Retro reflectivity testing will be waived for markings applied after October 31 and before April 1. If retro reflectivity testing is waived, no payment will be made for retro reflectivity testing. If retro reflectivity testing is not waived by the Engineer due to weather or waived by the seasonal time restriction and retro reflectivity testing is not performed, no payment will be made for retro reflectivity testing and payment for the marking items will be made at 70% of the unit price.~~

Payment will be made under:

	Pay Item	Pay Unit Symbol
670	Curb Painting, _____ color	LFT
	Grooving for Pavement Markings.....	LFT
	Line, _____, _____, _____, _____ in.....	LFT
	material type color width	
	Line, Remove	LFT
	Pavement Message Marking, _____, _____	EACH
	material message	
	Pavement Message Marking, Remove	SYS
680	Prismatic Reflector.....	EACH
	Retro Reflectivity Testing.....	LS
	Snowplowable Raised Pavement Marker	EACH
	Snowplowable Raised Pavement Marker, Remove	EACH
	Transverse Marking, _____, _____, _____, _____ in.	LFT
	material type color width	
	Transverse Marking, Remove	LFT

Recurring Special Provisions

DIVISION 900 – MATERIALS DETAILS

City of Fort Wayne

Public Works

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SECTION 922 – TRAFFIC SIGNAL MATERIALS AND EQUIPMENT

922.02 Traffic Signal Control Equipment

(f) NEMA TS2 Cabinet, Auxiliary Equipment, and Terminal and Facilities, TF, Requirements

1. Controller Cabinet Requirements

The NEMA TS2 type A1 controller cabinet shall be in accordance with the following requirements.

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a. General

The cabinet and the shelves shall be fabricated of aluminum. The cabinet shall be 1/8 in. minimum thickness sheet aluminum or 1/4 in. minimum thickness die-cast aluminum. The cabinet exterior and interior including shelves shall have a sandblasted, roughened, or chemically etched finish that reduces gloss, reflection, and glare. The cabinet must be provided with 2 shelves for supporting the control equipment, and shelves must be at least 10 inches in depth.

Provisions provided for positioning shelves to within 12 inches of the bottom of the cabinet and to within 6 inches of the top of the cabinet in increments not more than 1/2 inch must be provided. A pull out drawer/shelf is to be provided mounted below the lower shelf for the P Cabinets.

922.04 Pedestrian Signal Components

(b) Pedestrian Push-Button

810

Pedestrian push-button assemblies shall meet the standards of the MUTCD and Americans with Disabilities Act, ADA. Pedestrian push-button assemblies shall be vandal and weather resistant, be pressure activated with minimal movement, and cannot be stuck in a closed or constant call position. A red latching LED and audible tone shall be provided for confirmation of an actuation call. APS shall be a Polara 2-wire unit.

~~A type D certification in accordance with 916 shall be provided. Such~~ Any certification shall contain the contract number, manufacturer's name, model name, supplier's name, location or intersection name, and for a type APS pedestrian push button, the sound level measurement of the audible features of the device.

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922.07 Signal Support Assemblies

(d) Tether Bracket

960 The tether bracket shall attach to a 1/4 in. tether and prevent the bottom of the head from moving side-to-side on the tether. Where backplates are installed on the signal heads, the tether bracket shall be of the proper length for the backplate so that the cable is mounted below the bottom of the backplate to avoid interference with head alignment and damage to the backplate. If a 4-section head is mounted on the span, the the tether cable shall be mounted between the bottom two heads so that the tether wire is level with the bottom of the 3 or 5 section heads. No extensions on the 3 or 5-section heads shall be used in these installations to prevent excessive wear on the cable. Three bolts, nuts, and washers, shall be used to secure the tether bracket to a three-section or four-section signal head. A wire rope clamp in accordance with 922.10(e)4c, shall be used to secure the tether bracket to the tether. The tether bracket shall have predrilled 1/2 in. diameter holes. In lieu of the wire rope clamp and 1/2 in. diameter holes, a beveled tether plate that completely fills in the extruded portion of the tether bracket may be used to secure the tether bracket to the tether. A Crosby fastener should be used on the back side of the brackets to prevent wear on the tether cable. The tether bracket shall not extend more than 2 in. below the tether.

Unique Special Provisions
(see attached pages)