

**CONTRACT DOCUMENTS
FOR
2026 LOCAL ROAD PROGRAM**

**CITY OF FENTON
301 S LEROY ST
FENTON, MI 48430**

OHM ADVISORS
34000 Plymouth Road
Livonia, Michigan 48150

0077-25-0040
March 25, 2026

TABLE OF CONTENTS

BIDDING REQUIREMENTS

00 11 13	ADVERTISEMENT FOR BIDS.....	1
00 21 13	INSTRUCTIONS TO BIDDERS	1-9
00 41 00	BID FORM	1-8
00 43 13.01	BID BOND (PENAL SUM FORM)	1-2
00 44 36	SUBCONTRACTOR LISTING	1-2
00 45 13	STATEMENT OF QUALIFICATIONS	1-3
00 45 14	IRAN LINKED BUSINESS CERTIFICATION	1-2

CONTRACT FORMS

00 51 00	NOTICE OF AWARD	1
00 52 13	AGREEMENT	1-5
00 55 00	NOTICE TO PROCEED	1
00 61 13.13	PERFORMANCE BOND.....	1-4
00 61 13.16	PAYMENT BOND	1-4
00 61 19	MAINTENANCE AND GUARANTEE BOND	1-4
00 65 16	CERTIFICATE OF SUBSTANTIAL COMPLETION	1
00 65 19	CONTRACTORS AFFIDAVIT	1
00 65 20	CONTRACTORS DECLARATION	1
00 65 76	CONTRACTOR'S APPLICATION FOR PAYMENT.....	1-6

CONDITIONS OF THE CONTRACT

00 72 00	STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT	1-70
00 73 00	SUPPLEMENTARY CONDITIONS	1-9

TECHNICAL SPECIFICATIONS

DIVISION 1 - GENERAL REQUIREMENTS

01 10 00	SUMMARY	1-3
01 22 00	UNIT PRICES	1-2
01 26 00	CONTRACT MODIFICATION PROCEDURES	1-2
01 29 00	PAYMENT PROCEDURES	1-2
01 31 00	PROJECT MANAGEMENT AND COORDINATION.....	1-8
01 32 00	CONSTRUCTION PROGRESS DOCUMENTATION.....	1-3
01 33 00	SUBMITTAL PROCEDURES.....	1-6
01 40 00	QUALITY REQUIREMENTS	1-5
01 42 00	REFERENCES	1-16
01 50 00	TEMPORARY FACILITIES AND CONTROLS	1-4
01 60 00	PRODUCT REQUIREMENTS.....	1-5
01 73 00	EXECUTION.....	1-6
01 77 00	CLOSEOUT PROCEDURES	1-3
01 78 39	PROJECT RECORD DOCUMENTS	1-3

APPENDIX A – GEOTECHNICAL REPORT

APPENDIX B – SPECIAL PROVISIONS

ADVERTISEMENT FOR BIDS
CITY OF FENTON
FENTON, MICHIGAN
2026 LOCAL ROAD PROGRAM

The City of Fenton, the OWNER, is requesting Bids for the construction of the following Project:

2026 Local Road Program

Sealed Bids for the construction of the Project will be received at the City of Fenton, City Hall, Attn: City Clerk located at 301 South Leroy Street, Fenton, MI 48430 until **Thursday, April 16, 2026, at 1:00 pm** local time. No bids will be received after that time. Bids received will be publicly opened and read aloud at that time and place.

This project consists of approximately 3000 feet of asphalt road reconstruction, 1000 feet of asphalt road crushing and shaping, 1000 feet of curb & gutter repairs, and 2200 feet of 8" water main replacement with ductile iron.

Bidding Documents may be examined at the following locations after Wednesday, March 25, 2026, at 2:00 pm:

- BidNet Direct
- OHM Advisors Online Plan Room

Bidding Documents were prepared by OHM Advisors. Bidders should direct correspondence to that office: (248) 751-3109 / Alex.Parent@ohm-advisors.com (attn: Alex Parent). Digital plans may be downloaded from the OHM Plan Room:

<https://qcpi.questcdn.com/cdn/posting/?projType=all&provider=2581600&group=2581600>

Bid security shall be furnished in accordance with the Instructions to Bidders. Bid security in the form of a Bid Bond for a sum no less than five percent (5%) of the amount of the Bid will be required with each Bid. Bids shall be enclosed in sealed envelopes plainly marked with the project name and the name of the bidder.

No bid may be withdrawn for a period of ninety (90) calendar days after the scheduled closing time for receipt of the Bids. The Owner reserves the right to accept any Bid, reject any Bid, or waive irregularities in Bids.

A pre-bid conference will not be held for this project.

City Clerk's Office
City of Fenton

INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

TABLE OF CONTENTS

	Page
Article 1— Defined Terms.....	1
Article 2— Bidding Documents	1
Article 3— Qualifications of Bidders	2
Article 4— Pre-Bid Conference	2
Article 5— Site and Other Areas; Existing Site Conditions; Examination of Site; Owner’s Safety Program; Other Work at the Site.....	2
Article 6— Bidder’s Representations and Certifications	4
Article 7— Interpretations and Addenda.....	4
Article 8— Bid Security.....	4
Article 9— Contract Times.....	5
Article 10— Substitute and “Or Equal” Items.....	5
Article 11— Subcontractors, Suppliers, and Others	5
Article 12— Preparation of Bid.....	6
Article 13— Basis of Bid.....	6
Article 14— Submittal of Bid.....	7
Article 15— Modification and Withdrawal of Bid.....	7
Article 16— Opening of Bids	8
Article 17— Bids to Remain Subject to Acceptance	8
Article 18— Evaluation of Bids and Award of Contract.....	8
Article 19— Bonds and Insurance	8
Article 20— Signing of Agreement	9
Article 21— Public Meeting.....	9

ARTICLE 1—DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office*—The office from which the Bidding Documents are to be issued, and which registers plan holders is OHM Advisors, 34000 Plymouth Road, Livonia, MI 48150.

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 recommends 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 Bidder may register as a plan holder and obtain complete sets of Bidding Documents, in the number and format stated in the Advertisement or invitation to bid, from the Issuing Office. Bidders may rely that sets of Bidding Documents obtained from the Issuing Office are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner or Engineer.
- 2.05 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 encouraged to register as plan holders from the Bidding Documents Website or Issuing Office. Owner and Engineer are 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.
- 2.06 *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 PDF (Portable Document Format) (.pdf). 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.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, Bidder must submit the following information:
 - A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.
 - B. List of Proposed Subcontractors.
 - C. Contractor's Statement of Qualifications with supporting data.
- 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

- 4.01 A pre-bid conference will not be conducted for this Project.

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.
 - 2. 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.
 - 3. *Geotechnical Baseline Report/Geotechnical Data Report*: The Bidding Documents contain a Geotechnical Investigation Report (GIR), located in the Appendix.

- a. As set forth in the Supplementary Conditions, the GIR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations ("Baseline Conditions"). The GIR is a Contract Document.
 - b. The Baseline Conditions in the GIR are intended to reduce uncertainty and the degree of contingency in submitted Bids. However, Bidders cannot rely solely on the Baseline Conditions. Bids should be based on a comprehensive approach that includes an independent review and analysis of the GIR, all other Contract Documents, Technical Data, other available information, and observable surface conditions. Not all potential subsurface conditions are baselined.
 - c. Nothing in the GIR is intended to relieve Bidders of the responsibility to make their own determinations regarding construction costs, bidding strategies, and Bid prices, nor of the responsibility to select and be responsible for the means, methods, techniques, sequences, and procedures of construction, and for safety precautions and programs incident thereto.
 - d. As set forth in the Supplementary Conditions, the GIR is a Contract Document containing data prepared by or for the Owner in support of the GIR.
- B. *Underground Facilities:* Underground Facilities are shown or indicated in the Bidding documents, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.03.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 *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. 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.
- C. 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.
- D. 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.

5.04 *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.
- 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 seven 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 five percent (5%) of Bidder’s maximum Bid price (determined by adding the base bid and all alternates) and in the form of a Cashier’s check or 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 15 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 61 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 opening.

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 A Bidder must be prepared to retain specific Subcontractors and Suppliers for the performance of the Work if required to do so by the Bidding Documents or in the Specifications. If a prospective Bidder objects to retaining any such Subcontractor or Supplier and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.
- 11.02 The apparent Successful Bidder, and any other Bidder so requested, must submit to Owner a list of the Subcontractors or Suppliers proposed for the portions of the Work where such identification is required within five days after Bid opening.
- 11.03 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.
- 11.04 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.

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

ARTICLE 12—PREPARATION OF BID

- 12.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form must be completed in ink or typewritten and the bid signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein. A Bid price shall be indicated for each Bid item listed therein, or the words “No Bid,” “No Change,” or “Not Applicable” entered.
- 12.02 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½ inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.
- 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.

ARTICLE 13—BASIS OF BID

- 13.01 *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 “Estimated 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.

- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.
- D. **Refer to Section 01 22 00 – Unit Prices of this contract document, Sections 110 to 825 of the Michigan Department of Transportation 2020 Standard Specifications for Construction, and Appendix B – Special Provisions detailing each item of Work.**

13.02 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 Bidding Documents include one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 2 of the Bid Form.
- 14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must be enclosed in a plainly marked package with the Project title, and, if applicable, the designated portion of the Project for which the Bid is submitted, the name and address of Bidder, and must be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid must be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid must be addressed to the location designated in the Advertisement.
- 14.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID

- 15.01 An unopened Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 15.02 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, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 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. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder.
- 18.03 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.
- 18.04 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 will reject the Bid as nonresponsive.
- 18.05 If Owner awards the contract for the Work, such award will be to the responsible Bidder whose Bid is in the best interests of the Project.
- 18.06 *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. 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.
- 18.07 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.
- 18.08 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents.

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 15 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.

ARTICLE 21—PUBLIC MEETING

- 21.01 A public meeting may be scheduled by the City of Fenton and/or OHM Advisors. The Contractor must attend this meeting. If a public meeting is scheduled, the date and location will be announced sometime between the Notice of Award and the preconstruction meeting.

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 Fenton
301 South Leroy Street
Fenton, MI 48430

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. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. 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;
- B. List of Proposed Subcontractors; and
- C. Required Bidder Qualification Statement with supporting data.

ARTICLE 3—BASIS OF BID—UNIT PRICES

3.01 Bidder will perform the following Work at the indicated unit prices:

Item	Description	Estimated Quantity	Unit Price	Amount
Division 1: Road				
1	Mobilization, Max 10%	0.7 LSUM	\$	\$
2	Tree, Rem, 19 inch to 36 inch	4 Ea	\$	\$
3	Tree, Rem, 6 inch to 18 inch	5 Ea	\$	\$
4	Culv, Rem, Less than 24 inch	5 Ea	\$	\$
5	Dr Structure, Rem	5 Ea	\$	\$
6	Sewer, Rem, Less than 24 inch	190 Ft	\$	\$
7	Sewer, Rem, 24 inch to 48 inch	38 Ft	\$	\$
8	Curb and Gutter, Rem	2979 Ft	\$	\$
9	Sidewalk, Rem	232 Syd	\$	\$
10	Exploratory Investigation, Vertical	50 Ft	\$	\$
11	Pavt, Rem, Modified	9328 Syd	\$	\$
12	Ditch Cleanout	11.3 Sta	\$	\$
13	Embankment, CIP	54 Cyd	\$	\$
14	Excavation, Earth	154 Cyd	\$	\$
15	Subgrade Undercutting, Type IV	500 Cyd	\$	\$
16	Machine Grading, Modified	12.9 Sta	\$	\$
17	Erosion Control, Check Dam, Stone	50 Ft	\$	\$
18	Erosion Control, Inlet Protection, Fabric Drop	16 Ea	\$	\$
19	Erosion Control, Silt Fence	170 Ft	\$	\$
20	Project Cleanup	0.7 LSUM	\$	\$
21	Aggregate Base	170 Ton	\$	\$
22	Aggregate Base, Conditioning	3974 Syd	\$	\$
23	Aggregate Base, Conditioning, Surplus and Unsuitable, Rem, LM	116 Cyd	\$	\$
24	Aggregate Base, 3 inch, Modified	1361 Syd	\$	\$
25	Aggregate Base, 4 Inch, Modified	843 Syd	\$	\$
26	Aggregate Base, 8 Inch, Modified	3985 Syd	\$	\$
27	HMA Base Crushing and Shaping	2753 Syd	\$	\$
28	Material, Surplus and Unsuitable, Rem, LM	50 Cyd	\$	\$
29	Salv Crushed Material, LM	100 Cyd	\$	\$
30	Maintenance Gravel, LM	200 Cyd	\$	\$
31	Maintenance Gravel, Modified	200 Ton	\$	\$
32	Shld, CI II, 4 inch	100 Syd	\$	\$
33	Trenching	14.7 Sta	\$	\$

Item	Description	Estimated Quantity	Unit Price	Amount
34	Culv, CI A, 12 inch	183 Ft	\$	\$
35	Culv, CI E, 12 inch	58 Ft	\$	\$
36	Sewer, CI IV, 12 inch, Tr Det B	150 Ft	\$	\$
37	Sewer, CI IV, 18 inch, Tr Det B	32 Ft	\$	\$
38	Sewer, CI IV, 24 inch, Tr Det B	26 Ft	\$	\$
39	Sewer, CI IV, 36 inch, Tr Det B	8 Ft	\$	\$
40	Dr Structure Cover, Type B	3 Ea	\$	\$
41	Dr Structure Cover, Type C	9 Ea	\$	\$
42	Dr Structure, 24 inch dia	3 Ea	\$	\$
43	Dr Structure, 48 inch dia	1 Ea	\$	\$
44	Dr Structure, 60 inch dia	1 Ea	\$	\$
45	Dr Structure, Tap, 6 inch	10 Ea	\$	\$
46	Dr Structure, Tap, 12 inch	1 Ea	\$	\$
47	Structure Cover, Adj, Add Depth	10 Ft	\$	\$
48	Stm Structure Cover, Adj	5 Ea	\$	\$
49	Structure, Point Up	10 Ea	\$	\$
50	Underdrain, Subgrade, Open-Graded, 6 inch	2527 Ft	\$	\$
51	Pavt for Butt Joints, Rem	100 Syd	\$	\$
52	Joint and Crack, Cleanout	40 Ft	\$	\$
53	HMA Approach	85 Ton	\$	\$
54	HMA, 4EML	1482 Ton	\$	\$
55	HMA, 5EML	889 Ton	\$	\$
56	Crack Sealing, Conc Pavt	40 Ft	\$	\$
57	Driveway, Nonreinf Conc, 6 inch	820 Syd	\$	\$
58	Curb and Gutter, Conc, Det D2	2485 Ft	\$	\$
59	Curb and Gutter, Conc, Det D2, Modified	516 Ft	\$	\$
60	Detectable Warning Surface	30 Ft	\$	\$
61	Curb Ramp Opening, Conc	42 Ft	\$	\$
62	Sidewalk, Conc, 4 inch	1650 Sft	\$	\$
63	Curb Ramp, Conc, 6 inch	510 Sft	\$	\$
64	Post, Mailbox, Remove and Reset	33 Ea	\$	\$
65	Sign, Type III, Rem, Salv	6 Ea	\$	\$
66	Ground Mtd Sign Support, Rem	6 Ea	\$	\$
67	Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	10 Ea	\$	\$

Item	Description	Estimated Quantity	Unit Price	Amount
68	Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	10 Ea	\$	\$
69	Channelizing Device, 42 inch, Fluorescent, Furn	200 Ea	\$	\$
70	Channelizing Device, 42 inch, Fluorescent, Oper	200 Ea	\$	\$
71	Dust Palliative, Applied	5 Ton	\$	\$
72	Minor Traf Devices	0.7 LSUM	\$	\$
73	Pavt Mrkg, Longit, 6 inch or Less Width, Rem	500 Ft	\$	\$
74	Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, Yellow, Temp	500 Ft	\$	\$
75	Sign Cover	4 Ea	\$	\$
76	Sign, Type B, Temp, Prismatic, Furn	128 Sft	\$	\$
77	Sign, Type B, Temp, Prismatic, Oper	128 Sft	\$	\$
78	Traf Regulator Control	0.7 LSUM	\$	\$
79	Riprap, Plain	20 Syd	\$	\$
80	Boulder, Relocate	11 Ea	\$	\$
81	Remove, Salvage, and Replace Landscaping and Lighting	8 Ea	\$	\$
82	Turf Establishment, Performance	4000 Syd	\$	\$
83	Monument Box	1 Ea	\$	\$
84	Monument Box, Adj	1 Ea	\$	\$
85	Monument Preservation	1 Ea	\$	\$
86	Protect Corners	10 Ea	\$	\$
87	Sprinkler Line	250 Ft	\$	\$
88	Sprinkler Head, Relocate	50 Ea	\$	\$
89	Sprinkler Head, Replace	50 Ea	\$	\$
90	Contractor Staking	0.7 LSUM	\$	\$
91	Audio Video Route Survey	0.7 LSUM	\$	\$
92	Crew Days	Cdays	\$ 800.00	\$

Subtotal Division 1 (ITEMS 1-92 incl.): \$ _____

Division 2: Water Main

93	Mobilization, Max 10%	0.3 LSUM	\$	\$
94	Exploratory Investigation, Vertical	100 Ft	\$	\$
95	Project Cleanup	0.3 LSUM	\$	\$
96	Minor Traf Devices	0.3 LSUM	\$	\$
97	Traf Regulator Control	0.3 LSUM	\$	\$
98	Fire Hydrant	2 Ea	\$	\$

Item	Description	Estimated Quantity	Unit Price	Amount
99	Gate Well, Rem	1 Ea	\$ _____	\$ _____
100	Hydrant, Rem	2 Ea	\$ _____	\$ _____
101	Water Main, 6 inch, Cut and Plug	6 Ea	\$ _____	\$ _____
102	Water Main, DI, 8 inch, Tr Det G	2105 Ft	\$ _____	\$ _____
103	Water Serv	14 Ea	\$ _____	\$ _____
104	Water Serv, Long	18 Ea	\$ _____	\$ _____
105	Live Tap, 8 inch by 16 inch	2 Ea	\$ _____	\$ _____
106	Connection to Existing Water Main	4 Ea	\$ _____	\$ _____
107	Gate Valve and Well, 8 inch	5 Ea	\$ _____	\$ _____
108	Water Main, Abandon with Flowable Fill	1 LSUM	\$ _____	\$ _____
109	Contractor Staking	0.3 LSUM	\$ _____	\$ _____
110	Audio Video Route Survey	0.3 LSUM	\$ _____	\$ _____
111	Crew Days	_____ Cday	\$ 800.00	\$ _____

Subtotal Division 2 (Items 93-111 incl.): \$ _____

Total Bid Amount (Divisions 1 - 2 incl.): \$ _____

- A. Bidder acknowledges that:
 1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and
 2. 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—TIME OF COMPLETION

- 4.01 Bidder agrees that the Work will be substantially complete on or before August 14, 2026, and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before October 30, 2026.
- 4.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 5—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

- 5.01 *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.
- 5.02 *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.
- 5.03 *Receipt of Addenda*
 - A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

- 6.01 *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.

6.02 *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 6.02.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: Address <i>(principal place of business)</i> :	Surety Name: Address <i>(principal place of business)</i> :
Owner Name: City of Fenton Address <i>(principal place of business)</i> : 301 South Leroy St Fenton, MI 48430	Bid Project <i>(name and location)</i> : 2026 Local Road Program Bid Due Date: April 16, 2026
Bond Penal Sum: Date of Bond:	
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: _____
<i>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.</i>	

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.

SUBCONTRACTOR LISTING

Bidder submits to use the following subcontractors for performance of the work in accordance with Article 9 of the Instructions to Bidders.

Note to Bidder: List all work you propose to sublet on this Contract. Include each subcontractors name, address, phone, fax and e-mail address. Also include a description of work to be performed by subcontractor. For example: restoration, landscaping, lighting, signage, bore and jack, etc. List approximate dollar value of the subcontract.

NAME, ADDRESS & PHONE NO. OF SUBCONTRACTOR	DESCRIPTION OF WORK	APPROXIMATE DOLLAR VALUE OF SUBCONTRACT
_____	_____	\$ _____
_____	_____	_____
Phone: _____		
FAX: _____		
E-mail _____		
_____	_____	\$ _____
_____	_____	_____
Phone: _____		
FAX: _____		
E-mail _____		

\$

Phone:

FAX:

E-mail

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Phone:

FAX:

E-mail

\$

Phone:

FAX:

E-mail

STATEMENT OF QUALIFICATIONS

Bidder must answer all questions. If more space is needed to complete a question, attach a separate sheet.
Bidder may submit any additional information.

Name: _____

Address: _____ Phone: _____

Number of years operating under your present name: _____

Bonding Capacity: _____

Bonding Company: _____ Phone: _____

Prequalified by MDOT to bid on projects of this magnitude and type of work
Note: MDOT pre-qualification is not a requirement to submit a bid for this project.

(circle one) YES NO Prequalification Number: _____

General nature of work performed by your company: _____

Background and experience of the principal members of your organization including officers:

Major equipment available for this contract: _____

CURRENT PROJECTS:

	Project	Project	Project
Name:	_____	_____	_____
Owner:	_____	_____	_____
Contact Person:	_____	_____	_____
Phone:	_____	_____	_____
Contract Amount:	_____	_____	_____
Completion Date:	_____	_____	_____
% Complete:	_____	_____	_____

COMPLETED PROJECTS:

	Project	Project	Project
Name:	_____	_____	_____
Owner:	_____	_____	_____
Contact Person:	_____	_____	_____
Phone:	_____	_____	_____
Contract Amount:	_____	_____	_____
Date Completed:	_____	_____	_____

Additional information that may be pertinent to demonstrate your ability to complete this project.

Has your company defaulted on a contract? _____

If yes, where and why? _____

I hereby certify that the above answers are correct and true.

By: _____
Name

Signature

Title

Number of additional sheets attached: _____

IRAN LINKED BUSINESS CERTIFICATION

Pursuant to Michigan Public Act 517 of 2012, any Bidder that submits a bid on a request for proposal with the City of Fenton shall certify that Bidder is not an Iran linked business. An Iran linked business is not eligible to submit a bid on a request for proposal with the City. See attached definitions regarding this certification.

The undersigned Bidder does hereby certify, pursuant to Michigan Public Act 517 of 2012, that:

Bidder is not a person engaging in investment activities in the energy sector of Iran, including a person that provides oil or liquefied natural gas tankers, or products used to construct or maintain pipelines used to transport oil or liquefied natural gas, for the energy sector of Iran, or

Bidder is not a financial institution that extends credit to another person if that person will use the credit to engage in investment activities in the energy sector of Iran.

Date: _____

By: _____

Its: _____

Subscribed and sworn to before me, a Notary Public on this ____ day of _____, 2024.

Notary Public _____

_____ County, Michigan

My Commission Expires: _____

DEFINITIONS

- (A) “Energy sector of Iran” means activities to develop petroleum or natural gas resources or nuclear power in Iran.
- (B) “Investment” means 1 or more of the following:
- i. A commitment or contribution of funds or property.
 - ii. A loan or other extension of credit.
 - iii. The entry into or renewal of a contract for goods or services.
- (C) “Investment activity” means 1 or more of the following:
- i. A person who has an investment of \$20,000,000.00 or more in the energy sector of Iran.
 - ii. A financial institution that exceeds \$20,000,000.00 or more in credit to another person, for 45 days or more, if that person will use the credit for investment in the energy sector of Iran.
- (D) “Iran” means any agency or instrumentality of Iran.
- (E) “Iran linked business” means either of the following:
- i. A person engaging in investment activities in the energy sector of Iran, including a person that provides oil or liquefied natural gas tankers or products used to construct or maintain pipelines used to transport oil or liquefied natural gas for the energy sector of Iran.
 - ii. A financial institution that extends credit to another person, if that person will use the credit to engage in investment activities in the energy sector of Iran.
- (F) “Person” means any of the following:
- i. An individual, corporation, company, limited liability company, business association, partnership, society, trust, or any other nongovernmental entity, organization, or group.
 - ii. Any governmental entity or instrumentality of a government, including a multilateral development institution, as defined in section 1701(c) (3) of the international financial institutional act, 22 USC 262r(c) (3).
 - iii. Any successor, subunit, parent company, or subsidiary of, or company under common ownership or control with, any entity described in subparagraph (i) or (ii).
- (G) “Public entity” means this state or an agency or authority of this state, school district, community college district, intermediate school district, city, village, township, county, public authority, or public airport authority.

NOTICE OF AWARD

Date of Issuance: <Month Day, Year>
Owner: City of Fenton Owner's Project No.: _____
Engineer: OHM Advisors Engineer's Project No.: 0077-25-0040
Project: 2026 Local Road Program
Contract Name: 2026 Local Road Program
Bidder: <Contractor>
Bidder's Address: <Street, City State Zip>

You are notified that Owner has accepted your Bid dated <Month Day, Year>, for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

2026 Local Road Program

The Contract Price of the awarded Contract is <\$Dollars.Cents>. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

Six unexecuted counterparts of the Agreement accompany this Notice of Award, and six copies of the Contract Documents accompany this Notice of Award, or has been transmitted or made available to Bidder electronically.

Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner six counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6, and Supplementary Conditions Article 6.
3. Other conditions precedent: This Notice of Award is not authorization to begin construction or order materials. A Notice to Proceed will be issued to the contractor after the City of Fenton executes the Contract Document, and a pre-construction meeting is held.

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.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: City of Fenton
By (signature): _____
Name (printed): _____
Title: _____
Copy: Engineer

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

THIS AGREEMENT is by and between _____ City of Fenton _____ (“Owner”) and
_____ <Contractor> _____ (“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:

This project consists of approximately 3000 feet of asphalt road reconstruction, 1000 feet of asphalt road crushing and shaping, 1000 feet of curb & gutter repairs, and 2200 feet of 8” water main replacement with ductile iron.

ARTICLE 2—THE PROJECT

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

2026 Local Road Program

ARTICLE 3—ENGINEER

3.01 The Owner has retained OHM Advisors (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.

3.02 The part of the Project that pertains to the Work has been designed by the Engineer.

ARTICLE 4—CONTRACT TIMES

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 for Substantial Completion and Final Payment*

A. The Work will be substantially complete on or before August 14, 2026, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before October 30, 2026.

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), Contractor shall pay Owner \$1,500.00/day for each day that expires after the time specified in Paragraph 4.02 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner \$1,500.00/day for each day that expires after the time specified in Paragraph 4.02 for completion and readiness for final payment until the Work is completed and ready for final payment.

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 Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimate quantity of that item as indicated in this paragraph 5.01B:
 - B. Insert completed Bid Form at the time the agreement is to be signed.

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 or Owner as provided in the General Conditions.
- 6.02 *Progress Payments; Retainage*
- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on a monthly schedule during performance of the Work. 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. The provisions set forth in Michigan Public Acts of 1980, Act No. 524, will be adhered to by Owner and Contractor.
- 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 the following:
 - 1. Bidding Requirements, including Advertisement for Bids, Instructions to Bidders, and Bidder's Qualification and Experience Statement.
 - 2. This Agreement (pages 1 to 6, inclusive).
 - 3. Performance bond (pages 1 to 4, inclusive).
 - 4. Payment bond (pages 1 to 4, inclusive).
 - 5. Maintenance bond (pages 1 to 3, inclusive).

6. General Conditions (pages 1 to 70, inclusive).
 7. Supplementary Conditions (pages 1 to 9, inclusive).
 8. Specifications as listed in the table of contents of the Project Manual.
 9. Geotechnical Report listed in Appendix A
 10. Special Provisions listed in Appendix B
 11. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid.
 - b. Documentation submitted by Contractor prior to Notice of Award.
 12. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - a. Notice to Proceed (pages 1 to 1, inclusive).
 - b. Work Change Directives.
 - c. Change Order(s).
- 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.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

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

Owner:

City of Fenton

(typed or printed name of organization)

By:

(individual's signature)

Date:

(date signed)

Name:

(typed or printed)

Title:

(typed or printed)

Attest:

(individual's signature)

Title:

(typed or printed)

Address for giving notices:

301 South Leroy Street

Fenton, MI 48430

Designated Representative:

Name:

(typed or printed)

Title:

(typed or printed)

Address:

301 South Leroy Street

Fenton, MI 48430

Phone:

Email:

(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)

Contractor:

<Contractor>

(typed or printed name of organization)

By:

(individual's signature)

Date:

(date signed)

Name:

(typed or printed)

Title:

(typed or printed)

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

Attest:

(individual's signature)

Title:

(typed or printed)

Address for giving notices:

<Street>

<City, State Zip>

Designated Representative:

Name:

(typed or printed)

Title:

(typed or printed)

Address:

<Street>

<City, State Zip>

Phone:

Email:

License No.:

(where applicable)

State:

NOTICE TO PROCEED

Owner: City of Fenton Owner's Project No.: _____
Engineer: OHM Advisors Engineer's Project No.: 0077-25-0040
Contractor: <Contractor>
Project: 2026 Local Road Program
Contract Name: 2026 Local Road Program
Effective Date of Contract: <Date>

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on **<Date>** pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement:

The date by which Substantial Completion must be achieved is **August 14, 2026**, and the date by which readiness for final payment must be achieved is **October 30, 2026**.

Before starting any Work at the Site, Contractor must comply with the following: N/A

Owner: City of Fenton
By (*signature*): _____
Name (*printed*): _____
Title: _____
Date Issued: _____
Copy: Engineer

PERFORMANCE BOND

<p>Contractor</p> <p>Name: <Contractor></p> <p>Address <i>(principal place of business)</i>:</p> <p><Street></p> <p><City, State Zip></p>	<p>Surety</p> <p>Name:</p> <p>Address <i>(principal place of business)</i>:</p>
<p>Owner</p> <p>Name: City of Fenton</p> <p>Mailing address <i>(principal place of business)</i>:</p> <p>301 South Leroy St Fenton, MI 48430</p>	<p>Contract</p> <p>Description <i>(name and location)</i>:</p> <p>2026 Local Road Program</p> <p>Contract Price: <\$Dollars.Cents></p> <p>Effective Date of Contract:</p>
<p>Bond</p> <p>Bond Amount: <\$Dollars.Cents></p> <p>Date of Bond:</p> <p><i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form:</p> <p><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>_____</p> <p><i>(Full formal name of Contractor)</i></p>	<p>_____</p> <p><i>(Full formal name of Surety) (corporate seal)</i></p>
<p>By: _____</p> <p style="text-align: center;"><i>(Signature)</i></p>	<p>By: _____</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: None.

PAYMENT BOND

<p>Contractor</p> <p>Name: <Contractor></p> <p>Address <i>(principal place of business)</i>:</p> <p><Street></p> <p><City, State Zip></p>	<p>Surety</p> <p>Name:</p> <p>Address <i>(principal place of business)</i>:</p>
<p>Owner</p> <p>Name: City of Fenton</p> <p>Mailing address <i>(principal place of business)</i>:</p> <p>301 South Leroy St Fenton, MI 48430</p>	<p>Contract</p> <p>Description <i>(name and location)</i>:</p> <p>2026 Local Road Program</p> <p>Contract Price: <\$Dollars.Cents></p> <p>Effective Date of Contract:</p>
<p>Bond</p> <p>Bond Amount: <\$Dollars.Cents></p> <p>Date of Bond:</p> <p><i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form:</p> <p><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: _____ <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: _____
<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: None.

MAINTENANCE AND GUARANTEE BOND

KNOW ALL MEN BY THESE PRESENTS, That we <Enter Contractor Name>, as Principal, and _____, as Surety, are held and firmly bound unto City of Fenton, as Owner, in the sum of <Enter Dollar Amount> DOLLARS and <Enter Cents> CENTS (<\$Amount>) good and lawful money of the United States of America, to be paid to said City of Fenton, its legal representatives and assigns for which payment well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, and each and every one of them jointly and severally, firmly by these presents.

Sealed with our seals and dated this _____ day of _____ A.D. 20 _____ .

WHEREAS, the above named Principal has entered into a certain written Contract with City of Fenton dated this ____ day of _____ A.D. 20 _____ , wherein the said Principal covenanted and agreed to follows, to-wit: TO CONSTRUCT THE WORK IN ACCORDANCE WITH THE SPECIFICATIONS, CONTRACT DOCUMENTS AND DRAWINGS TITLED: 2026 Local Road Program.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that by and under said Contract, the above named Principal has agreed with the City of Fenton that for a period of two years from date of payment of Final Estimate, to keep in good order and repair any defect in all work done under said Contract either by the Principal or his Subcontractors, or his material suppliers, that may develop during said period due to improper materials, defective equipment, workmanship or arrangements, and any other work affected in making good such imperfections, shall also be made good all without expense to the OWNER, excepting only such parts or part of said work as may have been disturbed without consent or approval of the Principal after final acceptance of the work, and that whenever directed to do so by the OWNER by notice served in writing, either personally or by mail, on the Principal at <Enter Contractor Street, City, State Zip>, (contractor city state zip) OR _____ legal representatives, or successors, or on the Surety at _____ WILL PROCEED at once to make such repairs as directed by said OWNER; and in case of failure so to do within one week from the date of service of such notice, or within reasonable time not less than one week, as shall be fixed in said notice, then the said OWNER shall have the right to purchase such materials and employ such labor and equipment as may be necessary for the purpose, and to undertake, do and make such repairs and charge the expense thereof to, and receive same from, said Principal or Surety. If any repair is necessary to be made at once to protect life and property, then and in that case, the said OWNER may take

immediate steps to repair or barricade such defects without notice to the CONTRACTOR. In such accounting the said OWNER shall not be held to obtain the lowest figures for the doing of the work, or any part thereof, but all sums actually paid therefore shall be charged to the Principal or Surety. In this connection the judgment of the OWNER is final and conclusive. If the said Principal for a period of two year(s) from the date of payment of Final Estimate, shall keep said work so constructed under said Contract in good order and repair, excepting only such part or parts of said work which may have been disturbed without the consent or approval of said Principal after final acceptance of same, and shall whenever notice is given as hereinbefore specified, at once proceed to make repair as in said notice directed, or shall reimburse said OWNER for any expense incurred by making such repairs, should the Principal or Surety fail to do as hereinbefore specified, and shall fully indemnify, defend and save harmless the said Owner and Orchard, Hiltz & McCliment, Inc. from all suits and actions for damages of every name and description brought or claimed against it for, or on account of, any injury or damage to person or property received or sustained by any party or parties, by or from any of the acts or omissions or through the negligence of said Principal, servants, agents or employees, in the prosecution of the work included in said Contract, and from any and all claims arising under the Workman's Compensation Act, so-called, of the State of Michigan, then the above obligation shall be void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed by their respective authorized officers this _____ day of _____ A.D., 20 _____.

Signed, Sealed and Delivered

In the Presence of:

Signature

Signature

Name

Name

Principal

Signature

Signature

Name

Name

Surety

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner: City of Fenton	Owner's Project No.:
Engineer: OHM Advisors	Engineer's Project No.: 0077-25-0040
Contractor: <Contractor>	
Project: 2026 Local Road Program	

This Preliminary Final Certificate of Substantial Completion applies to:
 All Work The following specified portions of the Work:

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 Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. 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.

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: None As follows:

Amendments to Contractor's Responsibilities: None As follows:

The following documents are attached to and made a 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.

Engineer

By *(signature)*: _____
Name *(printed)*: _____
Title: _____

CONTRACTOR'S AFFIDAVIT

STATE OF MICHIGAN)

)SS.

COUNTY OF _____)

The undersigned, [CONTRACTOR] hereby represents that on _____, 20____ he (it) was awarded a Contract by City of Fenton hereinafter called the OWNER, to construct the 2026 Local Road Program in accordance with the terms and conditions of Contract No. 0077-25-0040; and the undersigned further represents that the subject work has now been accomplished and the said Contract has now been completed.

The undersigned hereby warrants and certifies that all of his (its) indebtedness arising by reason of said Contract has been fully or satisfactorily secured, and that all claims from subcontractors and others for labor and material used in accomplishing the said project, as well as all other claims arising from performance of said Contract, have been fully paid or satisfactorily secured. The undersigned further agrees that if any such claim should hereafter arise, he (it) shall assume responsibility for same immediately upon request to do so by the OWNER.

The undersigned, for a valuable consideration, receipt of which is hereby acknowledged, does further hereby waive, release and relinquish any and all claims or right of lien which the undersigned now has or may hereafter acquire upon the subject premises for labor and material used in accomplishing said project owned by the OWNER.

This affidavit is freely and voluntarily given with full knowledge of the facts on this ____ day of _____, 20_____.

Contractor

By: _____

Title _____

Subscribed and sworn to before me, a Notary Public in and for _____ County, Michigan, on this _____ day of _____, 20_____.

Notary Public:

My Commission expires: _____

CONTRACTOR'S DECLARATION

I HEREBY DECLARE THAT I HAVE NOT, during the period

_____ to

_____ A.D., 20 ____ performed any work, furnished any material, sustained any loss, damage or delay for any reason, including soil conditions encountered or created, or otherwise done anything for which I shall ask, demand, sue for or claim compensation from City of Fenton or his agents, in addition to the regular items set forth in the Contract numbered 0077-25-0040 and dated _____ A.D., 20 ____ for the Agreement executed between myself and the OWNER, and in the Change Orders for work issued by the OWNER in writing as provided thereunder, except as I hereby make claim for additional compensation and/or extension of time, as set forth on the itemized statement attached hereto.

There (is) (is not) an itemized statement attached.

Date: _____

By: _____

Title: _____

Contractor's Application for Payment

Owner: <u>City of Fenton</u>	Owner's Project No.: _____
Engineer: <u>OHM Advisors</u>	Engineer's Project No.: <u>0077-25-0040</u>
Contractor: _____	Contractor's Project No.: _____
Project: <u>2026 Local Road Program</u>	
Contract: <u>2026 Local Road Program</u>	

Application No.: _____ **Application Date:** _____
Application Period: From _____ to _____

1. Original Contract Price	\$	-
2. Net change by Change Orders	\$	-
3. Current Contract Price (Line 1 + Line 2)	\$	-
4. Total Work completed and materials stored to date (Sum of Column G Lump Sum Total and Column J Unit Price Total)	\$	-
5. Retainage		
a. _____ X \$ _____ - Work Completed =	\$	-
b. _____ X \$ _____ - Stored Materials =	\$	-
c. Total Retainage (Line 5.a + Line 5.b)	\$	-
6. Amount eligible to date (Line 4 - Line 5.c)	\$	-
7. Less previous payments (Line 6 from prior application)		
8. Amount due this application	\$	-
9. Balance to finish, including retainage (Line 3 - Line 4 + Line 5.c)	\$	-

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:

(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 the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor: _____
Signature: _____ **Date:** _____

Recommended by Engineer	Approved by Owner
By: _____	By: _____
Title: _____	Title: _____
Date: _____	Date: _____
Approved by Funding Agency	
By: _____	By: _____
Title: _____	Title: _____
Date: _____	Date: _____

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

	Page
Article 1—Definitions and Terminology.....	1
1.01 Defined Terms.....	1
1.02 Terminology	6
Article 2—Preliminary Matters.....	7
2.01 Delivery of Performance and Payment Bonds; Evidence of Insurance.....	7
2.02 Copies of Documents	7
2.03 Before Starting Construction	7
2.04 Preconstruction Conference; Designation of Authorized Representatives.....	8
2.05 Acceptance of Schedules	8
2.06 Electronic Transmittals	8
Article 3—Contract Documents: Intent, Requirements, Reuse.....	9
3.01 Intent.....	9
3.02 Reference Standards.....	9
3.03 Reporting and Resolving Discrepancies	10
3.04 Requirements of the Contract Documents.....	10
3.05 Reuse of Documents.....	11
Article 4—Commencement and Progress of the Work	11
4.01 Commencement of Contract Times; Notice to Proceed.....	11
4.02 Starting the Work.....	11
4.03 Reference Points.....	11
4.04 Progress Schedule.....	12
4.05 Delays in Contractor’s Progress	12
Article 5—Site; Subsurface and Physical Conditions; Hazardous Environmental Conditions	13
5.01 Availability of Lands	13
5.02 Use of Site and Other Areas.....	14
5.03 Subsurface and Physical Conditions.....	15
5.04 Differing Subsurface or Physical Conditions	16

5.05	Underground Facilities.....	17
5.06	Hazardous Environmental Conditions at Site	19
Article 6—Bonds and Insurance.....		21
6.01	Performance, Payment, and Other Bonds.....	21
6.02	Insurance—General Provisions.....	22
6.03	Contractor’s Insurance.....	24
6.04	Builder’s Risk and Other Property Insurance.....	25
6.05	Property Losses; Subrogation	25
6.06	Receipt and Application of Property Insurance Proceeds	27
Article 7—Contractor’s Responsibilities		27
7.01	Contractor’s Means and Methods of Construction	27
7.02	Supervision and Superintendence	27
7.03	Labor; Working Hours	27
7.04	Services, Materials, and Equipment	28
7.05	“Or Equals”.....	28
7.06	Substitutes	29
7.07	Concerning Subcontractors and Suppliers.....	31
7.08	Patent Fees and Royalties.....	32
7.09	Permits	33
7.10	Taxes	33
7.11	Laws and Regulations.....	33
7.12	Record Documents.....	33
7.13	Safety and Protection	34
7.14	Hazard Communication Programs	35
7.15	Emergencies.....	35
7.16	Submittals	35
7.17	Contractor’s General Warranty and Guarantee	38
7.18	Indemnification	39
7.19	Delegation of Professional Design Services	39
Article 8—Other Work at the Site.....		40
8.01	Other Work	40
8.02	Coordination	41
8.03	Legal Relationships.....	41

Article 9—Owner’s Responsibilities	42
9.01 Communications to Contractor	42
9.02 Replacement of Engineer	42
9.03 Furnish Data	42
9.04 Pay When Due.....	42
9.05 Lands and Easements; Reports, Tests, and Drawings.....	43
9.06 Insurance.....	43
9.07 Change Orders	43
9.08 Inspections, Tests, and Approvals.....	43
9.09 Limitations on Owner’s Responsibilities	43
9.10 Undisclosed Hazardous Environmental Condition.....	43
9.11 Evidence of Financial Arrangements.....	43
9.12 Safety Programs	43
Article 10—Engineer’s Status During Construction	44
10.01 Owner’s Representative.....	44
10.02 Visits to Site.....	44
10.03 Resident Project Representative.....	44
10.04 Engineer’s Authority	44
10.05 Determinations for Unit Price Work	45
10.06 Decisions on Requirements of Contract Documents and Acceptability of Work	45
10.07 Limitations on Engineer’s Authority and Responsibilities	45
10.08 Compliance with Safety Program.....	45
Article 11—Changes to the Contract	46
11.01 Amending and Supplementing the Contract	46
11.02 Change Orders	46
11.03 Work Change Directives.....	46
11.04 Field Orders.....	47
11.05 Owner-Authorized Changes in the Work	47
11.06 Unauthorized Changes in the Work.....	47
11.07 Change of Contract Price	47
11.08 Change of Contract Times.....	49
11.09 Change Proposals.....	49
11.10 Notification to Surety.....	50

Article 12—Claims.....	50
12.01 Claims.....	50
Article 13—Cost of the Work; Allowances; Unit Price Work	51
13.01 Cost of the Work	51
13.02 Allowances	55
13.03 Unit Price Work.....	55
Article 14—Tests and Inspections; Correction, Removal, or Acceptance of Defective Work	56
14.01 Access to Work.....	56
14.02 Tests, Inspections, and Approvals.....	56
14.03 Defective Work	57
14.04 Acceptance of Defective Work.....	58
14.05 Uncovering Work	58
14.06 Owner May Stop the Work	58
14.07 Owner May Correct Defective Work.....	59
Article 15—Payments to Contractor; Set-Offs; Completion; Correction Period	59
15.01 Progress Payments.....	59
15.02 Contractor’s Warranty of Title	62
15.03 Substantial Completion.....	62
15.04 Partial Use or Occupancy	63
15.05 Final Inspection	64
15.06 Final Payment.....	64
15.07 Waiver of Claims	65
15.08 Correction Period.....	66
Article 16—Suspension of Work and Termination	67
16.01 Owner May Suspend Work	67
16.02 Owner May Terminate for Cause.....	67
16.03 Owner May Terminate for Convenience.....	68
16.04 Contractor May Stop Work or Terminate	68
Article 17—Final Resolution of Disputes	69
17.01 Methods and Procedures.....	69
Article 18—Miscellaneous	69
18.01 Giving Notice	69
18.02 Computation of Times.....	69

18.03	Cumulative Remedies	70
18.04	Limitation of Damages	70
18.05	No Waiver	70
18.06	Survival of Obligations	70
18.07	Controlling Law	70
18.08	Assignment of Contract.....	70
18.09	Successors and Assigns	70
18.10	Headings.....	70

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.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
 - 4. 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*

1. *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.
2. *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.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. 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.
- 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.
- F. 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.
- G. 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.
 - 1. 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.
 - 2. 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.
- C. 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*

- A. 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.
 - B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
 - C. 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:
 - 1. 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.
 - 2. 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*

1. *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.
2. *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.

3. *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.
4. *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.

5. *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.
- C. *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.
- D. 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 OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

	Page
Article 1— Definitions and Terminology.....	1
Article 2— Preliminary Matters	1
Article 3— Contract Documents: Intent, Requirements, Reuse	1
Article 4— Commencement and Progress of the Work	1
Article 5— Site, Subsurface and Physical Conditions, Hazardous Environmental Conditions.....	2
Article 6— Bonds and Insurance	3
Article 7— Contractor’s Responsibilities	6
Article 8— Other Work at the Site	7
Article 9— Owner’s Responsibilities	7
Article 10— Engineer’s Status During Construction	7
Article 11— Changes to the Contract	7
Article 12— Claims	7
Article 13— Cost of Work; Allowances, Unit Price Work.....	7
Article 14— Tests and Inspections; Correction, Removal, or Acceptance of Defective Work	7
Article 15— Payments to Contractor, Set Offs; Completions; Correction Period	7
Article 16— Suspension of Work and Termination	7
Article 17— Final Resolutions of Disputes	8
Article 18— Miscellaneous	9

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

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

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, "Paragraph SC-4.05."

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

SC-1.01.50 The term "Work Change Directive" shall be understood to refer to a "Work Order."

ARTICLE 2—PRELIMINARY MATTERS

2.02 *Copies of Documents*

SC-2.02 Amend the first sentence of Paragraph 2.02.A to read as follows:

Owner shall furnish to Contractor **one** printed copies of the **Project Manual** (including one fully signed counterpart of the Agreement), and **one copy of the Project Manual and drawings** in electronic portable document format (PDF). Additional printed copies **may be furnished by the Contractor at their own expense.**

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

No suggested Supplementary Conditions in this Article.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

SC-4.01 Delete Paragraph 4.01.A of the General Conditions and substitute the following in its place:

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

4.03 *Reference Points*

SC-4.03 Add the following paragraph after paragraph 4.03.A:

- B. During the progress of the work, the Contractor may encounter section line, fractional section line, and property controlling corner monuments. Insofar as is known, such public land survey corners and property monuments have been indicated on the plans. The Contractor shall be responsible for complying with the requirements of Michigan Public Act 34. Specifically, he shall be responsible for notifying the county surveyor before removing a public land survey corner monument for construction activities. In addition, if construction time constraints will result in the public land survey corner monument being removed for more than one year, then the Contractor shall arrange to have a temporary corner monument set until the permanent one can be re-established. The costs of the removing and replacing public land survey corner monuments as well as setting temporary corner monuments shall be the responsibility of the Contractor unless pay items are provided in the bid form for these tasks. The Contractor shall not remove any such monument until the Engineer or Owner has witness points as reference for resetting of such monuments. After referencing has been done and suitable permanent sketches prepared, the Engineer or Owner will give permission to the Contractor for removal of the monument. Monuments and monument boxes shall be reset only after all backfilling has fully settled.

The Contractor shall protect and preserve all monument points, property corners, grade stakes, line and reference points. Where stakes and markers are disturbed or removed due to operations under this Contract, the Contractor shall be charged at invoice cost by the Owner for replacing the points. Care shall be exercised by the Contractor when operating near the markers, as any carelessness in operations will also cause a time delay to the schedule due to additional stakeout time required to replace reference points, lines, etc.

The Contractor shall accurately locate the work from reference points established by the Engineer along the surface of the ground and line of work.

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

5.01 Availability of Lands

- SC-5.01 Add the following new paragraph immediately after Paragraph 5.01A: “Unless otherwise approved by the Owner, the Contractor shall keep his work operations within the right of way and/or easement areas.”.

5.02 Use of Site and Other Areas

- SC-5.02 Add the following paragraph immediately after Paragraph 5.02.A.2:

3. The Contractor’s operations in public streets or alleys shall be confined to as small a space as practicable, so as not to cause undue inconvenience to the public or abutting properties, and shall be subject to the approval of the Owner.

Where the Contractor wishes to work on or stockpile materials on nearby properties, it will be his responsibility to contact the property owner for permission. Upon request, the Contractor shall provide a copy of written permission from any affected property owner. The Owner will not become involved with any such agreements and will not be held responsible for any damages that the Contractor may cause to private property. The Contractor shall not be compensated for restoration of private properties and stockpile areas unless said areas were within the original project limits.

SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03.D:

- E. 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:

Report Title	Date of Report	Technical Data
City of Fenton Local Road Program	12/11/25	G2 Consulting Group

- F. The following table lists the 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 specifically identifies the Technical Data upon which Contractor may rely:

Drawings Title	Date of Drawings	Technical Data
None		

- G. Contractor may examine copies of reports and drawings identified in SC-5.03.E and SC-5.03.F that were not included with the Bidding Documents at the office of the Engineer, 34000 Plymouth Road, Livonia, MI 48150, during regular business hours.

5.06 *Hazardous Environmental Conditions*

SC-5.06 Add the following new paragraphs immediately after Paragraph 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:

Report Title	Date of Report	Technical Data
None		

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.B:

1. The warranty bond must be issued by the same surety that issues the performance bond required under Paragraph 6.01A of the General Conditions.

6.03 *Contractor's Insurance*

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

- D. *Other Additional Insureds:* As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess,

pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds (in addition to Owner and Engineer) the following: **City of Fenton (Owner) and OHM Advisors (Engineer)**.

- E. *Workers' Compensation and Employer's Liability*: Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers' Compensation and Related Policies	Policy limits of not less than:
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Employer's Liability	
Coverage A - Compensation	Statutory
Coverage B - Employer's Liability	\$100,000

- F. *Commercial General Liability—Claims Covered*: Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:
1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
 2. damages insured by reasonably available personal injury liability coverage, and
 3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- G. *Commercial General Liability—Form and Content*: Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage.
 - a. Such insurance must be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
 4. Underground, explosion, and collapse coverage.
 5. Personal injury coverage.

6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
 7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 “Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured” or its equivalent.
- H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
1. Any modification of the standard definition of “insured contract” (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
 2. Any exclusion for water intrusion or water damage.
 3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
 4. Any exclusion of coverage relating to earth subsidence or movement.
 5. Any exclusion for the insured’s vicarious liability, strict liability, or statutory liability (other than worker’s compensation).
 6. Any limitation or exclusion based on the nature of Contractor’s work.
 7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.
- I. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	Policy limits of not less than:
General Aggregate	\$2,000,000
Products—Completed Operations Aggregate	\$1,000,000
Personal and Advertising Injury	\$1,000,000
Each Occurrence	\$1,000,000
Fire Damage – Each Occurrence	\$50,000
Medical Expense – Each person	\$5,000

- J. *Automobile Liability:* Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.

Automobile Liability	Policy limits of not less than:
Bodily Injury	
Each Occurrence	\$1,000,000

Automobile Liability	Policy limits of not less than:
Property Damage	
Each Occurrence	\$500,000
or	
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	\$1,000,000

- K. *Umbrella or Excess Liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer’s liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	\$2,000,000
General Aggregate	\$2,000,000

- L. *Contractor’s Professional Liability Insurance:* If Contractor will provide or furnish professional services under this *Contract*, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance must cover negligent acts, errors, or omissions in the performance of professional design or related services by the insured or others for whom the insured is legally liable. The insurance must be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. The retroactive date on the policy must pre-date the commencement of furnishing services on the Project.

Contractor’s Professional Liability	Policy limits of not less than:
Each Claim	\$1,000,000
Annual Aggregate	\$1,000,000

ARTICLE 7—CONTRACTOR’S RESPONSIBILITIES

7.03 *Labor; Working Hours*

SC-7.03 Add the following new subparagraphs immediately after Paragraph 7.03.C:

1. Regular working hours will be **7am to 7pm, Monday through Saturday.**
2. Owner's legal holidays are **New Year’s Day, Martin Luther King Day, President’s Day, Good Friday, Memorial Day, Juneteenth National Independence Day, Independence Day, Labor Day, Thanksgiving, Friday after Thanksgiving, Christmas Eve, Christmas Day, New Year’s Eve Day.**

C-7.03 Amend the first and second sentences of Paragraph 7.03.C to state "...all Work at the Site must be performed during regular working hours, **Monday** through **Saturday**. Contractor will not perform Work on a **Sunday** or any legal holiday without Owner approval."

SC-7.03 Add the following new paragraph immediately after Paragraph 7.03.C:

- D. Contractor shall be responsible for the cost of any overtime pay or other expense incurred by the Owner for Engineer's services (including those of the Resident Project Representative, if any), Owner's representative, and construction observation services, occasioned by the performance of Work on Saturday, Sunday, any legal holiday, or as overtime on any regular work day. If Contractor is responsible but does not pay, or if the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.

ARTICLE 8—OTHER WORK AT THE SITE

No suggested Supplementary Conditions in this Article.

ARTICLE 9—OWNER'S RESPONSIBILITIES

No suggested Supplementary Conditions in this Article.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

No suggested Supplementary Conditions in this Article.

ARTICLE 11—CHANGES TO THE CONTRACT

No suggested Supplementary Conditions in this Article.

ARTICLE 12—CLAIMS

No suggested Supplementary Conditions in this Article.

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

No suggested Supplementary Conditions in this Article.

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

No suggested Supplementary Conditions in this Article.

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

No suggested Supplementary Conditions in this Article.

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

17.02 *Arbitration*

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

17.02 *Arbitration*

- A. All matters subject to final resolution under this Article will be settled by arbitration administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules (subject to the conditions and limitations of this Paragraph SC-17.02). Any controversy or claim in the amount of \$100,000 or less will be settled in accordance with the American Arbitration Association's supplemental rules for Fixed Time and Cost Construction Arbitration. This agreement to arbitrate will be specifically enforceable under the prevailing law of any court having jurisdiction.
- B. The demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitration administrator, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the specific time required in Article 17, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event will any such demand be made after the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations.
- C. The arbitrator(s) must be licensed engineers, contractors, attorneys, or construction managers. Hearings will take place pursuant to the standard procedures of the Construction Arbitration Rules that contemplate in-person hearings. The arbitrators will have no authority to award punitive or other damages not measured by the prevailing party's actual damages, except as may be required by statute or the Contract. Any award in an arbitration initiated under this clause will be limited to monetary damages and include no injunction or direction to any party other than the direction to pay a monetary amount.
- D. The Arbitrators will have the authority to allocate the costs of the arbitration process among the parties, but will only have the authority to allocate attorneys' fees if a specific Law or Regulation or this Contract permits them to do so.
- E. The award of the arbitrators must be accompanied by a reasoned written opinion and a concise breakdown of the award. The written opinion will cite the Contract provisions deemed applicable and relied on in making the award.
- F. The parties agree that failure or refusal of a party to pay its required share of the deposits for arbitrator compensation or administrative charges will constitute a waiver by that party to present evidence or cross-examine witness. In such event, the other party shall be required to present evidence and legal argument as the arbitrator(s) may require for the making of an award. Such waiver will not allow for a default judgment against the non-paying party in the absence of evidence presented as provided for above.
- G. No arbitration arising out of or relating to the Contract will include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:

1. the inclusion of such other individual or entity will allow complete relief to be afforded among those who are already parties to the arbitration;
 2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration, and which will arise in such proceedings;
 3. such other individual or entity is subject to arbitration under a contract with either Owner or Contractor, or consents to being joined in the arbitration; and
 4. the consolidation or joinder is in compliance with the arbitration administrator's procedural rules.
- H. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.
- I. Except as may be required by Laws or Regulations, neither party nor an arbitrator may disclose the existence, content, or results of any arbitration hereunder without the prior written consent of both parties, with the exception of any disclosure required by Laws and Regulations or the Contract. To the extent any disclosure is allowed pursuant to the exception, the disclosure must be strictly and narrowly limited to maintain confidentiality to the extent possible.

ARTICLE 18—MISCELLANEOUS

No suggested Supplementary Conditions in this Article.

SECTION 01 10 00 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Work Covered by Contract Documents
 - 2. Type of Contract
 - 3. Use of Premises
 - 4. Access to Site
 - 5. Work Restrictions
 - 6. Easement Coordination
 - 7. Miscellaneous Provisions
- B. Related Requirements:
 - 1. Division 01 Section "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: 2026 Local Road Program – City of Fenton
 - 1. Project Location: 2026 Local Road Program
 - a. This project consists of approximately 3000 feet of asphalt road reconstruction, 1000 feet of asphalt road crushing and shaping, 1000 feet of curb & gutter repairs, and 2200 feet of 8" water main replacement with ductile iron.

Owner: City of Fenton, 301 S Leroy Street, Fenton, MI 48430

Owner's Representative: OHM Advisors, 34000 Plymouth Road, Livonia, Michigan 48150
- B. Engineer: OHM Advisors, 34000 Plymouth Road, Livonia, Michigan 48150

Construction Manager for this Project is Project's Contractor. In Divisions 01 through 49 Sections, the terms "Construction Manager" and "Contractor" are synonymous.

- C. Other Owner Consultants: The Owner has retained the following design professionals who have prepared designated portions of the Contract Documents:

G2 Consulting Group, LLC. has prepared the following portions of the Contract Documents:

 - a. G2 has performed soil borings and geotechnical laboratory tests on soil samples.

1.4 TYPE OF CONTRACT

- A. Project will be constructed under a single prime contract.

1.5 USE OF PREMISES

- A. General: Contractor shall have limited use of premises for construction operations as indicated on the Drawings by the work zone limits. If necessary, the Contractor is responsible for securing additional areas along the project route for their operations, through discussion with private property owners. The City will not be responsible for providing additional project staging areas beyond what is identified in the contract as the work zone.
- A. Use of Site: Limit use of premises to areas within the Contract work zone limits indicated. Do not disturb portions of Project site beyond areas in which the work zone limits are indicated.
 - 1. Limits: Confine construction operations and equipment/material staging as shown on drawings within public ROW and permanent/temporary easement limits. The Contractor is responsible for securing additional staging areas along the project route, or in the general vicinity of project. The City may provide assistance in locating additional areas for staging, but the Contractor is ultimately responsible for securing these areas with the private property owner.
 - 2. Owner Occupancy: Allow for Owner occupancy of Project site and use by the public.
 - 3. Driveways and Entrances: Keep driveways and entrances within the project limits clear and available to Owner, residents, the public, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize impacts on driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

1.6 ACCESS TO SITE

- A. Use of Site: Limit use of Project site to access routes and impact areas as designated on construction plans. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 - 1. Driveways, Walkways and Entrances: Keep entrances clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. All pedestrian walkways must be accessible or a detour route shall be posted where possible.
 - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

1.7 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Work shall be performed during normal business working hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday. No work on Sundays or holidays, unless otherwise approved by the City Manager's office.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 - 1. Notify Owner no less than **three** days in advance of proposed utility interruptions.

2. Obtain Owner's written permission before proceeding with utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
1. Notify Owner no less than **three** days in advance of proposed disruptive operations.
 2. Obtain Owner's written permission before proceeding with disruptive operations.

1.8 UTILITY COORDINATION

- A. The Contractor shall cooperate and coordinate construction activities and protection of underground and overhead utilities with the owners of utilities prior to commencing work. During the course of the construction, the Contractor will encounter both overhead and underground utilities.

For protection of underground utilities and in conformance with Public Act 174, of 2013, as amended, the Contractor shall contact "MISS DIG" at 1-800-482-7171 or 811 a minimum of three (3) full working days, excluding Saturdays, Sundays, and holidays prior to beginning each excavation in areas where public utilities have not been previously marked/located. This does not relieve the Contractor of the responsibility of notifying utility owners identified in the contract documents who may not be a part of the "MISS DIG" alert system.

The existing utilities as shown on the plans, represent the best information available. This information does not relieve the Contractor of the responsibility to be satisfied as to the accuracy and the location of the existing utilities.

It shall be the Contractor's responsibility to identify, locate and verify depths of all conflicting utilities in a timely manner. The contractor shall coordinate all necessary protection measures and temporary or permanent utility relocations with the utility affected. Damage to an existing utility caused by the Contractor shall be at the Contractor's expense. The City will be responsible for necessary utility relocation costs not due to the contractor's operations.

1.9 MISCELLANEOUS PROVISIONS

- A. Ownership of Salvaged Materials
1. All salvageable materials such as castings, hydrants, valves, culverts, and similar items removed during construction shall remain the property of the Owner. The Contractor shall set aside these salvaged materials in a safe place for pick up by the Owner. If the Owner indicates that he does not want the salvaged items, then the Contractor shall be responsible for the disposal of the items.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 10 00

SECTION 01 22 00 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for unit prices.
- B. Unit of payment and method of payment shall be consistent with this Section 01 22 00 as outlined below for each pay item.
- C. Related Sections include the following:
 - 1. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.
 - 2. Division 01 Section "Quality Requirements" for general testing and inspecting requirements.
 - 3. Sections 110 to 825 of the Michigan Department of Transportation 2020 Standard Specifications for Construction for pay items.
 - 4. Appendix B – Special Provisions for pay items.

1.3 DEFINITIONS

- A. Unit price is stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

1.5 PRICES AND MEASUREMENT

- A. Payment for work under this contract will be based on a unit price, lump sum, or dollar allowance basis for work actually completed. Final measurements of the work will be taken by the Engineer to determine the amount of work done and thereby determine the total cost. The method of applying the unit prices to measured quantities will also be as herein specified. Payment will include the cost of all labor, tools, materials, and equipment necessary to do the work, in all cases.

- B. Several items may have been included in the bid form but may not be called for on the plans. These items have been included in order to establish a unit price in the event that the item of work is necessary. The Contractor should be aware that these items may increase, decrease, or be zero based on field conditions, or Owner direction.
- C. Several items may have been included on the plans to be installed as directed by the Engineer or Owner, and included on this bid form with an estimated quantity. Necessity and accuracy of these items are to be confirmed in the field, along with measurement of item as field verified.
- D. **Refer to Sections 110 to 825 of the Michigan Department of Transportation 2020 Standard Specifications for Construction and Appendix B for Special Provisions detailing each item of Work.**

1.6 INCIDENTAL ITEMS

- A. Any items of work indicated as incidental or included shall be considered as part of the project work and shall be completed at no additional expense to the Owner. Incidental or included items shall include labor, materials, and equipment that may not be specifically listed in the Bid Form or in the drawings or specifications, but which are necessary to complete the work.
- B. The cost of Potholing and/or Exploratory Excavation of existing utilities for proposed work is assumed to be included in each pay item where underground impact is necessary, and shall be completed at no additional expense to the Owner.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 GARBAGE/WASTE COLLECTION

- A. The Contractor shall maintain waste collection procedures for all roadways and adjacent businesses during construction. Temporary access for garbage trucks, or any other approved method to allow for regular trash or recycle pick-up shall be considered as incidental.

3.2 SCHOOL BUS AND PUBLIC TRANSPORTATION BUS ACCESS

- A. The Contractor shall maintain safe and efficient access for school buses and public transportation buses at all times during the construction operations. Any temporary construction measures, or alternate construction methods necessary to allow for bus access during required hours of operation, shall be incidental to the pay items listing in this contract.

END OF SECTION 01 22 00

SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections include the following:
 - 1. Division 01 Section "Unit Prices" for administrative requirements for using unit prices.
 - 2. Division 01 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

1.3 FIELD WORK ORDER

- A. Engineer or Owner will issue a Field Order authorizing minor changes in the work, not involving adjustment to the Contract Sum or the Contract Time.

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Engineer will issue a detailed description of the proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by Engineer or Owner are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to Owner.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.

3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Division 01 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.

1.5 WORK CHANGE DIRECTIVE

- A. Work Change Directive & Change Order: Owner may issue a Work Change Directive & Change Order. Work Change Directive & Change Order instructs and authorizes Contractor to proceed with a change in the Work.
 1. Work Change Directive & Change Order contains a complete description of change in the Work. It also designates method followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work if required by the Work Change Directive & Change Order.
 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.
- C. On Owner's approval of a Proposal Request, Engineer will issue a Work Change Directive & Change Order for signatures of Owner and Contractor.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 26 00

SECTION 01 29 00 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
 - 1. Division 01 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - 2. Division 01 Section "Unit Prices" for administrative requirements governing use of unit prices.
 - 3. Division 01 Section "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.

1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Owner or Engineer and paid for by Owner.
 - 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Forms: EJCDC Document C-620 as form for Applications for Payment.
- D. Contractor's Declaration Form – Each application shall be accompanied by a Contractor's Declaration on the form provided in the project manual.
- E. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Owner or Engineer will return incomplete applications without action.
 - 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 - 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- F. Transmittal: Submit **3** signed and notarized original copies of each Application for Payment to Owner or Engineer by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of Values.
 3. Contractor's Construction Schedule (preliminary if not final).
 4. Products list.
 5. Schedule of unit prices.
 6. Submittals Schedule (preliminary if not final).
 7. List of Contractor's staff assignments.
 8. List of Contractor's principal consultants.
 9. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 10. Initial progress report.
 11. Report of preconstruction conference.
 12. Certificates of insurance and insurance policies.
 13. Performance and payment bonds.
 14. Data needed to acquire Owner's insurance.
- H. Application for Payment at Substantial Completion: After the Owner issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- I. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. Evidence that claims have been settled.
 5. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 6. Final, liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 29 00

SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Project meetings.
 - 2. Requests for Interpretation (RFIs).
- B. Related Sections include the following:
 - 1. Division 01 Section "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
 - 2. Division 01 Section "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
 - 3. Division 01 Section "Closeout Procedures" for coordinating closeout of the Contract.

1.3 DEFINITIONS

- A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

1.4 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
 - 4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts

and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's Construction Schedule.
2. Preparation of the Schedule of Values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Progress meetings.
6. Preinstallation conferences
7. Project closeout activities.
8. Startup and adjustment of systems.
9. Project closeout activities.

- E. Coordination with Owner and other contractors: The Owner, utility companies, and commercial or private owners may have construction projects occurring within or adjacent to the project limits during the life of this Contract. Coordinate construction with all such projects that may be ongoing in the vicinity. Where the Contractor's work affects the operation of the Owner's utilities, coordinate work with the Owner. Contact Owner's representative. Give at least 48 hours of notice to the Owner in order to schedule activities such as valve operation, hydrant operation, sewer and structure cleanout, etc. No claim for extra compensation or adjustments in the Contract Unit Prices will be allowed on account of delay or failure of others to complete work scheduled.

1.5 OBSERVATION OF CONSTRUCTION

- A. This project shall require full time construction inspection by the Owner. Construction inspection is shown in the Bid Form as the bid item "Crew Days". This item is included in the Bid Form in order to expedite construction and ensure the Contractor's expedient pursuit of completion of the Contract.
- B. Each bidder shall enter, as the estimated quantity of inspection, the number of crew days he will require for completion of the project. This number shall then be multiplied by the unit price noted, and the extension entered as the amount for this item of work.
- C. The basis of computing crew days shall be as follows:
1. Crew days shall be defined as one construction inspector working 8 hours, and shall be billed in 4 hour increments rounded to the next half day as defined below:
 - a. 0 through 4 hours 1/2 crew day
 - b. Over 4 hours through 8 hours 1 crew day
 - c. Over 8 hours through 12 hours 1-1/2 crew day
 - d. Over 12 hours 2 crew days
 2. If the Contractor cancels work for any given scheduled work day and the Contractor does not provide notice to the Construction Observer before 5:00 p.m. the day prior to the work stoppage, 0.25 crew days (2 hours) shall be accrued against the Crew Days bid item. It is the Contractor's sole responsibility to assure that any cancellation notification has been received.
 3. If the Contractor proceeds with work without having an inspector present for inspection of work items listed in Subsection K, below, 1.0 crew day (8 hours) shall be accrued against the Crew Days bid item and that work may be rejected or not considered for payment until properly rectified with the Construction Observer.
- D. The Foreman present for the Contractor shall sign the construction inspector's report at the end of each working day, agreeing to the number of Crew Days reported for that day.

- E. The Contractor shall notify the Owner a minimum of seventy-two (72) hours prior to starting work. If the Contractor should move offsite for a period of more than two days, excluding weekends and holidays, the Construction Observer shall be notified. The Contractor shall then notify the Construction Observer a minimum of forty-eight (48) hours prior to returning to the site.
- F. If the contractor utilizes more than one crew to complete tasks listed below requiring full time inspection, the Owner may require that one (1) inspector be assigned to each construction crew. Crew days will be charged for any one operation requiring full time inspection (See Subsection K for types of operations requiring a full time inspector). The Contractor shall give the Owner at least 48 hours' notice, exclusive of Saturdays, Sundays or holidays, when the project requires an increase or decrease in the number of construction inspectors. The Owner shall determine when multiple construction inspectors are necessary. Extra construction inspectors are to be approved by the Owner. The contractor will need to anticipate the need for multiple crews per day, if applicable, and account for the additional inspection crew days in the bid.
- G. On pay estimates the actual number of crew days accumulated, up to the quantity bid, will be entered and extended. This amount will be deducted from the estimate and retained by the Owner for construction inspection services performed.
- H. If the Contractor completes the work using fewer crew days than the number stated in his proposal, his final payment shall not include the remaining balance of these unused additional crew. If additional crew days are awarded by change order, and the contractor uses fewer crew days than the added by change order, these unused additional crew days added by change orders will NOT be paid to the Contractor.
- I. If the work under the contract is incomplete when the Contractor has expended the number of crew days stated in his proposal, subsequent payments to the Contractor shall include a deduction item for excess crew days, at the unit price given, for each excess crew day of construction inspection used during the period covered by the payment, independent of and in addition to other provisions in the contract pertaining to retainage or liquidated damages.
- J. If, by change order, the quantity of work under the contract varies significantly from that stated in the proposal, the number of crew days shall be increased or decreased, as appropriate, in said change order. If the change order contains no increase or decrease in the number of crew days of construction inspection, then no adjustment is to be made in the number of crew days for construction inspection. Any increase in crew days shall be applied only to the specific work associated with the change order, and shall not be transferred to other work items. Furthermore, any unused crew days associated with a change order will not be included as additional payment to the Contractor.
- K. Full time inspection shall be required for construction tasks that are generally related to traffic safety, work to resolve property owner complaints, testing, and construction of all work that will become the property of the City of Fenton upon completion. These tasks may include, but are not limited to, the following:
 - 1. General
 - a. Material Testing (not the operations done by a geotechnical firm).
 - b. Checking barricades and lighting.
 - c. Checking maintenance of traffic.
 - d. Emergency conditions, as determined by the Owner.
 - e. Measuring quantities when said measurements are taken during one of the operations included with this list.
 - 2. Clean-Up and Complaints
 - a. Replacement of driveways, sidewalks, pavement, etc.
 - b. Checking grade for final restoration and answering complaints.

3. Concrete Pavement
 - a. Excavation and Preparation of the Site.
 - b. Mucking and filling ditches.
 - c. Pavement Removal.
 - d. Subgrade Preparation and Fine Grading.
 - e. Adjusting and Reconstructing Existing Structures.
 - f. Sub-Base Construction.
 - g. Checking Form Alignment and Grade.
 - h. Placing Concrete.
 - i. Preparing Compression Cylinders.
 - j. Finishing of Concrete.
 - k. Placing of Cold Weather Protection.
 - l. Sawing and Sealing.
 - m. Finish Grading.
 - n. Adjusting Existing Driveways and Sidewalks.
 - o. Checking final pavement prior to final acceptance for conformance to specifications.
4. Sanitary Sewers, Storm Sewers, and Appurtenances
 - a. Excavation and Preparation of the Site.
 - b. Checking Sewer Pipe.
 - c. Installing Pipe Bed.
 - d. Laying Pipe.
 - e. Installing House Leads.
 - f. Tunneling, Jacking or Boring of Sewer.
 - g. Constructing Manholes, Catch Basins, Inlets.
 - h. Backfilling.
 - i. Infiltration or Ex-Filtration Tests.
 - j. Final checking of sewers prior to releasing for connections to be made or placing in service.
5. Water Main and Appurtenances
 - a. Excavation and Preparation of the Site.
 - b. Checking Water Main Pipe.
 - c. Installing Pipe Bed.
 - d. Laying Pipe.
 - e. Installing House Services.
 - f. Tunneling, Jacking or Boring of Water Main.
 - g. Constructing Gate Wells or Valve Boxes.
 - h. Backfilling.
 - i. Acceptance Tests.
 - j. Final checking of mains prior to releasing for connections to be made or placing in service.
6. Asphalt Paving and Pavement Resurfacing
 - a. Excavation.
 - b. Preparation of Subgrade.
 - c. Construction of Base.
 - d. Preparation of Existing Pavement.
 - e. Priming Base Course.
 - f. Laying of Bituminous Concrete Pavement or Surface.
 - g. Checking of Material.
 - h. Checking of Asphalt Plants.
 - i. Checking of Final Pavement for Conformance to Specifications.

- L. All Sunday work shall multiply the number of crew days by a factor of 1.5 and with prior approval given by the Owner.

- M. All holiday work shall multiply the number of crew days by a factor of 1.5 and with prior approval given by the Owner. A holiday is defined as New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, the day after Thanksgiving, Christmas Eve, Christmas Day and New Year's Eve.
- N. No payment on inspector crew days shall occur while the project is in progress. Upon final evaluation and inspection approval of inspector crew days will be calculated and paid along with the final payment of the project to the contractor.

1.6 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
 - 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Construction Observer of scheduled meeting dates and times.
 - 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 - 3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Construction Observer, within **three** days of the meeting.
- B. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner, but no later than 15 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
 - 1. Attendees: Authorized representatives of Owner, Engineer and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Procedures for processing field decisions and Change Orders.
 - f. Procedures for RFIs.
 - g. Procedures for testing and inspecting.
 - h. Procedures for processing Applications for Payment.
 - i. Distribution of the Contract Documents.
 - j. Submittal procedures.
 - k. Use of the premises.
 - l. Work restrictions.
 - m. Responsibility for temporary facilities and controls.
 - n. Construction waste management and recycling.
 - o. Parking availability.
 - p. Storage areas.
 - q. Equipment deliveries and priorities.
 - r. First aid.
 - s. Security.
 - t. Progress cleaning.

- u. Working hours.
 - 3. Minutes: Engineer will record and distribute meeting minutes.
- C. Progress Meetings: Conduct progress meetings at **biweekly** intervals unless more frequent meetings are necessary as determined by the Owner. Coordinate dates of meetings with preparation of payment requests.
- 1. Attendees: In addition to representatives of Owner, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Sequence of operations.
 - 2) Status of submittals.
 - 3) Deliveries.
 - 4) Off-site fabrication.
 - 5) Access.
 - 6) Site utilization.
 - 7) Temporary facilities and controls.
 - 8) Work hours.
 - 9) Hazards and risks.
 - 10) Progress cleaning.
 - 11) Quality and work standards.
 - 12) Status of correction of deficient items.
 - 13) Field observations.
 - 14) RFIs.
 - 15) Status of proposal requests.
 - 16) Pending changes.
 - 17) Status of Change Orders.
 - 18) Pending claims and disputes.
 - 19) Documentation of information for payment requests.
 - 3. Minutes: Engineer will record and distribute to Contractor the meeting minutes.
 - 4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
 - a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

1.7 REQUESTS FOR INTERPRETATION (RFIs)

- A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.
1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
1. Project name.
 2. Date.
 3. Name of Contractor.
 4. Name of Engineer.
 5. RFI Subject.
 6. RFI number, numbered sequentially.
 7. Specification Section number and title and related paragraphs, as appropriate.
 8. Drawing number and detail references, as appropriate.
 9. Field dimensions and conditions, as appropriate.
 10. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 11. Contractor's signature.
 12. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
 13. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.
- C. Hard-Copy RFIs:
1. Identify each page of attachments with the RFI number and sequential page number.
- D. Engineer's or Owner's Action: Engineer or Owner will review each RFI, determine action required, and return it. Allow **seven** working days for Engineer's or Owner's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Engineer's or Owner's actions on submittals.
 - f. Incomplete RFIs or RFIs with numerous errors.
 2. Engineer's or Owner's action may include a request for additional information, in which case Engineer's or Owner's time for response will start again.
 3. Engineer's or Owner's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Engineer or Owner in writing within five days of receipt of the RFI response.
- E. On receipt of Engineer's or Owner's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Engineer or Owner within **seven** days if Contractor disagrees with response.

- F. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log bi-weekly. Include the following:
1. Project name.
 2. Name and address of Contractor.
 3. Name and address of Engineer or Owner.
 4. RFI number including RFIs that were dropped and not submitted.
 5. RFI description.
 6. Date the RFI was submitted.
 7. Date Engineer's or Owner's response was received.
 8. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 31 00

SECTION 01 32 00 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Contractor's Construction Schedule.
 - 2. Submittals Schedule.
 - 3. Daily construction reports.
 - 4. Field condition reports.
- B. Related Sections include the following:
 - 1. Division 01 Section "Payment Procedures" for submitting the Schedule of Values.
 - 2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
 - 3. Division 01 Section "Submittal Procedures" for submitting schedules and reports.
 - 4. Division 01 Section "Quality Requirements" for submitting a schedule of tests and inspections.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.
- B. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.
- C. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- D. Float: The measure of leeway in starting and completing an activity.
 - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
- E. Fragment: A partial or fragmentary network that breaks down activities into smaller activities for greater detail.
- F. Major Area: A story of construction, a separate building, or a similar significant construction element.

1.4 SUBMITTALS

- A. Submittals Schedule: Submit **three** copies of schedule. Arrange the following information in a tabular format:
 - 1. Scheduled date for first submittal.
 - 2. Specification Section number and title.
 - 3. Submittal category (action or informational).
 - 4. Name of subcontractor.
 - 5. Description of the Work covered.
 - 6. Scheduled date for Engineer's or Owner's final release or approval.
- B. Contractor's Construction Schedule: Submit **two** opaque copies of initial schedule, large enough to show entire schedule for entire construction period.
- C. Field Condition Reports: Submit **two** copies at time of discovery of differing conditions.

1.5 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from parties involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
 - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
 - 2. Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
 - 1. List of subcontractors at Project site.
 - 2. List of separate contractors at Project site.
 - 3. Approximate count of personnel at Project site.
 - 4. Equipment at Project site.
 - 5. Material deliveries.
 - 6. High and low temperatures and general weather conditions.
 - 7. Accidents.
 - 8. Meetings and significant decisions.
 - 9. Unusual events (refer to special reports).
 - 10. Stoppages, delays, shortages, and losses.

11. Meter readings and similar recordings.
12. Emergency procedures.
13. Orders and requests of authorities having jurisdiction.
14. Change Orders received and implemented.
15. Work Change Directives received and implemented.
16. Services connected and disconnected.

- B. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a request for interpretation on Engineer or Owner approved form. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At **biweekly** intervals, update schedule to reflect actual construction progress and activities. Issue schedule **one week** before each regularly scheduled progress meeting.
1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 3. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Engineer or Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 01 32 00

SECTION 01 33 00 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Sections include the following:
 - 1. Division 01 Section "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
 - 2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
 - 3. Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
 - 4. Division 01 Section "Quality Requirements" for submitting test and inspection reports.
 - 5. Division 01 Section "Closeout Procedures" for submitting warranties.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Engineer's or Owner's responsive action.
- B. Informational Submittals: Written information that does not require Engineer's or Owner's responsive action. Submittals may be rejected for not complying with requirements.

1.4 SUBMITTALS SCHEDULE

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by the Engineer or Owner and additional time for handling and reviewing submittals required by those corrections.

1.5 SUBMITTAL PROCEDURES

- A. General: Electronic copies of CAD Drawings of the Contract Drawings will not be provided by Engineer or Owner for Contractor's use in preparing submittals.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Engineer or Owner reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

- C. Submittals Schedule: Comply with requirements in Division 01 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
- D. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's or Owner's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Engineer or Owner will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 15 days for review of each resubmittal.
- E. Identification: Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Engineer or Owner.
 3. Include the following information on label for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name and address of Engineer.
 - d. Name and address of Contractor.
 - e. Name and address of subcontractor.
 - f. Name and address of supplier.
 - g. Name of manufacturer.
 - h. Submittal number or other unique identifier, including revision identifier.
 - 1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).
 - i. Number and title of appropriate Specification Section.
 - j. Drawing number and detail references, as appropriate.
 - k. Location(s) where product is to be installed, as appropriate.
 - l. Other necessary identification.
- F. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.
- G. Additional Copies: Unless additional copies are required for final submittal, and unless Engineer or Owner observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
1. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Engineer or Owner.
- H. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Engineer or Owner will return submittals, without review, received from sources other than Contractor.
1. Transmittal Form: Use form acceptable to Owner.
 2. Transmittal Form: Provide locations on form for the following information:
 - a. Project name.
 - b. Date.

- c. Destination (To:).
 - d. Source (From:).
 - e. Names of subcontractor, manufacturer, and supplier.
 - f. Category and type of submittal.
 - g. Submittal purpose and description.
 - h. Specification Section number and title.
 - i. Drawing number and detail references, as appropriate.
 - j. Transmittal number, numbered consecutively.
 - k. Submittal and transmittal distribution record.
 - l. Remarks.
 - m. Signature of transmitter.
3. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Engineer or Owner on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same label information as related submittal.
- I. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
- 1. Note date and content of previous submittal.
 - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 - 3. Resubmit submittals until they are marked as "Approved" or "Approved as Noted."
- J. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- K. Use for Construction: Use only final submittals with mark indicating Approved by Engineer or Owner. Retain copies of submittals on project sites.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
- 1. Submit electronic submittals directly to extranet specifically established for Project.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
- 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each copy of each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Standard color charts.
 - e. Manufacturer's catalog cuts.
 - f. Wiring diagrams showing factory-installed wiring.
 - g. Printed performance curves.
 - h. Operational range diagrams.
 - i. Mill reports.
 - j. Standard product operation and maintenance manuals.
 - k. Compliance with specified referenced standards.
 - l. Testing by recognized testing agency.
 - m. Application of testing agency labels and seals.

- n. Notation of coordination requirements.
 - 4. Submit Product Data before or concurrent with Samples.
 - 5. Number of Copies: Submit three copies of Product Data, unless otherwise indicated. Engineer or Owner, will return two copies. Mark up and retain one returned copy as a Project Record Document.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
- 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Fabrication and installation drawings.
 - d. Roughing-in and setting diagrams.
 - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - f. Shopwork manufacturing instructions.
 - g. Templates and patterns.
 - h. Schedules.
 - i. Design calculations.
 - j. Compliance with specified standards.
 - k. Notation of coordination requirements.
 - l. Notation of dimensions established by field measurement.
 - m. Relationship to adjoining construction clearly indicated.
 - n. Seal and signature of professional engineer if specified.
 - o. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 - 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 22 by 34 inches.
 - 3. Number of Copies: Submit three opaque (bond) copies of each submittal, unless copies are required for operation and maintenance manuals. Engineer or Owner will retain two copies; remainder will be returned.
- D. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation" for Construction Manager's action.
- E. Submittals Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- F. Application for Payment: Comply with requirements specified in Division 01 Section "Payment Procedures."
- G. Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."
- H. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
- 1. Name, address, and telephone number of entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.
 - 3. Drawing number and detail references, as appropriate, covered by subcontract.
 - 4. Number of Copies: Submit three copies of subcontractor list, unless otherwise indicated. Engineer or Owner will return two copies.
 - a. Mark up and retain one returned copy as a Project Record Document.

2.2 INFORMATIONAL SUBMITTALS

- A. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- B. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- C. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- D. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- E. Schedule of Tests and Inspections: Comply with requirements specified in Division 01 Section "Quality Requirements."
- F. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- G. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- H. Construction Videotapes: Comply with requirements specified in Division 01 Section "Photographic Documentation."

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Engineer or Owner.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ENGINEER'S ACTION

- A. General: Engineer or Owner will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Engineer or Owner will review each submittal, make marks to indicate corrections or modifications required, and return it. Engineer or Owner will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 - 1. Approved
 - 2. Rejected

3. Approved as noted
 4. Revise and Resubmit
 5. Submit specified item
- C. Informational Submittals: Engineer or Owner will review each submittal and will not return it or will return it if it does not comply with requirements. Engineer or Owner will forward each submittal to appropriate party.
- D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 01 33 00

SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Engineer, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections include the following:
 - 1. Division 01 Section "Allowances" for testing and inspecting allowances.
 - 2. Division 01 Section "Construction Progress Documentation" for developing a schedule of required tests and inspections.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Engineer or Owner.
- C. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- D. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
- E. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- F. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

- G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- H. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Using a term such as "landscaper" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "landscaper". It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- I. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of **five** previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 REGULATORY

- A. Public Agency Requirements: It is the intention of these specifications to construct all work in accordance with the applicable requirements of the Owner, EGLE, MCDR, MCPW, MDOT and the contract specifications, and the contract drawings. Where there is a conflict between any of the aforementioned specifications and the permit requirements of the agency controlling the respective utility or rights-of-way, the more restrictive shall govern.

1.5 CONFLICTING REQUIREMENTS

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Engineer or Owner for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Engineer or Owner for a decision before proceeding.

1.6 SUBMITTALS

- A. Testing Agency Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Reports: Prepare and submit certified written reports that include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.

11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 12. Name and signature of laboratory inspector.
 13. Recommendations on retesting and reinspecting.
- C. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.7 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- F. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- G. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- H. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
1. Provide test specimens representative of proposed products and construction.
 2. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 3. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.

4. First subparagraph below attempts to ensure that tested assemblies will be representative of actual construction. This requirement may complicate testing and add cost.
5. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
6. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
7. When testing is complete, remove test specimens, assemblies, mockups, and laboratory mockups; do not reuse products on Project.
8. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Engineer or Owner, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

1.8 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."
- D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- E. Testing Agency Responsibilities: Cooperate with Engineer or Owner and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
 1. Notify Engineer or Owner and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.

2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 40 00

SECTION 01 42 00 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Engineer's or Owner's action on Contractor's submittals, applications, and requests, "approved" is limited to Engineer's or Owner's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Engineer or Owner. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Thomson Gale's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."
- B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

AA	Aluminum Association, Inc. (The) www.aluminum.org	(703) 358-2960
AAADM	American Association of Automatic Door Manufacturers www.aaadm.com	(216) 241-7333
AABC	Associated Air Balance Council www.aabchq.com	(202) 737-0202
AAMA	American Architectural Manufacturers Association www.aamanet.org	(847) 303-5664
AASHTO	American Association of State Highway and Transportation Officials www.transportation.org	(202) 624-5800
AATCC	American Association of Textile Chemists and Colorists (The) www.aatcc.org	(919) 549-8141
ABAA	Air Barrier Association of America www.airbarrier.org	(866) 956-5888
ABMA	American Bearing Manufacturers Association www.abma-dc.org	(202) 367-1155
ACI	ACI International (American Concrete Institute) www.aci-int.org	(248) 848-3700
ACPA	American Concrete Pipe Association www.concrete-pipe.org	(972) 506-7216
AEIC	Association of Edison Illuminating Companies, Inc. (The) www.aeic.org	(205) 257-2530
AF&PA	American Forest & Paper Association www.afandpa.org	(800) 878-8878 (202) 463-2700
AGA	American Gas Association www.aga.org	(202) 824-7000
AGC	Associated General Contractors of America (The) www.agc.org	(703) 548-3118

AHA	American Hardboard Association (Now part of CPA)	
AHAM	Association of Home Appliance Manufacturers www.aham.org	(202) 872-5955
AI	Asphalt Institute www.asphaltinstitute.org	(859) 288-4960
AIA	American Institute of Architects (The) www.aia.org	(800) 242-3837 (202) 626-7300
AISC	American Institute of Steel Construction www.aisc.org	(800) 644-2400 (312) 670-2400
AISI	American Iron and Steel Institute www.steel.org	(202) 452-7100
AITC	American Institute of Timber Construction www.aitc-glulam.org	(303) 792-9559
ALCA	Associated Landscape Contractors of America (Now PLANET - Professional Landcare Network)	
ALSC	American Lumber Standard Committee, Incorporated www.alsc.org	(301) 972-1700
AMCA	Air Movement and Control Association International, Inc. www.amca.org	(847) 394-0150
ANSI	American National Standards Institute www.ansi.org	(202) 293-8020
AOSA	Association of Official Seed Analysts, Inc. www.aosaseed.com	(405) 780-7372
APA	Architectural Precast Association www.archprecast.org	(239) 454-6989
APA	APA - The Engineered Wood Association www.apawood.org	(253) 565-6600
APA EWS	APA - The Engineered Wood Association; Engineered Wood Systems (See APA - The Engineered Wood Association)	
API	American Petroleum Institute www.api.org	(202) 682-8000
ARI	Air-Conditioning & Refrigeration Institute www.ari.org	(703) 524-8800
ARMA	Asphalt Roofing Manufacturers Association www.asphaltroofing.org	(202) 207-0917
ASCE	American Society of Civil Engineers	(800) 548-2723

	www.asce.org	(703) 295-6300
ASCE/SEI	American Society of Civil Engineers/Structural Engineering Institute (See ASCE)	
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers www.ashrae.org	(800) 527-4723 (404) 636-8400
ASME	ASME International (The American Society of Mechanical Engineers International) www.asme.org	(800) 843-2763 (973) 882-1170
ASSE	American Society of Sanitary Engineering www.asse-plumbing.org	(440) 835-3040
ASTM	ASTM International (American Society for Testing and Materials International) www.astm.org	(610) 832-9585
AWCI	AWCI International (Association of the Wall and Ceiling Industry International) www.awci.org	(703) 534-8300
AWCMA	American Window Covering Manufacturers Association (Now WCSC)	
AWI	Architectural Woodwork Institute www.awinet.org	(571) 323-3636
AWPA	American Wood-Preservers' Association www.awpa.com	(205) 733-4077
AWS	American Welding Society www.aws.org	(800) 443-9353 (305) 443-9353
AWWA	American Water Works Association www.awwa.org	(800) 926-7337 (303) 794-7711
BHMA	Builders Hardware Manufacturers Association www.buildershardware.com	(212) 297-2122
BIA	Brick Industry Association (The) www.bia.org	(703) 620-0010
BICSI	BICSI www.bicsi.org	(800) 242-7405 (813) 979-1991
BIFMA	BIFMA International (Business and Institutional Furniture Manufacturer's Association International) www.bifma.com	(616) 285-3963
BISSC	Baking Industry Sanitation Standards Committee www.bissc.org	(866) 342-4772

CCC	Carpet Cushion Council www.carpetcushion.org	(610) 527-3880
CDA	Copper Development Association www.copper.org	(800) 232-3282 (212) 251-7200
CEA	Canadian Electricity Association www.canelect.ca	(613) 230-9263
CFFA	Chemical Fabrics & Film Association, Inc. www.chemicalfabricsandfilm.com	(216) 241-7333
CGA	Compressed Gas Association www.cganet.com	(703) 788-2700
CIMA	Cellulose Insulation Manufacturers Association www.cellulose.org	(888) 881-2462 (937) 222-2462
CISCA	Ceilings & Interior Systems Construction Association www.cisca.org	(630) 584-1919
CISPI	Cast Iron Soil Pipe Institute www.cispi.org	(423) 892-0137
CLFMI	Chain Link Fence Manufacturers Institute www.chainlinkinfo.org	(301) 596-2583
CRRC	Cool Roof Rating Council www.coolroofs.org	(866) 465-2523 (510) 485-7175
CPA	Composite Panel Association www.pbmdf.com	(301) 670-0604
CPPA	Corrugated Polyethylene Pipe Association www.cppa-info.org	(800) 510-2772 (202) 462-9607
CRI	Carpet & Rug Institute (The) www.carpet-rug.com	(800) 882-8846 (706) 278-3176
CRSI	Concrete Reinforcing Steel Institute www.crsi.org	(847) 517-1200
CSA	Canadian Standards Association	(800) 463-6727 (416) 747-4000
CSA	CSA International (Formerly: IAS - International Approval Services) www.csa-international.org	(866) 797-4272 (416) 747-4000
CSI	Cast Stone Institute www.caststone.org	(717) 272-3744
CSI	Construction Specifications Institute (The) www.csinet.org	(800) 689-2900 (703) 684-0300

CSSB	Cedar Shake & Shingle Bureau www.cedarbureau.org	(604) 820-7700
CTI	Cooling Technology Institute (Formerly: Cooling Tower Institute) www.cti.org	(281) 583-4087
DHI	Door and Hardware Institute www.dhi.org	(703) 222-2010
EIA	Electronic Industries Alliance www.eia.org	(703) 907-7500
EIMA	EIFS Industry Members Association www.eima.com	(800) 294-3462 (770) 968-7945
EJCDC	Engineers Joint Contract Documents Committee www.ejdc.org	(703) 295-5000
EJMA	Expansion Joint Manufacturers Association, Inc. www.ejma.org	(914) 332-0040
ESD	ESD Association www.esda.org	(315) 339-6937
FIBA	Federation Internationale de Basketball (The International Basketball Federation) www.fiba.com	41 22 545 00 00
FIVB	Federation Internationale de Volleyball (The International Volleyball Federation) www.fivb.ch	41 21 345 35 35
FM Approvals	FM Approvals www.fmglobal.com	(781) 762-4300
FM Global	FM Global (Formerly: FMG - FM Global) www.fmglobal.com	(401) 275-3000
FMRC	Factory Mutual Research (Now FM Global)	
FRSA	Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc. www.floridarroof.com	(407) 671-3772
FSA	Fluid Sealing Association www.fluidsealing.com	(610) 971-4850
FSC	Forest Stewardship Council www.fsc.org	49 228 367 66 0
GA	Gypsum Association www.gypsum.org	(202) 289-5440

GANA	Glass Association of North America www.glasswebsite.com	(785) 271-0208
GRI	(Now GSI)	
GS	Green Seal www.greenseal.org	(202) 872-6400
GSI	Geosynthetic Institute www.geosynthetic-institute.org	(610) 522-8440
HI	Hydraulic Institute www.pumps.org	(888) 786-7744 (973) 267-9700
HI	Hydronics Institute www.gamanet.org	(908) 464-8200
HMMA	Hollow Metal Manufacturers Association (Part of NAAMM)	
HPVA	Hardwood Plywood & Veneer Association www.hpva.org	(703) 435-2900
HPW	H. P. White Laboratory, Inc. www.hpwhite.com	(410) 838-6550
IAS	International Approval Services (Now CSA International)	
IBF	International Badminton Federation www.internationalbadminton.org	(6-03) 9283-7155
ICEA	Insulated Cable Engineers Association, Inc. www.icea.net	(770) 830-0369
ICRI	International Concrete Repair Institute, Inc. www.icri.org	(847) 827-0830
IEC	International Electrotechnical Commission www.iec.ch	41 22 919 02 11
IEEE	Institute of Electrical and Electronics Engineers, Inc. (The) www.ieee.org	(212) 419-7900
IESNA	Illuminating Engineering Society of North America www.iesna.org	(212) 248-5000
IEST	Institute of Environmental Sciences and Technology www.iest.org	(847) 255-1561
IGCC	Insulating Glass Certification Council www.igcc.org	(315) 646-2234
IGMA	Insulating Glass Manufacturers Alliance www.igmaonline.org	(613) 233-1510

ILI	Indiana Limestone Institute of America, Inc. www.iliai.com	(812) 275-4426
ISO	International Organization for Standardization www.iso.ch	41 22 749 01 11
	Available from ANSI www.ansi.org	(202) 293-8020
ISSFA	International Solid Surface Fabricators Association www.issfa.net	(877) 464-7732 (702) 567-8150
ITS	Intertek Testing Service NA www.intertek.com	(972) 238-5591
ITU	International Telecommunication Union www.itu.int/home	41 22 730 51 11
KCMA	Kitchen Cabinet Manufacturers Association www.kcma.org	(703) 264-1690
LMA	Laminating Materials Association (Now part of CPA)	
LPI	Lightning Protection Institute www.lightning.org	(800) 488-6864
MBMA	Metal Building Manufacturers Association www.mbma.com	(216) 241-7333
MFMA	Maple Flooring Manufacturers Association, Inc. www.maplefloor.org	(847) 480-9138
MFMA	Metal Framing Manufacturers Association, Inc. www.metalframingmfg.org	(312) 644-6610
MH	Material Handling (Now MHIA)	
MHIA	Material Handling Industry of America www.mhia.org	(800) 345-1815 (704) 676-1190
MIA	Marble Institute of America www.marble-institute.com	(440) 250-9222
MPI	Master Painters Institute www.paintinfo.com	(888) 674-8937
MSS	Manufacturers Standardization Society of The Valve and Fittings Industry Inc. www.mss-hq.com	(703) 281-6613
NAAMM	National Association of Architectural Metal Manufacturers www.naamm.org	(312) 332-0405
NACE	NACE International	(800) 797-6623

	(National Association of Corrosion Engineers International) www.nace.org	(281) 228-6200
NADCA	National Air Duct Cleaners Association www.nadca.com	(202) 737-2926
NAGWS	National Association for Girls and Women in Sport www.aahperd.org/nagws/	(800) 213-7193, ext. 453
NAIMA	North American Insulation Manufacturers Association www.naima.org	(703) 684-0084
NBGQA	National Building Granite Quarries Association, Inc. www.nbgqa.com	(800) 557-2848
NCAA	National Collegiate Athletic Association (The) www.ncaa.org	(317) 917-6222
NCMA	National Concrete Masonry Association www.ncma.org	(703) 713-1900
NCPI	National Clay Pipe Institute www.ncpi.org	(262) 248-9094
NCTA	National Cable & Telecommunications Association www.ncta.com	(202) 775-3550
NEBB	National Environmental Balancing Bureau www.nebb.org	(301) 977-3698
NECA	National Electrical Contractors Association www.necanet.org	(301) 657-3110
NeLMA	Northeastern Lumber Manufacturers' Association www.nelma.org	(207) 829-6901
NEMA	National Electrical Manufacturers Association www.nema.org	(703) 841-3200
NETA	InterNational Electrical Testing Association www.netaworld.org	(888) 300-6382 (303) 697-8441
NFHS	National Federation of State High School Associations www.nfhs.org	(317) 972-6900
NFPA	NFPA (National Fire Protection Association) www.nfpa.org	(800) 344-3555 (617) 770-3000
NFRC	National Fenestration Rating Council www.nfrc.org	(301) 589-1776
NGA	National Glass Association www.glass.org	(866) 342-5642 (703) 442-4890

NHLA	National Hardwood Lumber Association www.natlhardwood.org	(800) 933-0318 (901) 377-1818
NLGA	National Lumber Grades Authority www.nlga.org	(604) 524-2393
NOFMA	NOFMA: The Wood Flooring Manufacturers Association (Formerly: National Oak Flooring Manufacturers Association) www.nofma.com	(901) 526-5016
NRCA	National Roofing Contractors Association www.nrca.net	(800) 323-9545 (847) 299-9070
NRMCA	National Ready Mixed Concrete Association www.nrmca.org	(888) 846-7622 (301) 587-1400
NSF	NSF International (National Sanitation Foundation International) www.nsf.org	(800) 673-6275 (734) 769-8010
NSSGA	National Stone, Sand & Gravel Association www.nssga.org	(800) 342-1415 (703) 525-8788
NTMA	National Terrazzo & Mosaic Association, Inc. (The) www.ntma.com	(800) 323-9736 (540) 751-0930
NTRMA	National Tile Roofing Manufacturers Association (Now TRI)	
NWWDA	National Wood Window and Door Association (Now WDMA)	
OPL	Omega Point Laboratories, Inc. (Now ITS)	
PCI	Precast/Prestressed Concrete Institute www.pci.org	(312) 786-0300
PDCA	Painting & Decorating Contractors of America www.pdca.com	(800) 332-7322 (314) 514-7322
PDI	Plumbing & Drainage Institute www.pdionline.org	(800) 589-8956 (978) 557-0720
PGI	PVC Geomembrane Institute http://pgi-tp.ce.uiuc.edu	(217) 333-3929
PLANET	Professional Landcare Network (Formerly: ACLA - Associated Landscape Contractors of America) www.landcarenetwork.org	(800) 395-2522 (703) 736-9666
PTI	Post-Tensioning Institute www.post-tensioning.org	(602) 870-7540
RCSC	Research Council on Structural Connections	

	www.boltcouncil.org	
RFCI	Resilient Floor Covering Institute www.rfci.com	(301) 340-8580
RIS	Redwood Inspection Service www.calredwood.org	(888) 225-7339 (415) 382-0662
SAE	SAE International www.sae.org	(877) 606-7323 (724) 776-4841
SDI	Steel Deck Institute www.sdi.org	(847) 458-4647
SDI	Steel Door Institute www.steeldoor.org	(440) 899-0010
SEFA	Scientific Equipment and Furniture Association www.sefalabs.com	(516) 294-5424
SEI/ASCE	Structural Engineering Institute/American Society of Civil Engineers (See ASCE)	
SGCC	Safety Glazing Certification Council www.sgcc.org	(315) 646-2234
SIA	Security Industry Association www.siaonline.org	(703) 683-2075
SIGMA	Sealed Insulating Glass Manufacturers Association (Now IGMA)	
SJI	Steel Joist Institute www.steeljoist.org	(843) 626-1995
SMA	Screen Manufacturers Association www.smacentral.org	(561) 533-0991
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association www.smacna.org	(703) 803-2980
SMPTE	Society of Motion Picture and Television Engineers www.smpte.org	(914) 761-1100
SPFA	Spray Polyurethane Foam Alliance (Formerly: SPI/SPFD - The Society of the Plastics Industry, Inc.; Spray Polyurethane Foam Division) www.sprayfoam.org	(800) 523-6154
SPIB	Southern Pine Inspection Bureau (The) www.spib.org	(850) 434-2611
SPRI	Single Ply Roofing Industry www.spri.org	(781) 647-7026

SSINA	Specialty Steel Industry of North America www.ssina.com	(800) 982-0355 (202) 342-8630
SSPC	SSPC: The Society for Protective Coatings www.sspc.org	(877) 281-7772 (412) 281-2331
STI	Steel Tank Institute www.steeltank.com	(847) 438-8265
SWI	Steel Window Institute www.steelwindows.com	(216) 241-7333
SWRI	Sealant, Waterproofing, & Restoration Institute www.swrionline.org	(816) 472-7974
TCA	Tile Council of America, Inc. www.tileusa.com	(864) 646-8453
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance www.tiaonline.org	(703) 907-7700
TMS	The Masonry Society www.masonrysociety.org	(303) 939-9700
TPI	Truss Plate Institute, Inc. www.tpinst.org	(703) 683-1010
TPI	Turfgrass Producers International www.turfgrasssod.org	(800) 405-8873 (847) 649-5555
TRI	Tile Roofing Institute www.tilerroofing.org	(312) 670-4177
UL	Underwriters Laboratories Inc. www.ul.com	(877) 854-3577 (847) 272-8800
UNI	Uni-Bell PVC Pipe Association www.uni-bell.org	(972) 243-3902
USAV	USA Volleyball www.usavolleyball.org	(888) 786-5539 (719) 228-6800
USGBC	U.S. Green Building Council www.usgbc.org	(202) 828-7422
USITT	United States Institute for Theatre Technology, Inc. www.usitt.org	(800) 938-7488 (315) 463-6463
WASTEC	Waste Equipment Technology Association www.wastec.org	(800) 424-2869 (202) 244-4700
WCLIB	West Coast Lumber Inspection Bureau www.wclib.org	(800) 283-1486 (503) 639-0651

WCMA	Window Covering Manufacturers Association (Now WCSC)	
WCSC	Window Covering Safety Council (Formerly: WCMA - Window Covering Manufacturers Association) www.windowcoverings.org	(800) 506-4636 (212) 297-2109
WDMA	Window & Door Manufacturers Association (Formerly: NWWDA - National Wood Window and Door Association) www.wdma.com	(800) 223-2301 (847) 299-5200
WI	Woodwork Institute (Formerly: WIC - Woodwork Institute of California) www.wicnet.org	(916) 372-9943
WIC	Woodwork Institute of California (Now WI)	
WMMPA	Wood Moulding & Millwork Producers Association www.wmmpa.com	(800) 550-7889 (530) 661-9591
WSRCA	Western States Roofing Contractors Association www.wsrca.com	(800) 725-0333 (650) 570-5441
WWPA	Western Wood Products Association www.wwpa.org	(503) 224-3930

C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

BOCA	BOCA International, Inc. (See ICC)	
IAPMO	International Association of Plumbing and Mechanical Officials www.iapmo.org	(909) 472-4100
ICBO	International Conference of Building Officials (See ICC)	
ICBO ES	ICBO Evaluation Service, Inc. (See ICC-ES)	
ICC	International Code Council www.iccsafe.org	(888) 422-7233 (703) 931-4533
ICC-ES	ICC Evaluation Service, Inc. www.icc-es.org	(800) 423-6587 (562) 699-0543

SBCCI Southern Building Code Congress International, Inc.
(See ICC)

UBC Uniform Building Code
(See ICC)

D. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CE Army Corps of Engineers
www.usace.army.mil

CPSC Consumer Product Safety Commission (800) 638-2772
www.cpsc.gov (301) 504-7923

DOC Department of Commerce (202) 482-2000
www.commerce.gov

DOD Department of Defense (215) 697-6257
<http://.dodssp.daps.dla.mil>

DOE Department of Energy (202) 586-9220
www.energy.gov

EPA Environmental Protection Agency (202) 272-0167
www.epa.gov

FAA Federal Aviation Administration (866) 835-5322
www.faa.gov

FCC Federal Communications Commission (888) 225-5322
www.fcc.gov

FDA Food and Drug Administration (888) 463-6332
www.fda.gov

GSA General Services Administration (800) 488-3111
www.gsa.gov

HUD Department of Housing and Urban Development (202) 708-1112
www.hud.gov

LBL Lawrence Berkeley National Laboratory (510) 486-4000
www.lbl.gov

NCHRP National Cooperative Highway Research Program
(See TRB)

NIST National Institute of Standards and Technology (301) 975-6478
www.nist.gov

OSHA Occupational Safety & Health Administration (800) 321-6742
www.osha.gov (202) 693-1999

PBS	Public Building Service (See GSA)	
PHS	Office of Public Health and Science www.osophs.dhhs.gov/ophs	(202) 690-7694
RUS	Rural Utilities Service (See USDA)	(202) 720-9540
SD	State Department www.state.gov	(202) 647-4000
TRB	Transportation Research Board http://gulliver.trb.org	(202) 334-2934
USDA	Department of Agriculture www.usda.gov	(202) 720-2791
USPS	Postal Service www.usps.com	(202) 268-2000

E. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ADAAG	Americans with Disabilities Act (ADA) Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities Available from Access Board www.access-board.gov	(800) 872-2253 (202) 272-0080
CFR	Code of Federal Regulations Available from Government Printing Office www.gpoaccess.gov/cfr/index.html	(866) 512-1800 (202) 512-1800
DOD	Department of Defense Military Specifications and Standards Available from Department of Defense Single Stock Point http://dodssp.daps.dla.mil	(215) 697-2664
DSCC	Defense Supply Center Columbus (See FS)	
FED-STD	Federal Standard (See FS)	
FS	Federal Specification Available from Department of Defense Single Stock Point http://dodssp.daps.dla.mil Available from Defense Standardization Program www.dps.dla.mil	(215) 697-2664

Available from General Services Administration (202) 619-8925
www.gsa.gov

Available from National Institute of Building Sciences (202) 289-7800
www.wbdg.org/ccb

FTMS Federal Test Method Standard
(See FS)

MIL (See MILSPEC)

MIL-STD (See MILSPEC)

MILSPEC Military Specification and Standards (215) 697-2664
Available from Department of Defense Single Stock Point
<http://dodssp.daps.dla.mil>

UFAS Uniform Federal Accessibility Standards (800) 872-2253
Available from Access Board (202) 272-0080
www.access-board.gov

F. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

MDOT Michigan Department of Transportation 517-373-2090
www.michigan.gov/mdot

EGLE Michigan Department of Environment, Great Lakes, and Energy 800-662-9278
www.michigan.gov/egle

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 42 00

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes requirements for temporary facilities and temporary soil erosion and sedimentation controls.
- B. Related Sections include the following:
 - 1. Division 01 Section "Summary" for limitations on utility interruptions and other work restrictions.
 - 2. Division 01 Section "Submittal Procedures" for procedures for submitting copies of implementation and termination schedule and utility reports.
 - 3. Division 01 Section "Execution" for progress cleaning requirements.

1.3 USE CHARGES

- A. Water Service: Pay water service use charges for water used by all entities for construction operations.

1.4 QUALITY ASSURANCE

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

1.5 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Erosion Control in accordance with 2020 MDOT Standard Specifications for Construction, Section 916 as well as Genesee County.
- B. Temporary Traffic Control devices including plastic drums, barricades, signs, sign covers, lighted arrows, and temporary pavement markings in accordance with 2020 MDOT Standard Specifications for Construction, Section 812.
- C. Aggregate 21AA in accordance with 2020 MDOT Standard Specifications for Construction table 902-1.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work. Construct temporary access road in the locations shown in the drawings.
 - 1. Locate facilities to limit site disturbance as specified in Division 01 Section "Summary."

3.2 SUPPORT FACILITIES INSTALLATION

- A. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
 - 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
 - 2. Remove snow and ice as required to minimize accumulations.
- B. Project Identification and Temporary Signs: Provide Project identification and other signs as indicated on Drawings. Install signs where indicated to inform public and individuals seeking entrance to Project. Unauthorized signs are not permitted.
 - 1. Provide temporary, directional signs for construction personnel and visitors.
 - 2. Maintain and touchup signs so they are legible at all times.

3.3 TRAFFIC CONTROL

- A. General
 - 1. During the course of construction, provisions must be made to maintain access for emergency vehicles at all times. Where possible and when directed by the Owner, all streets must be left open to traffic at the end of each working day. Traffic maintenance and control as defined in this section shall be considered as included in the unit bid prices or lump sum bid prices that are given in the Bid Form.
 - 2. All work for maintaining traffic and control shall be in accordance with Section 812 of the 2020 MDOT Standard Specifications for Construction and the current edition of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD). The Contract shall also comply with work zone sign requirements as described in Public Act 315 of 2003.
 - 3. The Contractor shall conduct his operations and use of equipment in such a manner that traffic will be maintained throughout the entire length of the project. When conditions are such as to warrant variations from this requirement, the procedure to be followed shall be approved by the Owner prior to such procedure being put into effect.
 - 4. The Contractor shall furnish, erect and maintain all barricades, signs and lights as required according to the current edition of the MMUTCD. The Contractor shall be responsible for notifying concerned parties such as Police, Fire, and school officials if a road closure and/or detour will be in effect. The Contractor shall notify the same parties when the road has been reopened.
 - 5. Once work on a particular utility is begun, the Contractor must continue his work to completion. The Owner will not permit random movements of work operations among the project area that tend to confuse traffic patterns.
 - 6. Protect existing site improvements to remain including curbs, pavement, and utilities.
 - 7. Comply with requirements of authorities having jurisdiction.

B. Provisions for Local Traffic

1. During the progress of the work, the Contractor shall accommodate both local vehicular and pedestrian traffic along the roads.
2. Access to all residences and businesses shall be maintained except as noted on the plans or as directed by the Owner. The use of maintenance aggregate to maintain access shall be as approved by the Owner.
3. Maintain access for fire-fighting equipment and access to fire hydrants.
4. The Contractor's truck and equipment operations on public streets shall be governed by all local traffic ordinances and regulations of the Fire and Police Departments, the Owner, and the Michigan Department of Transportation.

C. Existing Warning and Regulatory Signs

1. Wherever possible, all existing signs on this project are to be preserved and maintained as incidental to the project.
2. Where it is not possible to preserve existing traffic control signs and street name signs, they shall be removed, temporarily reset and maintained by the Contractor. Upon completion of the project, the Contractor will reset traffic control signs and street name signs in the proper position at no additional cost to the contract. The contractor shall be responsible for coordinating with governing agencies on items impacted by the contractor's operations at no additional cost to the contract.
3. In cases where new signs are called for, they shall be placed in accordance with the requirements outlined elsewhere in the plans or technical specifications.
4. Any new or existing signs damaged by the Contractor shall be replaced in kind by him at no additional cost to the Owner.

D. Existing Bus Stop Signs and Infrastructure

1. Wherever possible, all existing bus stop signs and infrastructure (including but not limited to landing pads, shelters etc.) on this project are to be preserved and maintained as incidental to the project.
2. Where it is not possible to preserve existing bus stop signs and infrastructure, they shall be removed, temporarily reset, or constructed, and maintained by the Contractor. Upon completion of the project, the Contractor will reset bus stop signs and replace infrastructure in the proper position at no additional cost to the contract. The Contractor shall be responsible for coordinating with the public transportation company on items impacted by the contractor's operations at no additional cost to the contract.
3. In cases where new signs or infrastructure are called for, they shall be placed in accordance with the requirements outlined elsewhere in the plans or technical specifications.
4. Any new or existing signs or infrastructure damaged by the Contractor shall be replaced in kind by him at no additional cost to the Owner.

E. Lane Closures and Detours

1. Any lane closures or detours shall be approved by the Owner and the appropriate governing agency, and shall meet their specifications and standards as well as those of the MMUTCD. Where there are conflicts, the more restrictive requirement shall apply. If any type of closure is to occur during twilight or darkness, proper lighting will be required.

F. Construction Signs and Barricades

1. Warning signs and barricades configurations shall meet the requirements of the MMUTCD, the Owner, and the Michigan Department of Transportation.
2. The Contractor shall not begin any operation on the project until all required signs and barricades have been set.
3. All signs to be used during twilight or darkness shall be reflectorized, in good condition, with two continuous flashing lights.
4. The construction site shall at all times be maintained and left in a clean, neat, and safe condition, including any construction signing.

5. After working hours, signs that are not appropriate shall be covered and/or removed so that motorists will not be confused. The Contractor shall also remove and replace or cover (where practical) existing traffic signs that may conflict with the proposed construction.

G. Flag Control

1. Traffic regulators (flaggers) shall be provided by the Contractor as necessary to protect the vehicular and pedestrian traffic and the work within the work zone areas.

3.4 EXISTING STORM DRAINAGE AND UTILITIES

A. General

1. Contractor shall maintain positive flow through existing drainage ditches, drains, storm sewers, and culverts throughout the course of the work. In the event of a conflict with an existing storm drainage utility, the contractor shall provide temporary measures or redirect flow as necessary to complete the proposed water main installation work. Any damage to existing storm utilities shall be replaced with similar materials at no additional cost to the Owner.

END OF SECTION 01 50 00

SECTION 01 60 00 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. Related Sections include the following:
 - 1. Division 01 Section "References" for applicable industry standards for products specified.
 - 2. Division 01 Section "Closeout Procedures" for submitting warranties for Contract closeout.

1.3 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.4 SUBMITTALS

- A. Substitution Requests: Submit **three** copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified material or product cannot be provided.

- b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
 - i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
 - j. Cost information, including a proposal of change, if any, in the Contract Sum.
 - k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
 - l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
2. Engineer's or Owner's Action: If necessary, Engineer or Owner will request additional information or documentation for evaluation within **7** days of receipt of a request for substitution. Engineer or Owner will notify Contractor of acceptance or rejection of proposed substitution within **15** days of receipt of request, or **7** days of receipt of additional information or documentation, whichever is later.
- a. Form of Acceptance: Change Order.
 - b. Use product specified if Engineer or Owner cannot make a decision on use of a proposed substitution within time allocated.
- B. Comparable Product Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
1. Engineer's or Owner's Action: If necessary, Engineer or Owner will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Engineer or Owner will notify Contractor of approval or rejection of proposed comparable product request within **15** days of receipt of request, or **7** days of receipt of additional information or documentation, whichever is later.
- a. Form of Approval: As specified in Division 01 Section "Submittal Procedures."
 - b. Use product specified if Engineer or Owner cannot make a decision on use of a comparable product request within time allocated.
- C. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
- C. Storage:
 - 1. Store products to allow for inspection and measurement of quantity or counting of units.
 - 2. Store materials in a manner that will not endanger Project structure.
 - 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
 - 4. Store cementitious products and materials on elevated platforms.
 - 5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
 - 6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 - 7. Protect stored products from damage and liquids from freezing.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 - 1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 - 2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
 - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 - 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.
- C. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Engineer or Owner will make selection.
 5. Where products are accompanied by the term "match sample," sample to be matched is Engineer's or Owner's.
 6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
 7. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," comply with provisions in Part 2 "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures:
1. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements.
 2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.
 3. Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
 4. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
 5. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
 6. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
 7. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed product or system.
 8. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product by the other named manufacturers.

2.2 PRODUCT SUBSTITUTIONS

- A. Timing: Engineer or Owner will consider requests for substitution if received within **15** days after commencement of the Work. Requests received after that time may be considered or rejected at discretion of Engineer or Owner.
- B. Conditions: Engineer or Owner will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer or Owner will return requests without action, except to record noncompliance with these requirements:
 - 1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Engineer or Owner for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 - 2. Requested substitution does not require extensive revisions to the Contract Documents.
 - 3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - 4. Substitution request is fully documented and properly submitted.
 - 5. Requested substitution will not adversely affect Contractor's Construction Schedule.
 - 6. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - 7. Requested substitution is compatible with other portions of the Work.
 - 8. Requested substitution has been coordinated with other portions of the Work.
 - 9. Requested substitution provides specified warranty.

2.3 COMPARABLE PRODUCTS

- A. Conditions: Engineer or Owner will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Engineer or Owner will return requests without action, except to record noncompliance with these requirements:
 - 1. Evidence that the proposed product does not require extensive revisions to the Contract Documents that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 - 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - 3. Evidence that proposed product provides specified warranty.
 - 4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 - 5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 60 00

SECTION 01 73 00 - EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering and surveying.
 - 3. General installation of products.
 - 4. Progress cleaning.
 - 5. Starting and adjusting.
 - 6. Protection of installed construction.
 - 7. Correction of the Work.
- B. Related Sections include the following:
 - 1. Division 01 Section "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.
 - 2. Division 01 Section "Submittal Procedures" for submitting surveys.
 - 3. Division 01 Section "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.
 - 4. Division 01 Section "Temporary Facilities and Controls" for submitting construction sequencing details and procedures.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
 - 1. Before construction, verify the location and points of connection of utility services.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
 - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
 - 3. For protection of underground utilities, the Contractor shall contact "MISS DIG" at 1-800-482-7171 a minimum of three (3) working days prior to excavating. This does not relieve the Contractor of the responsibility of notifying utility owners who may not be part of the "MISS DIG" alert system.

4. Where any utility, water, sewer, gas, telephone or any other public or private utilities are encountered, the Contractor must provide adequate protection for them, and he will be held responsible for any damages to such utilities arising from his operations.
 5. When it is apparent that construction operations may endanger the foundation of any utility, conduit, or support of any structure, the Contractor shall notify the utility owner of this possibility, and he shall take such steps as may be required to provide temporary bracing or support of conduits or structures.
 6. In all cases where permits or inspection fees are required by utilities in connection with changes to or temporary support of their conduits, the Contractor shall secure permits and pay all inspection fees.
 7. When it is necessary in order to carry out the work that a pole, telephone or electric, be moved to a new location or moved and replaced after construction, the Contractor shall arrange for moving such pole or poles and the lines thereof, and shall pay any charges.
 8. Where it is the policy of any utility owner to make his own repairs to damaged conduit or other structures, the Contractor shall cooperate to the fullest extent with the utility Owner and shall see that his operations interfere as little as possible with the utility Owner's operations.
 9. Sump Pump Discharge Pipe: Any discharge pipe from sump pumps or yard drains encountered on this project, whether or not shown on the plans, which discharges to existing ditches and/or storm sewers or cross public or private easements, shall be maintained, replaced, or reconnected as necessary. Bulkheads shall be placed only as approved by the Engineer or Owner. Sump pump connections shall be made to the storm drain pipe by a coring method as approved by the Engineer or Owner. The Contractor shall use adequate measures to prevent soil erosion, sedimentation, and/or ponding when connecting discharge pipes to existing or proposed ditches. This work shall be considered as incidental to the cost of the project.
 10. Existing Sewer Facilities: Existing sewers or drains may be encountered along the line of work. In all such cases, the Contractor shall perform his operation in such a manner that sewer service will not be interrupted. He shall, at his own expense, make all temporary provisions to maintain sewer service (both dry weather and storm flows).
 11. Unless otherwise indicated on the plans, the Contractor shall replace, at his own expense, any disturbed sewer or drain, or relay same at a new grade to be established by the Engineer or Owner such that sufficient clearance for the sewer will be provided.
 12. Existing Water Facilities: Where existing water mains and/or water services are encountered in the work, they shall be maintained in operation. They shall be relayed if necessary using the class of pipe and fittings standard to the Owner of the main. Water services crossing the alignment of the proposed water main shall be disconnected and connected to the new water main as specified on the plans.
 13. Existing Drains: Drainage through existing sewers, ditches and drains shall be maintained at all times during construction, and all nearby gutters shall be kept open for drainage.
 14. Maintenance of services as described above shall be considered as incidental to the project cost unless pay items have been included in the bid form for this work.
- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
1. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 3. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Existing Utility Information: Furnish information to local utility that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Engineer or Owner. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.3 CONSTRUCTION SEQUENCING

- A. The Contractor shall provide a detailed project schedule. The schedule shall show all sequencing of operations during the course of the project, including traffic control, trenchless construction, open cut construction, pavement removal and replacement, and all other applicable work.
- B. The Contractor shall be aware that leaving any existing clay subgrade exposed to the elements after pavement removal beyond the end of the construction day in which it was exposed is prohibited. Once the subgrade is exposed, compaction shall occur, and undercuts will be as directed by the Construction Observer and aggregate base material will be placed in a timely fashion before any inclement weather occurs or prior to being exposed to the elements overnight.

3.4 CONSTRUCTION LAYOUT

- A. The Contractor will perform the project staking.

3.5 FIELD ENGINEERING

- A. Identification: Owner will identify existing benchmarks, control points, and property corners.
- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
 - 1. Do not change or relocate existing benchmarks or control points without prior written approval of the Engineer or Owner. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Engineer or Owner before proceeding.
 - 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.

1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

3.6 DUST CONTROL

- A. All haul roads, detour roads, temporary access roads, other public or private roads, driveways and parking lots used by the Contractor must be maintained in a dust free condition for the duration of the Contract. The control of the dust shall be accomplished by application of dust control materials and methods of application as approved and as directed by the Engineer or Owner. Such dust control materials shall be applied as often as is necessary to control dust. Neglect of dust control will not be tolerated.

Should the Contractor be negligent of his duties in providing dust control, the Owner may, with or without notice cause the same to be done and deduct the cost of such work from any monies due or to become due the Contractor under the Contract. Cost of providing dust control shall be considered incidental to the project.

3.7 STREET CLEANING

- A. The Contractor shall keep the streets clean. Trucks hauling excavated material, cement, sand, stone or other loose materials from or to the site shall be tight so that no spillage will occur on adjacent streets. Before trucks start away from the site, their loads shall be trimmed and covered. If, in the judgment of the Owner, adequate cleanup efforts are not being expended, including but not limited to, roadway, driveway and drainage maintenance, and removal of surplus materials, further construction shall be halted and work forces directed to the cleanup activity until proper order is restored. Should the Contractor continue to be negligent of his duties in maintaining proper street cleanliness, the Owner will take necessary steps to perform such cleaning and shall charge the Contractor for all the costs.

3.8 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
1. Remove liquid spills promptly.
 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning

materials that are not hazardous to health or property and that will not damage exposed surfaces.

- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.9 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.
- C. Provide and maintain weather protection and heating at Contractor's expense to properly protect the work under construction from damage if the weather conditions require. This work shall include all windbreaks, insulations cover, and other necessary measures required to provide protection from freezing. Continue to provide weather protection and heating as necessary until such time as the Owner takes over the work.

3.10 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

3.11 POWER AND LIGHT

The Contractor shall furnish, at his own expense, all the electric power and lighting necessary during the life of this Contract or until such time as the Owner takes over the work. The

Contractor shall be responsible for complying with any applicable ordinances or regulations concerning power and light.

3.12 WATER

The Contractor shall not make a connection to any public water main or fire hydrant without first obtaining the necessary permit and/or meter from the Owner. The Contractor will be charged for all water used.

Existing public water systems shall be operated and controlled by the Owner. All valves shall be operated exclusively by the Owner's personnel.

3.11 REPAIR OF DAMAGE

The Contractor shall be responsible for repairing all damages to existing lawns, sidewalk, parking lots, streets or other areas outside the limits of the Contract. Private utilities, private ornamental gas or electric lights, sprinkler systems, fences, shrubs, trees, existing sidewalk, or any other surface or subsurface items of value damaged by the Contractor shall be repaired, replaced or removed and replaced to at least equal condition at the Contractor's expense unless otherwise specified on the plans.

END OF SECTION 01 73 00

SECTION 01 77 00 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Warranties.
 - 3. Final cleaning.
 - 4. Repair of Work.
- B. Related Sections include the following:
 - 1. Division 01 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
 - 2. Division 01 Section "Execution" for progress cleaning of Project site.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. For first two subparagraphs below, see Evaluations.
 - 3. Advise Owner of pending insurance changeover requirements.
 - 4. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 5. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 6. Prepare and submit Project Record Documents, operation and maintenance manuals, and similar final record information.
 - 7. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 8. Complete final cleaning requirements, including touchup painting.
 - 9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for Substantial Completion a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Engineer or Owner will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer or Owner will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Engineer or Owner, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.4 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
 1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
 2. Submit certified copy of Engineer's or Owner's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Engineer or Owner. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Engineer or Owner will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer or Owner will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit **three** copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1.6 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Engineer or Owner for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01 77 00

SECTION 01 78 39 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including the following:
1. Record Drawings.
 2. Record Specifications.
 3. Record Product Data.

1.2 CLOSEOUT SUBMITTALS

- A. Record Drawings: Comply with the following:
1. Number of Copies: Submit copies of record Drawings as follows:
 - a. Initial Submittal:
 - 1) Submit PDF electronic files of scanned record prints and one set(s) of file prints.
 - 2) Owner will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
 - b. Final Submittal:
 - 1) Submit PDF electronic files of scanned record prints and **three** set(s) of prints. Print copies may be waived at the sole discretion of the Owner upon request.
 - 2) Print each drawing, whether or not changes and additional information were recorded.
- B. Record Product Data: Submit one paper copy and one annotated PDF electronic files and directories of each submittal.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised Drawings as modifications are issued.
1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Record data as soon as possible after obtaining it.
 - c. Record and check the markup before enclosing concealed installations.
 2. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
 3. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 4. Note Addenda, Construction or Work Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

- B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Owner. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:
 - 1. Format: Same digital data software program, version, and operating system as the original Contract Drawings.
 - 2. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
 - 3. Refer instances of uncertainty to Owner for resolution.
 - 4. Owner will furnish Contractor one set of digital data files of the Contract Drawings for use in recording information.

- C. Format: Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
 - 1. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 - 2. Format: Annotated PDF electronic file with comment function enabled.
 - 3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
 - 4. Identification: As follows:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Owner.
 - e. Name of Contractor.

2.2 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 - 3. Note related Change Orders and record Drawings where applicable.

- B. Format: Submit record Product Data as annotated PDF electronic file or scanned PDF electronic file(s) of marked-up paper copy of Product Data.

2.3 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

- B. Format: Submit miscellaneous record submittals as PDF electronic file or scanned PDF electronic file(s) of marked-up miscellaneous record submittals.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.
- B. Maintenance of Record Documents and Samples: Store record documents and Samples in the field office apart from the Contract Documents used for construction. Do not use project record documents for construction purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project record documents for Owner's reference during normal working hours.

END OF SECTION 01 78 39



REPORT ON GEOTECHNICAL INVESTIGATION

CITY OF FENTON LOCAL ROAD PROGRAM

ORCHARDVIEW DRIVE, VALLEYVIEW, HILLVIEW TERRACE, VALLEY
DRIVE, ELM STREET, & LONG STREET
FENTON, MICHIGAN

LATITUDE 42.783209° N
LONGITUDE 83.711036° W



CONSULTING
GROUP

Prepared for:

City of Fenton
Department of Public Works
301 S. Leroy Street
Fenton, Michigan 48430

G2 Project No. 251035
December 11, 2025



December 11, 2025

Mr. Dan Brisson
Director - Department of Public Works
City of Fenton
301 S. Leroy Street
Fenton, Michigan 48430

RE: Report on Geotechnical Investigation

City of Fenton 2026 Local Road Program
Orchardview Drive, Valleyview, Hillview Terrace, Valley Drive, Elm Street & Long Street
Fenton, Michigan
G2 Project No. 251035

Dear Mr. Brisson:

We have completed the geotechnical investigation for the proposed water main and paving improvements project for the City of Fenton 2026 Local Road Program within the City of Fenton, Genesee County, Michigan. This report presents the results of our observations and analyses and our recommendations for pavement section design, underground utility replacement, and project construction as they relate to the geotechnical conditions in the project area.

We appreciate the opportunity to be of service to the City of Fenton and OHM Advisors on this project and look forward to discussing the recommendations presented. In the meantime, if you have any questions regarding this report or any other matter pertaining to the project, please contact us.

Sincerely,

G2 Consulting Group, LLC

Handwritten signature of Jeffrey M. Hayball in black ink.

Jeffrey M. Hayball, P.E.
Project Manager

Handwritten signature of James L. Berry in black ink.

James L. Berry, P.E.
Project Consultant

JMH/JLB/ljv

EXECUTIVE SUMMARY

The project consists of water main and paving improvements for the City of Fenton 2026 Local Road Program within the City of Fenton, Genesee County, Michigan. Hot Mix Asphalt (HMA) pavements are present along each of the roadways within the 2026 Local Road Program. It is our understanding the pavement surface along Orchardview Drive and Valleyview will be partially reconstructed, leaving the existing curb and gutter in place. New water main will be installed along Hillview Terrace, Valley Drive, Elm Street, and Long Street. The pavements will be fully reconstructed where new water main is installed. We assume new water main will be installed using open-cut installation methods. It is assumed that maximum excavation depths for the water main will extend up to 6 feet. No information regarding traffic counts along the roadway alignments were available upon completion of this report.

HMA pavement is present at the ground surface of the borings and generally ranges in thickness from 2 to 4-1/4 inches. The underlying aggregate base consists of crushed limestone gravelly sand with little silt and natural sand and gravel with little silt measures 4 to 9 inches in thickness. Very stiff silty clay fill underlies the pavement section within boring B-03 and extends to an approximate depth of 3 feet. Loose silty sand fill with trace organic matter is present below the pavement section within boring B-05 and extends to an approximate depth of 3 feet. Native granular soils, consisting of loose to medium compact silty sand, gravelly sand, and sand, underlies the silty sand fill within boring B-05 and pavement section within boring B-06 and extends to depths ranging from 6 to 10 feet. Native cohesive soils, consisting of stiff to hard silty clay and sandy clay, are present below the pavement section, silty clay fill, and native silty sand within the remaining borings, and generally extend to the explored depth of 5 and 10 feet. However, native granular soils, consisting of gravelly sand and clayey sand, underlie the native cohesive soils within boring B-08 below an approximate depth of 8 feet and 9-1/2 feet within boring B-09. In addition, a strata of native gravelly sand is present within the native cohesive soils within boring B-07 between 6 and 8 feet. No measurable groundwater was observed within the borings during or upon completion of drilling operations.

Temporary unsurcharged trench excavations for the proposed open-cut water main installation operations must be sloped back at a minimum of 1-1/2H:1V (horizontal: vertical) within the existing loose to medium compact granular soils, 1H:1V within the stiff cohesive soils, and 3/4H:1V within the very stiff to hard cohesive soils. Where seepage from excavation cuts is observed, the slopes must be flattened sufficiently to achieve stability, but in no case left steeper than 3H:1V at and below the seepage level.

Given the existing cohesive subgrade conditions, we anticipate a moderate to high amount of subgrade treatment by undercut may be required during construction operations. We recommend construction operations be performed during the summer months and the exposed subgrade is not left exposed to rain events.

Based on our analysis and construction considerations, we recommend the proposed pavement section consist of 1-1/2 inches of MDOT 5EML HMA wearing course over 2-1/2 inches of MDOT 4EML HMA leveling course, supported on a minimum of 8 inches of MDOT 21AA aggregate base (fully reconstructed section) or the existing aggregate base after grading (partially reconstructed section).

As noted, the "inlay" partial reconstruction option of 4 inches of new HMA over the existing aggregate base represents a significant reduction in estimated service life: from 20 years to approximately 10 years with normal maintenance and longer with more extensive maintenance including extensive patching and full depth repairs.

This summary is not to be considered separate from the entire text of this report, with all the conclusions and recommendations mentioned herein. Details of our analysis and recommendations are discussed in the following sections and in the Appendix of this report.

PROJECT DESCRIPTION

The project consists of water main and paving improvements for the City of Fenton 2026 Local Road Program within the City of Fenton, Genesee County, Michigan. The following roads are included in the 2026 Local Road Program: Orchardview Drive, Valleyview, Hillview Terrace, Valley Drive, Elm Street, and Long Street. Hot Mix Asphalt (HMA) pavements are present along each of the roadways. Portland cement concrete curb and gutter is present along the roadways except for Elm Street and Long Street which have open shoulders. It is our understanding that partial pavement section reconstruction is planned along Orchardview Drive and Valleyview with an “inlay” section where only the HMA is replaced and the base and curb and gutter are retained. New water main will be installed along Hillview Terrace, Valley Drive, Elm Street, and Long Street. The pavements will be fully reconstructed where new water main is installed. We assume new water main will be installed using open-cut installation methods. It is assumed that maximum excavation depths for the water main will extend up to 6 feet. No information regarding traffic counts along the roadway alignments were available upon completion of this report; however, we assume traffic will be typical of residential streets consisting primarily of automobiles with occasional delivery trucks, refuse haulers, and school buses.

SCOPE OF SERVICES

The field operations, laboratory testing, and engineering report preparation were performed under direction and supervision of a licensed professional engineer. Our services were performed according to generally accepted standards and procedures in the practice of geotechnical engineering in this area. Our scope of services for this project is as follows:

1. We performed a total of ten (10) pavement cores/soil borings for the project. Pavement core/soil borings B-01 and B-02 were drilled along Orchardview Drive, extending to a depth of 5 feet each. Pavement core/soil boring B-03 was performed on Valleyview and extended to a depth of 5 feet. Pavement core/soil borings B-04 through B-06 were drilled through the pavements of Hillview Terrace and extended to a depth of 10 feet each. Pavement core/soil boring B-07 was performed on Valley Drive, extending to a depth of 10 feet. Pavement core/soil borings B-08 and B-09 were drilled through the pavement of Elm Street and extended to a depth of 10 feet each. Pavement core/soil boring B-10 was drilled along Long Street and extended to a depth of 10 feet. We measured the existing pavement section material (HMA pavement and aggregate base) and identified the type and condition of subgrade soils.
2. We performed laboratory testing on representative samples obtained from our subsurface exploration. Laboratory testing included visual engineering classification, natural moisture content, organic matter content (loss-on-ignition), Atterberg Limits, grain-size distribution, and unconfined compressive strength determinations.
3. We prepared this engineering report. Our report includes recommendations for pavement reconstruction and water main replacement construction.

FIELD OPERATIONS

OHM Advisors (OHM), in conjunction with G2 Consulting Group, LLC, (G2) selected the number, depth, and location of the pavement core/soil borings. The pavement core/soil borings were located in the field by a G2 representative by measuring from existing site features and landmarks using conventional taping methods. The approximate pavement core/soil boring locations are shown on the Soil Boring Location Plan, Plate No. 1. Ground surface elevations were not available at the time of the field investigation. We recommend the soil boring locations be surveyed so that soil and groundwater conditions can be referenced by elevation for use in construction.

We used a gas powered core rig equipped with a 6-inch diameter diamond-tipped core barrel to core the pavement at the pavement core/soil boring location. The pavement cores were drilled through the full depth of the existing pavement structure to obtain an accurate determination of the pavement thickness. The core samples were delivered to our laboratory for length measurement and photograph.

The soil borings were drilled using a truck-mounted rotary drilling rig. Continuous flight, 2-1/4-inch inside diameter, hollow-stem augers were used to advance the boreholes. The soil samples were obtained at intervals of 2-1/2 feet by the Standard Penetration Test (SPT) method ASTM D1586, which involves driving a 2-inch diameter split-spoon sampler into the soil with a 140-pound weight falling 30 inches. The sampler is generally driven three successive 6-inch increments with the number of blows for each increment recorded. The number of blows required to advance the sampler the last 12 inches is termed the Standard Penetration Resistance (N). The blow counts for each 6-inch increment and the resulting N-value are presented on the soil boring logs.

The soil samples were placed in sealed containers in the field and brought to the laboratory for testing and classification. During the drilling operations, the drilling crew maintained logs of the encountered subsurface conditions, including changes in stratigraphy and observed groundwater levels of the soil borings to be used in conjunction with our analyses of the subsurface conditions. The final boring logs are based on the field logs and laboratory soil classification and testing. After completion of the drilling operations, the boreholes were backfilled with excavated soil and capped with cold patch.

LABORATORY TESTING

The pavement core sample and soil samples from the boring were delivered to the G2 laboratory in Troy, Michigan for photographs and length measurements of the core sample and basic index tests on soil samples. A photograph and length measurement for the core samples are presented as Figure Nos. 14 through 23 in the Appendix.

Representative soil samples were subjected to laboratory testing to determine soil parameters pertinent to pavement design and underground utility construction. An experienced geotechnical engineer classified the samples in general conformance with the Unified Soil Classification System.

Laboratory testing included Atterberg Limits, grain size distribution, natural moisture content, organic matter content (loss-on-ignition), and unconfined compressive strength determinations. Atterberg limits were determined in accordance with ASTM D 4318 "Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils". Grain size distribution was determined in general conformance with ASTM C 136 method of testing. The organic matter content of representative samples was determined in accordance with ASTM Test Method D 2974, "Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils". The unconfined compressive strengths were determined by using a spring-loaded hand penetrometer. The hand penetrometer estimates the unconfined compressive strength to a maximum of 4-1/2 tons per square foot (tsf) by measuring the resistance of the soil sample to the penetration of a calibrated spring-loaded cylinder.

The results of the moisture content, organic matter content, and unconfined compressive strength laboratory tests are indicated on the soil boring logs at the depths the samples were obtained. Atterberg limits are shown graphically on Figure No. 11 in the Appendix. The grain size analysis is presented in the Appendix as Grain Size Distribution, Figure Nos. 12 and 13. We will hold the soil samples for 60 days from the date of this report. If you would like the samples, please let us know.

PAVEMENT AND SUBSURFACE SOIL CONDITIONS

The existing HMA pavements, particularly along Orchardview Drive, Valleyview, Hillview Terrace, and Valley Drive are generally in poor or even extremely poor condition. These pavements have essentially failed with surface distress consisting of widespread areas of severe fatigue cracking and areas of disintegrating pavement and

extensive hand patching. They were initially crowned, allowing surface runoff water to drain into the curb and gutter, but areas of surface water were observed during the field work for this project likely the result of the poor pavement conditions. The existing HMA pavements along Elm Street and Long Street are also in poor condition with large areas of severe fatigue cracking and hand patching. Surface water is directed to the edge of the pavement into the grass shoulders.

The HMA pavement section along Orchardview Drive, Valleyview, Hillview Terrace, and Valley Drive ranges from 2 inches thick to 3-1/2 inches thick at the core sample locations (B-01 through B-07) with an average thickness of approximately 2-3/4 inches. The HMA section along Elm Street and Long Street is somewhat thicker, ranging from 3 inches to 4-1/4 inches at the core sample locations, with an average thickness of nominally 3-3/4 inches. An aggregate base course is present at all of the boring locations ranging from 4 inches (B-07) to 8-1/2 inches (B-02 and B-04) thick on Orchardview Drive, Valleyview, Hillview Terrace, and Valley Drive and 4-3/4 inches to 9 inches (B-08 to B-10) thick on Elm Street and Long Street. In general, it appears the base course layer is 7 inches to 8 inches thick over all of the routes.

The underlying aggregate base consists of crushed limestone gravelly sand with little silt on Orchardview Drive, Valleyview, Hillview Terrace, and Valley Drive, and natural aggregate sand and gravel with little silt base on Elm Street and Long Street. Grain size analysis tests were performed on a sample of the aggregate base obtained from boring B-01 and B-09. Test results indicate the aggregate base is finer in grain size than MDOT 21AA dense graded aggregate specifications and contains excessive amount of material passing the No. 200 sieve (clay and silt).

Silty clay fill underlies the pavement section within boring B-03 and extends to an approximate depth of 3 feet. Silty sand fill with trace organic matter is present below the pavement section within boring B-05 and extends to an approximate depth of 3 feet. Native granular soils, consisting of silty sand, gravelly sand, and sand, underlies the silty sand fill within boring B-05 and pavement section within boring B-06 and extends to an approximate depth of 6 feet within boring B-05 and the explored depth of 10 feet within boring B-06. Native cohesive soils, consisting of silty clay and sandy clay, are present below the pavement section within borings B-01, B-02, B-04, and B-07 through B-10, silty clay fill within boring B-03, and native silty sand within boring B-05 and generally extend to the explored depth of 5 and 10 feet. However, native granular soils, consisting of gravelly sand and clayey sand, underlie the native cohesive soils within boring B-08 below an approximate depth of 8 feet and 9-1/2 feet within boring B-09. In addition, a strata of native gravelly sand is present within the native cohesive soils within boring B-07 between 6 and 8 feet.

The silty clay fill is very stiff in consistency with a moisture content of 10 percent and an unconfined compressive strength of 6,500 pounds per square feet (psf). The silty sand fill is loose in compactness with a Standard Penetration Test (SPT) N-value of 10 blows per foot (bpf) and an organic matter content of 1.7 percent. The native cohesive soils are stiff to hard in consistency with natural moisture contents ranging from 7 to 24 percent, a liquid limit of 28 percent, a plasticity index of 16 percent, and unconfined compressive strengths ranging from 2,000 to 9,000 psf. The native granular soils are loose to medium compact with SPT N-values ranging from 6 to 22 bpf.

The stratification depths shown on the soil boring logs represent the soil conditions at the boring locations. Variations may occur between borings. Additionally, the stratigraphic lines represent the approximate boundaries between soil types. The transition may be more gradual than what is shown. We have prepared the boring logs on the basis of laboratory classification and testing as well as field logs of the soils encountered.

Soil Boring Location Plan, Plate No. 1, Soil Boring Logs, Figure Nos. 1 through 10, Atterberg Limits Results, Figure No. 11, and Grain Size Distribution, Figure Nos. 12 and 13, are presented in the Appendix. Photographs of the pavement core samples are included as Figure Nos. 14 through 23. The soil profiles described above are generalized descriptions of the conditions encountered at the boring locations. General Notes Terminology defining the nomenclature used on the soil boring logs and elsewhere in this report are presented on Figure No. 24.

GROUNDWATER CONDITIONS

Groundwater observations were made during and upon completion of drilling operations. No measurable groundwater was observed within the borings during or upon completion of drilling operations.

Fluctuations in perched and long-term groundwater levels should be anticipated due to seasonal variations and following periods of prolonged precipitation. It should also be noted that groundwater observations made during drilling operations in predominantly cohesive soils are not necessarily indicative of the static groundwater level. This is due to the low permeability of such soils and the tendency of drilling operations to seal off the natural paths of groundwater flow.

WATER MAIN CONSTRUCTION RECOMMENDATIONS

General

We assume the water main will be installed using open-cut installation methods. It is assumed that maximum excavation depths for the water main will extend up to 6 feet. Once the proposed pipeline profile becomes available and the pipeline installation methods for each segment of the pipeline alignment have been established, G2 should be notified so that we can review our recommendations presented herein.

Open Cut Excavations

Temporary unshored trench excavations for the proposed open-cut water main installation operations must be sloped back at a minimum of 1-1/2H:1V (horizontal: vertical) within the existing loose to medium compact granular soils, 1H:1V within the stiff cohesive soils, and 3/4H:1V within the very stiff to hard cohesive soils. Where seepage from excavation cuts is observed, the slopes must be flattened sufficiently to achieve stability, but in no case left steeper than 3H:1V at and below the seepage level. If the temporary construction embankments are to be maintained during the rainy season, berms are suggested along the tops of the embankments to prevent runoff water from entering the excavation and eroding the slope faces. The soils exposed in slope faces should be inspected by qualified personnel so modifications of the slopes can be made if variations in the soil or water conditions occur. If sufficient space for open cut consideration is not available trench box shoring may be used.

Trench box shoring may be used provided some lateral deflection of adjacent soils can be tolerated. If a trench box is used, excavations should be performed from within the trench box, such that no unsupported vertical cut is allowed to exist. A trench box is not recommended where adjacent utilities, roadways, or structures are located less than a lateral distance delineated by a plane extending upward from the bottom edges of the excavation at a 1H:1V slope.

All excavations should be safely sheeted, shored, sloped, or brace in accordance with MI-OSHA requirements. If material is stored or equipment is operated near the excavation, stronger shoring must be used to resist the extra pressure due to the superimposed loads. Care should always be exercised when excavating near existing buildings, roadways, or utilities to avoid undermining. In no case should excavations extend below the level of adjacent structures or utilities unless underpinning is planned.

Groundwater Control

No measurable groundwater was observed within the soil borings during or upon completion of drilling operations. Therefore, we anticipate excavation operations for utility construction will be performed in the dry. However, it is anticipated that any groundwater accumulations can be controlled with pumping from properly constructed internal sumps.

Pipeline Support

Based on the observed subsurface conditions and the anticipated invert elevations, we expect the proposed water main will generally be supported on stiff to hard cohesive soils and loose to medium compact granular soils. In general, these soils are adequate for support of the utilities. Bedding material for the proposed water main should consist of MDOT 6A open-graded material or other approved granular materials. Differential movements of the pipeline may occur if the trench bottom is not adequately stabilized. The exposed subgrade should be visually evaluated for stability prior to the backfilling of the construction excavations.

Trench Backfill

The existing cohesive soils that are predominant over the project areas are not suitable to be reused as backfill within construction excavations. However, limited areas of native granular soils, such as those encountered within borings B-05 and B-06 may be suitable provided they are tested and approved by the construction engineer at the time of construction. We recommend clean granular engineered fill should be used to backfill utility trenches within the influence of the road or drive approaches. The initial lift should be compacted using light-duty compaction equipment, such as walk-behind vibratory plate compactors, and should be compacted in a manner that will not disturb the pipe alignment.

After the bedding material and initial lift of backfill has been placed and compacted, the remainder of the trench should be backfilled in an engineered manner. The engineered fill should be free of organic matter, frozen soil, clods, or other harmful material. All engineered backfill should be placed in loose layers not to exceed 9 inches in thickness and should be mechanically compacted to achieve a density of at least 95 percent of the materials maximum dry density as determined by the Modified Proctor compact test (ASTM D1557) or in accordance with the latest version of the Michigan Department of Transportation "Density Testing and Inspection Manual". Granular engineered fill material should be placed and compacted at moisture contents within 2 percent above or below the optimum moisture content.

PAVEMENT RECOMMENDATIONS

General

As noted, the existing HMA section on all of the project routes is essentially in a state of failure, and there are no viable options to extend the service life of these pavements short of partial or full section reconstruction. The minimum recommended HMA thickness for any new section is 4 inches. In the case of partial reconstruction with an "inlay" type project, this would require removing nominally 2 inches of the existing base course in order to accommodate the new HMA section and match the existing edge of gutter on Orchardview Drive, Valleyview, Hillview Terrace, and Valley Drive. The amount of base removal would be somewhat less along Elm Street and Long Street, where it appears the existing HMA is thicker than the other routes. Full reconstruction would include complete removal of the existing HMA and aggregate base and likely removal of the existing curb and gutter on Orchardview Drive, Valleyview, Hillview Terrace, and Valley Drive.

The "inlay" option of partial reconstruction which retains some of the existing base course represents a reduction of the expected full reconstruction pavement service life of 20 years because of the resulting thinner base section and the structural capacity of the existing base material, which is less that would be expected from new MDOT 21AA specification crushed limestone. In addition, the existing base in the "inlay" areas would be reduced in thickness from nominally 7 inches or 8 inches to nominally 5 inches to 6 inches. As a result, it is likely that construction traffic would result in more damage to the subgrade soils and possibly require more areas of subgrade treatment.

It is noted that the HMA pavement on Orchardview Drive, south of House Number 11693 is in relatively good condition. The pavement history for this portion of the route is not known, but it is either a newer, heavier pavement section or was partially or fully reconstructed relatively recently.

Pavement Subgrade Preparation Recommendations

The existing HMA pavements should be completely removed along Orchardview Drive and Hillview for either a partial section reconstruction (“inlay”) project or a full section reconstruction project. The exposed aggregate base (“inlay” project) or subgrade soils (full reconstruction) should be graded to promote effective subsurface drainage and then compacted. Once a rough grade has been achieved, the exposed aggregate base and subgrade soils should be evaluated for stability. We recommend the existing aggregate base and subgrade soils be proof rolled with a fully loaded tri-axle dump truck. Any unstable or unsuitable areas noted should be improved by additional compaction or removed or undercut and replaced with engineered fill.

Given the existing cohesive subgrade conditions, we anticipate a moderate to high amount of subgrade treatment by undercut may be required during construction operations with a greater amount of subgrade treatment required for an “inlay” type partial reconstruction project. We recommend construction operations be performed during the summer months and the exposed base or subgrade is not left exposed to rain events.

Subgrade undercuts, if required, should be evaluated by a qualified engineering technician to determine if subgrade stabilization is necessary. We recommend that undercut excavations, where required, be backfilled MDOT 21AA placed in an engineered manner. A under drain should be placed at the deepest portion of subgrade undercuts and connected to the closest catch basin to prevent trapped water from collecting in the granular cut soils or the subgrade should be sloped towards utility installation backfill to drain the undercut. Lift thicknesses should not exceed 9 inches. All engineered fill should be compacted to a density of at least 95 percent of the maximum density determined by the Modified Proctor (ASTM D 1557) method of testing or in accordance with the latest MDOT specifications. All engineered fill material should be placed and compacted at approximately the optimum moisture content. Frozen material should not be used as fill, nor should fill be placed on a frozen subgrade.

Pavement Design

We performed pavement design analyses in accordance with the “AASHTO Guide for Design of Pavement Structures”. The subgrade soils will generally consist of lean clays with localized areas of granular soils. Based on the existing subgrade soils, we have provided design pavement sections based on an effective subgrade resilient modulus (M_r) of 3,500 pounds per square inch (psi).

For the proposed new pavement section, we estimated a serviceability loss of 2.0, a standard deviation of 0.49 for flexible pavements, and a reliability factor of 0.95 all in accordance with MDOT design guidelines. A traffic analysis assuming a two-way AADT of 500 vehicles per day with a commercial fraction of 10 trucks per day, a Truck Factor of 0.7 ESALs / truck, and negligible volume growth produces an estimated 20 year traffic loading of approximately 30,000 ESALs. If traffic volume information become available, G2 Consulting Group should be notified so we can reevaluate our estimated traffic loading.

Based on our analysis and construction considerations, we recommend the proposed pavement section consist of 1-1/2 inches of MDOT 5EML HMA wearing course over 2-1/2 inches of MDOT 4EML HMA leveling course, supported on a minimum of 8 inches of MDOT 21AA aggregate base (fully reconstructed section) or the existing aggregate base after grading (partially reconstructed section).

As noted, the “inlay” partial reconstruction option of 4 inches of new HMA over the existing aggregate base represents a significant reduction in estimated service life: from 20 years to approximately 10 years with normal maintenance and longer with more extensive maintenance including extensive patching and full depth repairs.

Binder grades PG 64-28 are suitable for use with the bituminous concrete mixtures. Top course mixtures should be limited to Tier 1 Recycled Asphalt Percentage (RAP) addition requirements as noted in MDOT Special Provision 12SP501(E) to reduce early reflective cracking. Any imported aggregate base should consist of MDOT 21AA limestone aggregate.

All pavement materials are specified within the 2020 Standard Specifications for Construction from the Michigan Department of Transportation. The HMA pavement materials are described in Section 501 and can be assigned a structural coefficient number of 0.42. Any imported aggregate base material can be assigned a structural coefficient number of 0.14. We have assigned the existing aggregate base a structural coefficient of 0.11.

Pavement Drainage

We recommend the proposed pavement have Portland cement concrete curbs with catch basins to provide surface drainage. We recommend edge drains be provided continuously along curbs since they can become a source of water infiltration into the pavement subgrade. Such drains should extend to minimum depths of 4 inches below the bottom of the proposed aggregate base course or granular fill placed within undercut areas. These drains could be connected to nearby catch basins. The pavement and subgrade should be properly sloped to promote effective surface and subsurface drainage and prevent water from ponding. We also recommend pavement subbase materials consist of non-frost-susceptible aggregates where possible.

Pavement Maintenance

Regular timely maintenance should be performed on the pavement to reduce the potential deterioration associated with moisture infiltration through surface cracks. The owner should be prepared to seal the cracks with a hot-applied elastic crack filler as soon as possible after cracking develops and as often as necessary to block the passage of water to the subgrade soils. In addition, regular joint maintenance should be performed.

GENERAL COMMENTS

We have formulated the evaluations and recommendations presented in this report relative to underground utility construction, site preparation, and pavement reconstruction on the basis of data provided to us relating to the general location for the proposed pavement improvements. Any significant change in this data should be brought to our attention for review and evaluation with respect to the prevailing subsurface conditions.

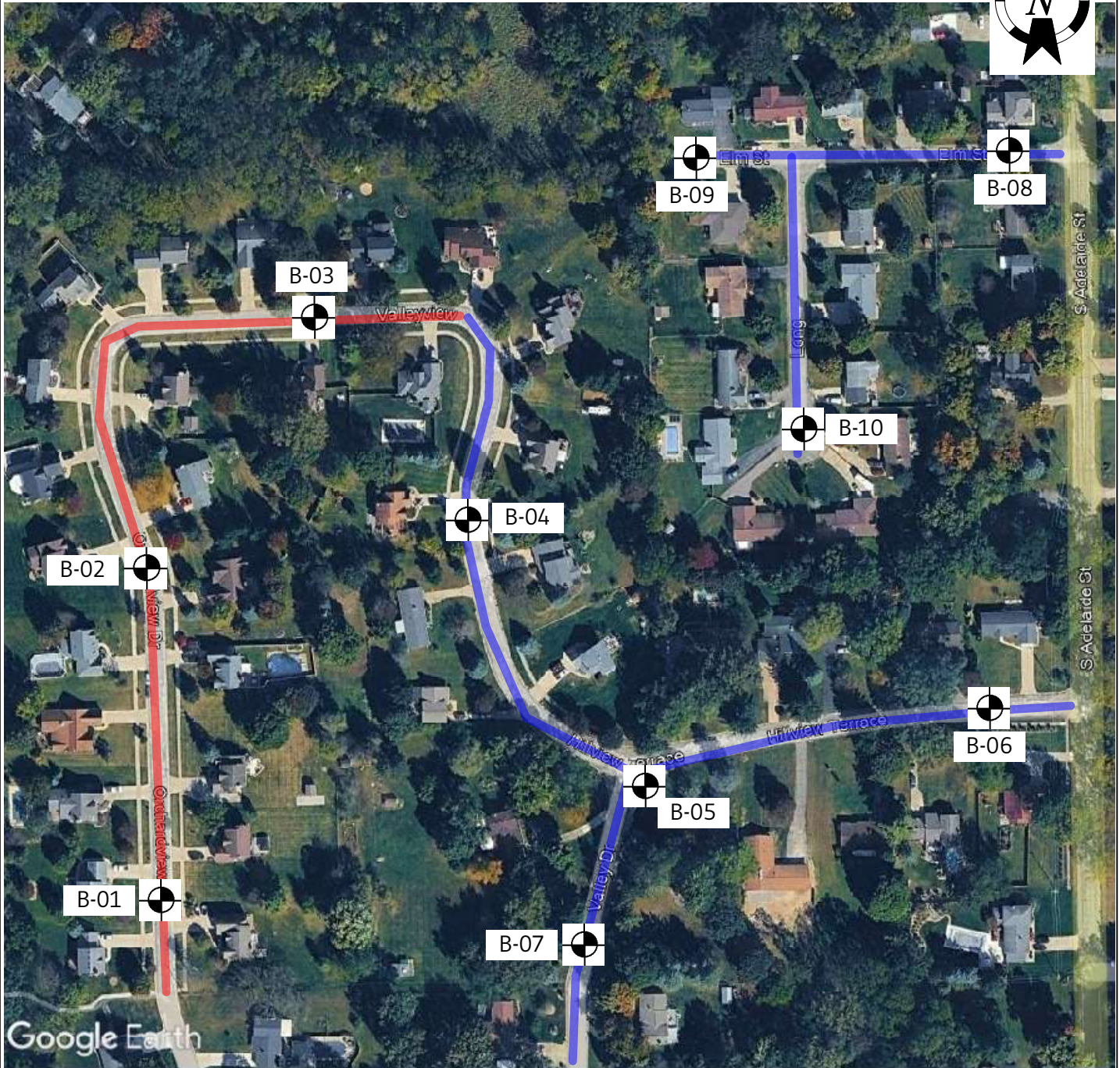
The scope of the present investigation was limited to evaluation of subsurface conditions for the support of the new underground utilities, pavements, and other related aspects of the development. No chemical, environmental, or hydrogeological testing or analyses were included in the scope of this investigation. If changes occur in the design, location, or concept of the project, the conclusions and recommendations contained in this report are not valid unless G2 Consulting Group, LLC reviews the changes. G2 Consulting Group, LLC will then confirm the recommendations presented herein or make changes in writing.

We have based the analyses and recommendations submitted in this report upon the data from soil borings performed at the approximate locations shown on the Soil Boring Location Plan, Plate No. 1. This report does not reflect variations that may occur between the actual boring locations. The nature and extent of any such variations may not become clear until the time of construction. If significant variations then become evident, it may be necessary for us to re-evaluate our report recommendations.


Soil conditions at the site could vary from those generalized on the basis of soil borings made at specific locations. It is, therefore, recommended that G2 Consulting Group, LLC be retained to provide soil engineering services during the site preparation and pavement construction phases of the proposed project. This is to observe compliance with the design concepts, specifications, and recommendations. Also, this allows design changes to be made in the event that subsurface conditions differ from those anticipated prior to the start of construction.


APPENDIX

SOIL BORING LOCATION PLAN	PLATE NO. 1
SOIL BORING LOGS	FIGURE NO. 1 THROUGH 10
ATTERBERG LIMITS RESULTS	FIGURE NO. 11
GRAIN SIZE DISTRIBUTION	FIGURE NOS. 12 AND 13
PHOTOGRAPHIC DOCUMENTATION	FIGURE NOS. 14 THROUGH 23
GENERAL NOTES TERMINOLOGY	FIGURE NO. 24



Legend

 Pavement Core/Soil Borings performed by Strata Drilling, Inc. on November 3, 2025

 Limits of Pavement Surface Reconstruction

 Limits of Water Main Replacement and Pavement Reconstruction

Soil Boring Location Plan

City of Fenton 2026 Local Road Program
Fenton, Michigan



Project No. 251035	
Drawn by: JMH	
Date: 12/2/25	Plate No. 1
Scale: NTS	

Project Name: City of Fenton 2026 Local Road Program

Soil Boring No. **B-01**

Project Location: Orchardview Dr, Valleyview, Hillview Terrace,
Valley Dr, Elm St, & Long St
Fenton, Michigan



CONSULTING GROUP

G2 Project No. 251035

Latitude: N/A Longitude: N/A

SUBSURFACE PROFILE			SOIL SAMPLE DATA						
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		HMA Pavement (2-3/4 inches)	0.2	AS-1					
		Crushed Limestone Aggregate Base: Gray Gravelly Sand with little silt (7-1/4 inches)	0.8						
5		Very Stiff Brown Silty Clay with trace sand and gravel	5.0	S-1	5 4 4	8	15.1		4000*
				S-2	4 7 7	14	10.1		7000*
		End of Boring @ 5 ft							
10			10						
15			15						

SOIL / PAVEMENT BORING_251035.GPJ_20150116 G2 CONSULTING DATA TEMPLATE.GDT 12/2/25

Total Depth: 5 ft
 Drilling Date: November 3, 2025
 Inspector:
 Contractor: Strata Drilling, Inc.
 Driller: J. Haynor

Water Level Observation:
 Dry during and upon completion of drilling operations

Notes:
 * Calibrated Hand Penetrometer

Drilling Method:
 6-inch diameter diamond tipped core barrel; 2-1/4 inch inside diameter hollow-stem augers

Excavation Backfilling Procedure:
 Auger cuttings and capped with cold patch

Figure No. 1

Project Name: City of Fenton 2026 Local Road Program

Soil Boring No. **B-02**

Project Location: Orchardview Dr, Valleyview, Hillview Terrace,
Valley Dr, Elm St, & Long St
Fenton, Michigan



CONSULTING GROUP

G2 Project No. 251035

Latitude: N/A Longitude: N/A

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		HMA Pavement (3-1/2 inches)	0.3	AS-1					
		Crushed Limestone Aggregate Base: Gray Gravelly Sand with little silt (8-1/2 inches)	1.0						
		Very Stiff to Hard Brown Silty Clay with trace sand and gravel		S-1	6 8 9	17	7.4		9000*
5			5.0	S-2	3 4 4	8	10.0		4000*
		End of Boring @ 5 ft							
10			10						
15			15						

SOIL / PAVEMENT BORING_251035.GPJ_20150116 G2 CONSULTING DATA TEMPLATE.GDT 12/2/25

Total Depth: 5 ft
 Drilling Date: November 3, 2025
 Inspector:
 Contractor: Strata Drilling, Inc.
 Driller: J. Haynor

Water Level Observation:
 Dry during and upon completion of drilling operations

Notes:
 * Calibrated Hand Penetrometer

Drilling Method:
 6-inch diameter diamond tipped core barrel; 2-1/4
 inch inside diameter hollow-stem augers

Excavation Backfilling Procedure:
 Auger cuttings and capped with cold patch

Figure No. 2

Project Name: City of Fenton 2026 Local Road Program

Soil Boring No. **B-03**

Project Location: Orchardview Dr, Valleyview, Hillview Terrace,
Valley Dr, Elm St, & Long St
Fenton, Michigan



CONSULTING GROUP

G2 Project No. 251035

Latitude: N/A

Longitude: N/A

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		HMA Pavement (3 inches)	0.3	AS-1					
		Crushed Limestone Aggregate Base: Gray Gravelly Sand with little silt (8 inches)	0.9						
		Fill: Hard Dark Brown Silty Clay with trace sand and gravel	3.0	S-1	4 6 7	13	9.8		6500*
5		Stiff Brown Sandy Clay with trace silt and gravel	5.0	S-2	3 4 4	8	11.9		3000*
		End of Boring @ 5 ft							
10			10						
15			15						

Total Depth: 5 ft
 Drilling Date: November 3, 2025
 Inspector:
 Contractor: Strata Drilling, Inc.
 Driller: J. Haynor

Water Level Observation:
 Dry during and upon completion of drilling operations

Notes:
 * Calibrated Hand Penetrometer

Drilling Method:
 6-inch diameter diamond tipped core barrel; 2-1/4
 inch inside diameter hollow-stem augers

Excavation Backfilling Procedure:
 Auger cuttings and capped with cold patch

SOIL / PAVEMENT BORING_251035.GPJ_20150116 G2 CONSULTING DATA TEMPLATE.GDT 12/2/25

Figure No. 3

Project Name: City of Fenton 2026 Local Road Program

Soil Boring No. **B-04**

Project Location: Orchardview Dr, Valleyview, Hillview Terrace,
Valley Dr, Elm St, & Long St
Fenton, Michigan



CONSULTING GROUP

G2 Project No. 251035

Latitude: N/A Longitude: N/A

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		HMA Pavement (3-1/2 inches)	0.3	AS-1					
		Crushed Limestone Aggregate Base: Gray Gravelly Sand with little silt (8-1/2 inches)	1.0						
5		Very Stiff to Hard Brown Silty Clay with trace sand and gravel	5	S-1	6 11 5	16	18.5		8000*
			5	S-2	4 9 10	19	11.9		9000*
				S-3	6 9 10	19	11.8		9000*
10				S-4	8 7 7	14	12.9		7000*
		End of Boring @ 10 ft	10.0						
15			15						

SOIL / PAVEMENT BORING_251035.GPJ_20150116 G2 CONSULTING DATA TEMPLATE.GDT 12/2/25

Total Depth: 10 ft
 Drilling Date: November 3, 2025
 Inspector:
 Contractor: Strata Drilling, Inc.
 Driller: J. Haynor

Water Level Observation:
 Dry during and upon completion of drilling operations

Notes:
 * Calibrated Hand Penetrometer

Drilling Method:
 6-inch diameter diamond tipped core barrel; 2-1/4 inch inside diameter hollow-stem augers

Excavation Backfilling Procedure:
 Auger cuttings and capped with cold patch

Figure No. 4

Project Name: City of Fenton 2026 Local Road Program

Soil Boring No. B-05

Project Location: Orchardview Dr, Valleyview, Hillview Terrace,
Valley Dr, Elm St, & Long St
Fenton, Michigan



CONSULTING GROUP

G2 Project No. 251035

Latitude: N/A Longitude: N/A

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		HMA Pavement (2 inches)	0.2	AS-1					
		Natural Aggregate Base: Brown Sand and Gravel with little silt (8 inches)	0.8						
		Fill: Loose Dark Brown Silty Sand with trace gravel, clay, and organic matter (Organic Matter Content = 1.7%)	3.0	S-1	8 5 5	10			
5		Loose Brown Silty Sand with trace gravel	5	S-2	5 4 4	8			
		Stiff Brown Sandy Clay with trace silt and gravel	6.0	S-3	4 3 2	5	16.5		2500*
10		End of Boring @ 10 ft	10.0	S-4	1 2 3	5	15.6		2500*
15			15						

SOIL / PAVEMENT BORING 251035.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.GDT 12/2/25

Total Depth: 10 ft
 Drilling Date: November 3, 2025
 Inspector:
 Contractor: Strata Drilling, Inc.
 Driller: J. Haynor

Water Level Observation:
 Dry during and upon completion of drilling operations

Notes:
 * Calibrated Hand Penetrometer

Drilling Method:
 6-inch diameter diamond tipped core barrel; 2-1/4 inch inside diameter hollow-stem augers

Excavation Backfilling Procedure:
 Auger cuttings and capped with cold patch

Figure No. 5

Project Name: City of Fenton 2026 Local Road Program

Soil Boring No. **B-06**

Project Location: Orchardview Dr, Valleyview, Hillview Terrace,
Valley Dr, Elm St, & Long St
Fenton, Michigan



CONSULTING GROUP

G2 Project No. 251035

Latitude: N/A

Longitude: N/A

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		HMA Pavement (3-1/2 inches)	0.3	AS-1					
		Natural Aggregate Base: Brown Sand and Gravel with little silt (7-1/2 inches)	0.9						
		Medium Compact Brown Gravelly Sand with trace silt	3.0	S-1	18 14 8	22			
5		Loose Brown Silty Sand with trace gravel	5	S-2	6 4 3	7			
		Medium Compact Brown Sand with trace silt and gravel	8.0	S-3	3 2 4	6			
10		End of Boring @ 10 ft	10.0	S-4	6 7 7	14			
15			15						

SOIL / PAVEMENT BORING_251035.GPJ_20150116 G2 CONSULTING DATA TEMPLATE.GDT 12/2/25

Total Depth: 10 ft
 Drilling Date: November 3, 2025
 Inspector:
 Contractor: Strata Drilling, Inc.
 Driller: J. Haynor

Water Level Observation:
 Dry during and upon completion of drilling operations

Excavation Backfilling Procedure:
 Auger cuttings and capped with cold patch

Drilling Method:
 6-inch diameter diamond tipped core barrel; 2-1/4 inch inside diameter hollow-stem augers

Figure No. 6

Project Name: City of Fenton 2026 Local Road Program

Soil Boring No. **B-07**

Project Location: Orchardview Dr, Valleyview, Hillview Terrace,
Valley Dr, Elm St, & Long St
Fenton, Michigan



CONSULTING GROUP

G2 Project No. 251035

Latitude: N/A Longitude: N/A

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		HMA Pavement (2 inches)	0.2						
		Natural Aggregate Base: Brown Sand and Gravel with little silt (4 inches)	0.5	AS-1					
		Very Stiff Brown Silty Clay with trace sand and gravel			5 4 4	8	14.7		4000*
5		Stiff Brown Sandy Clay with trace silt and gravel	5	S-2	1 2 2	4	17.8		2000*
		Loose Brown Gravelly Sand with trace silt	6.0		6 3 3	6			
		Hard Brown Silty Clay with trace sand and gravel	8.0		8 9 11	20	23.7		9000*
10		End of Boring @ 10 ft	10.0	S-4					
15			15						

SOIL / PAVEMENT BORING_251035.GPJ_20150116 G2 CONSULTING DATA TEMPLATE.GDT 12/2/25

Total Depth: 10 ft
 Drilling Date: November 3, 2025
 Inspector:
 Contractor: Strata Drilling, Inc.
 Driller: J. Haynor

Water Level Observation:
 Dry during and upon completion of drilling operations

Notes:
 * Calibrated Hand Penetrometer

Drilling Method:
 6-inch diameter diamond tipped core barrel; 2-1/4 inch inside diameter hollow-stem augers

Excavation Backfilling Procedure:
 Auger cuttings and capped with cold patch

Figure No. 7

Project Name: City of Fenton 2026 Local Road Program

Soil Boring No. **B-08**

Project Location: Orchardview Dr, Valleyview, Hillview Terrace,
Valley Dr, Elm St, & Long St
Fenton, Michigan



CONSULTING GROUP

G2 Project No. 251035

Latitude: N/A

Longitude: N/A

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		HMA Pavement (4 inches)	0.3	AS-1					
		Natural Aggregate Base:							
		Brown Sand and Gravel with little silt (7 inches)	0.9						
5		Very Stiff to Hard Brown Silty Clay with trace sand and gravel, occasional sand seams	5	S-1	4 7 7	14	11.0		7000*
	5		S-2	4 5 6	11	11.2		5500*	
			S-3	6 7 9	16	14.5		8000*	
			8.0						
10		Medium Compact Brown Gravelly Sand with trace silt and gravel	10.0	S-4	12 11 8	19			
		End of Boring @ 10 ft	10						
15			15						

SOIL / PAVEMENT BORING_251035.GPJ_20150116 G2 CONSULTING DATA TEMPLATE.GDT 12/2/25

Total Depth: 10 ft
 Drilling Date: November 3, 2025
 Inspector:
 Contractor: Strata Drilling, Inc.
 Driller: J. Haynor

Water Level Observation:
 Dry during and upon completion of drilling operations

Notes:
 * Calibrated Hand Penetrometer

Drilling Method:
 6-inch diameter diamond tipped core barrel; 2-1/4 inch inside diameter hollow-stem augers

Excavation Backfilling Procedure:
 Auger cuttings and capped with cold patch

Figure No. 8

Project Name: City of Fenton 2026 Local Road Program

Soil Boring No. **B-09**

Project Location: Orchardview Dr, Valleyview, Hillview Terrace,
Valley Dr, Elm St, & Long St
Fenton, Michigan



CONSULTING GROUP

G2 Project No. 251035

Latitude: N/A

Longitude: N/A

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		HMA Pavement (4-1/4 inches)	0.4	AS-1					
		Natural Aggregate Base: Brown Sand and Gravel with little silt (4-3/4 inches)	0.8						
5		Stiff to Very Stiff Brown Silty Clay with trace sand and gravel	5	S-1	4 6 7	13	21.0		6000*
				S-2	2 2 4	6	16.3		3000*
			6.5	S-3	4 5 5	10	11.0		5000*
		Very Stiff Brown Sandy Clay with trace silt and gravel							
10		Loose Brown Clayey Sand with trace gravel	9.5	S-4	4 3 3	6			
		End of Boring @ 10 ft	10.0						
15			15						

SOIL / PAVEMENT BORING_251035.GPJ_20150116 G2 CONSULTING DATA TEMPLATE.GDT 12/2/25

Total Depth: 10 ft
 Drilling Date: November 3, 2025
 Inspector:
 Contractor: Strata Drilling, Inc.
 Driller: J. Haynor

Water Level Observation:
 Dry during and upon completion of drilling operations

Notes:
 * Calibrated Hand Penetrometer

Drilling Method:
 6-inch diameter diamond tipped core barrel; 2-1/4 inch inside diameter hollow-stem augers

Excavation Backfilling Procedure:
 Auger cuttings and capped with cold patch

Figure No. 9

Project Name: City of Fenton 2026 Local Road Program

Soil Boring No. **B-10**

Project Location: Orchardview Dr, Valleyview, Hillview Terrace,
Valley Dr, Elm St, & Long St
Fenton, Michigan



CONSULTING GROUP

G2 Project No. 251035

Latitude: N/A Longitude: N/A

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO-FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		HMA Pavement (3 inches)	0.3	AS-1					
		Natural Aggregate Base: Brown Sand and Gravel with little silt (9 inches)	1.0						
5		Stiff to Very Stiff Brown Silty Clay with trace sand and gravel	5	S-1	4 6 7	13	10.4		6500*
			5	S-2	3 3 3	6	10.3		3000*
				S-3	4 5 7	12	11.4		6000*
10				S-4	4 8 9	17	14.2		6000*
		End of Boring @ 10 ft	10.0						
15			15						

SOIL / PAVEMENT BORING_251035.GPJ_20150116 G2 CONSULTING DATA TEMPLATE.GDT 12/2/25

Total Depth: 10 ft
 Drilling Date: November 3, 2025
 Inspector:
 Contractor: Strata Drilling, Inc.
 Driller: J. Haynor

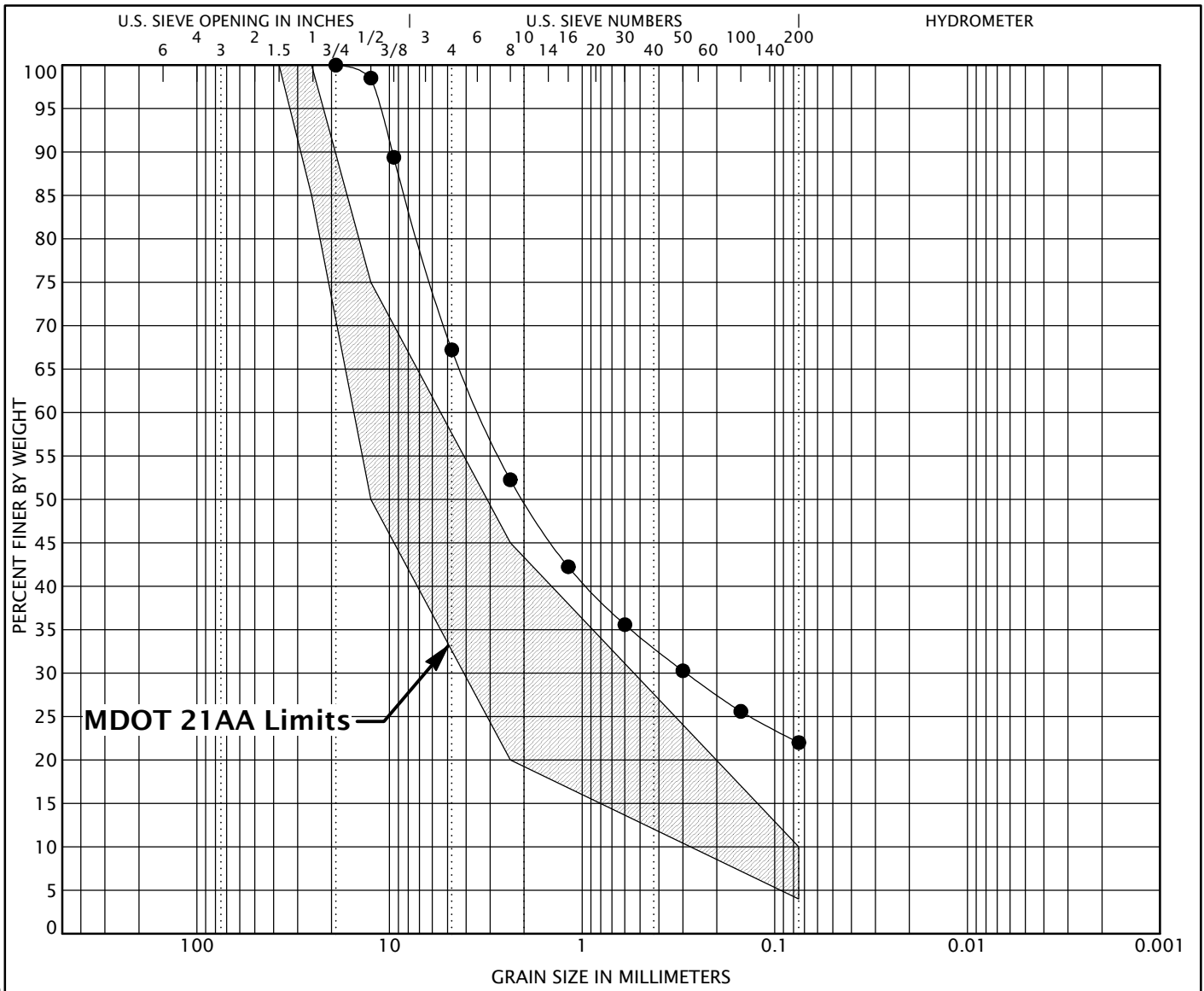
Water Level Observation:
 Dry during and upon completion of drilling operations

Notes:
 * Calibrated Hand Penetrometer

Drilling Method:
 6-inch diameter diamond tipped core barrel; 2-1/4 inch inside diameter hollow-stem augers


Excavation Backfilling Procedure:
 Auger cuttings and capped with cold patch

Figure No. 10



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen ID	Description					LL	PL	PI	Cc	Cu
● B-01	Gray Gravelly Sand with little silt									
Specimen ID	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay		
● B-01	19	3.389	0.288		32.8	45.2	22.0			



GRAIN SIZE DISTRIBUTION

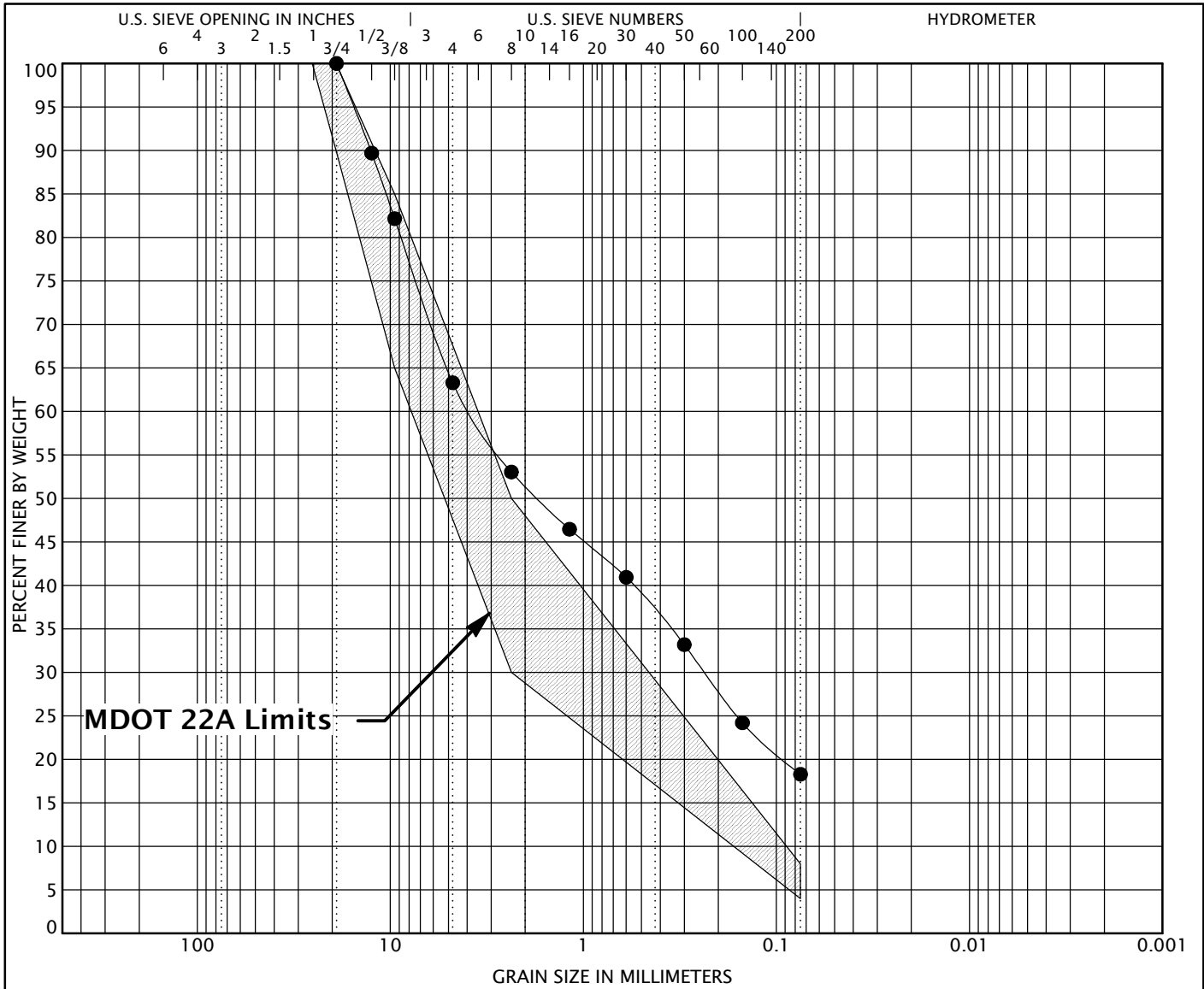
Project Name: City of Fenton 2026 Local Road Program

Project Location: Orchardview Dr, Valleyview, Hillview Terrace, Valley Dr, Elm St, & Long St
Fenton, Michigan

G2 Project No.: 251035

Figure No. 12

US_GRAIN_SIZE_MDOT-21AA_251035.GPJ 20140820 G2 CONSULTING DATA TEMPLATE.GDT 12/2/25



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen ID	Description	LL	PL	PI	Cc	Cu		
● B-09 AS-1	Brown Sand and Gravel with little silt							
Specimen ID	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● B-09 AS-1	19	3.794	0.235		36.7	45.0	18.3	

CONSULTING GROUP

GRAIN SIZE DISTRIBUTION

Project Name: City of Fenton 2026 Local Road Program

Project Location: Orchardview Dr, Valleyview, Hillview Terrace, Valley Dr, Elm St, & Long St
Fenton, Michigan

G2 Project No.: 251035

Figure No. 13

US_GRAIN_SIZE_MDOT_22A_251035.GPJ 20140820 G2 CONSULTING DATA TEMPLATE.GDT 12/11/25



Core Photograph B-01: HMA Pavement = 2-3/4 inches



Core Photograph B-02: HMA Pavement = 3-1/2 inches



Core Photograph B-03: HMA Pavement = 3 inches



Core Photograph B-04: HMA Pavement = 3-1/2 inches



Core Photograph B-05: HMA Pavement = 2 inches



Core Photograph B-06: HMA Pavement = 3-1/2 inches



Core Photograph B-07: HMA Pavement = 2 inches



Core Photograph B-08: HMA Pavement = 4 inches



Core Photograph B-09: HMA Pavement = 4-1/4 inches



Core Photograph B-10: HMA Pavement = 3 inches

GENERAL NOTES TERMINOLOGY

Unless otherwise noted, all terms herein refer to the Standard Definitions presented in ASTM D 653.

PARTICLE SIZE

Boulders	- greater than 12 inches
Cobbles	- 3 inches to 12 inches
Gravel - Coarse	- 3/4 inches to 3 inches
- Fine	- No. 4 to 3/4 inches
Sand - Coarse	- No. 10 to No. 4
- Medium	- No. 40 to No. 10
- Fine	- No. 200 to No. 40
Silt	- 0.005mm to 0.074mm
Clay	- Less than 0.005mm

CLASSIFICATION

The major soil constituent is the principal noun, i.e. clay, silt, sand, gravel. The second major soil constituent and other minor constituents are reported as follows:

Second Major Constituent (percent by weight)	Minor Constituent (percent by weight)
Trace - 1 to 12%	Trace - 1 to 12%
Adjective - 12 to 35%	Little - 12 to 23%
And - over 35%	Some - 23 to 33%

COHESIVE SOILS

If clay content is sufficient so that clay dominates soil properties, clay becomes the principal noun with the other major soil constituent as modifier, i.e. sandy clay. Other minor soil constituents may be included in accordance with the classification breakdown for cohesionless soils, i.e. silty clay, trace sand, little gravel.

Consistency	Unconfined Compressive Strength (psf)	Approximate Range of (N)
Very Soft	Below 500	0 - 2
Soft	500 - 1,000	3 - 4
Medium	1,000 - 2,000	5 - 8
Stiff	2,000 - 4,000	9 - 15
Very Stiff	4,000 - 8,000	16 - 30
Hard	8,000 - 16,000	31 - 50
Very Hard	Over 16,000	Over 50

Consistency of cohesive soils is based upon an evaluation of the observed resistance to deformation under load and not upon the Standard Penetration Resistance (N).

COHESIONLESS SOILS

Density Classification	Relative Density %	Approximate Range of (N)
Very Loose	0 - 15	0 - 4
Loose	16 - 35	5 - 10
Medium Compact	36 - 65	11 - 30
Compact	66 - 85	31 - 50
Very Compact	86 - 100	Over 50

Relative Density of cohesionless soils is based upon the evaluation of the Standard Penetration Resistance (N), modified as required for depth effects, sampling effects, etc.

SAMPLE DESIGNATIONS

AS - Auger Sample - Cuttings directly from auger flight	ST - Shelby Tube sample - 3 inch diameter unless otherwise noted
BS - Bottle or Bag Samples	
S - Split Spoon Sample - ASTM D 1586	PS - Piston Sample - 3 inch diameter unless otherwise noted
LS - Liner Sample with liner insert 3 inches in length	RC - Rock Core - NX core unless otherwise noted

STANDARD PENETRATION TEST (ASTM D 1586) - A 2.0 inch outside-diameter, 1-3/8 inch inside-diameter split barrel sampler is driven into undisturbed soil by means of a 140-pound weight falling freely through a vertical distance of 30 inches. The sampler is normally driven three successive 6-inch increments. The total number of blows required for the final 12 inches of penetration is the Standard Penetration Resistance (N).

CITY OF FENTON
SPECIAL PROVISION
FOR
PAVT, REM, MODIFIED

OHM:CEL

1 of 1

3/25/26

- a. **Description.** This work shall be done in accordance with Section 204 of the 2020 Michigan Department of Transportation Standard Specifications for Construction except as herein provided.
- b. **Materials.** The materials used shall be as defined in Section 204 of the 2020 Michigan Department of Transportation Standard Specifications for Construction.
- c. **Construction.** The construction methods used shall be as defined in Section 204 of the 2020 Michigan Department of Transportation Standard Specifications for Construction except:

The Contractor shall remove pavement of whatever material, thickness, or multiple layers that may be encountered. This work shall include all excavation and disposal of all pavement and excavation material to construct the proposed cross sections as specified in the plans. The work shall also include all necessary sawcutting to remove to the limits as specified on the plans and approved in the field by the Engineer.

- d. **Measurement and Payment.** The completed work as measured will be paid for at the contract unit price for the following contract items (pay items):

Contract Item (Pay Item)	Pay Unit
Pavt, Rem, Modified	Square Yard

Pavt, Rem, Modified shall be measured in place by area in square yards based upon the average length and width measurements as determined in the field by the Engineer. The contract unit price shall be payment in full for all labor, materials, and equipment necessary to sawcut, remove pavement of all material/thickness/layers, excavation, and disposal of all removed pavement and excavation in accordance with the limits defined in the plans and as approved in the field by the Engineer.

Materials or debris resulting from pavement removal shall become the property of the Contractor and disposed of in accordance with Subsection 204.03.B of the 2020 MDOT Standard Specifications for Construction.

CITY OF FENTON
SPECIAL PROVISION
FOR
MACHINE GRADING, MODIFIED

OHM:CEL

1 of 1

3/25/26

a. Description. This work consists of providing all labor and equipment necessary to shape the existing grade to variable depths and widths to provide positive drainage within the limits shown on the plans and as specified in the Proposal, as directed by the Engineer. Complete this work according to the standard specifications and this special provision.

b. Materials. None specified.

c. Construction. Grade the existing ground surface to provide positive drainage based on the proposed pavement surface adjacent to the grading area. Move excess material to other locations within the project limits if necessary and determined suitable for reuse by the Engineer. Any unused excess material must be removed from the project limits and disposed of in accordance with subsection 205.03.P of the Standard Specifications for Construction.

Remove all surface coatings, miscellaneous timbers, and miscellaneous masonry as directed by the Engineer within the grading limits defined on the plan. Clear, strip, and stockpile topsoil as needed to excavate/fill the subgrade for pavement, curb, and approaches.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Contract Item (Pay Item)	Pay Unit
Machine Grading, Modified.....	Station

Machine Grading, Modified will be measured by length in stations down the center of the roadway and which includes both sides including all labor and equipment required to complete the work as described. Rework of stations will not be paid again.

Use of excavated or imported material for fill will be considered inclusive of this pay item.

Curb and gutter removal, pavement removal, and turf establishment items, if required, will be measured and paid for separately.

CITY OF FENTON
SPECIAL PROVISION
FOR
AGGREGATE BASE

OHM:CEL

1 of 1

3/25/2026

- a. **Description.** This work shall be done in accordance with Section 302, Aggregate Base Courses, of the Michigan Department of Transportation 2020 Standard Specifications for Construction except as herein provided.
- b. **Materials.** Aggregate materials shall meet the requirements specified in Section 902 of the 2020 Standard Specifications for Construction, Table 902-1 and 902-2 for 21AA dense-graded aggregate, except that the materials shall be produced entirely by crushing rock, boulders, cobbles, or slag. Only fines produced by the crushing process shall be permissible, no plastic fines shall be added. **No crushed concrete shall be allowed.**
- c. **Construction Methods.** The Aggregate Base Course shall be constructed in accordance with Section 302.03 of the 2020 Michigan Department of Transportation Standard Specifications for Construction.
- d. **Measurement and Payment.** The completed work as measured will be paid for at the contract unit price for the following contract item (pay item):

Contract Item (Pay Item)	Pay Unit
Aggregate Base	Ton
Aggregate Base, _ inch, Modified	Square Yard

Aggregate Base shall be measured in place by tonnage ticket provided to Engineer and as verified by the Engineer. **Aggregate Base, _ inch, Modified** shall be measured in place by area in square yards based upon the average length and width measurements as determined in the field by the Engineer. The contract unit price shall be payment in full for all labor, materials, and equipment necessary to construct the aggregate base in accordance with the plan details.

CITY OF FENTON
SPECIAL PROVISION
FOR
MAINTENANCE GRAVEL

OHM:CEL

1 of 1

3/25/2026

- a. **Description.** This work shall be done in accordance with Section 306, Aggregate Surface Course, of the Michigan Department of Transportation 2020 Standard Specifications for Construction except as herein provided.
- b. **Materials.** Aggregate materials shall meet the requirements specified in Section 902 of the 2020 Standard Specifications for Construction, Table 902-1 and 902-2 for 21AA dense-graded aggregate, except that the materials shall be produced entirely by crushing rock, boulders, cobbles, or slag. Only fines produced by the crushing process shall be permissible, no plastic fines shall be added. **No crushed concrete shall be allowed.**
- c. **Construction Methods.** The Aggregate Surface Course shall be constructed in accordance with Section 306.03 of the 2020 Michigan Department of Transportation Standard Specifications for Construction.
- d. **Measurement and Payment.** The completed work as measured will be paid for at the contract unit price for the following contract item (pay item):

Contract Item (Pay Item)	Pay Unit
Maintenance Gravel, Modified	Ton

Maintenance Gravel, Modified shall be measured by tonnage on tickets as determined in the field by the Engineer. The contract unit price shall be payment in full for all labor, materials, and equipment necessary to maintain access in accordance with the plan details.

CITY OF FENTON
 SPECIAL PROVISION
 FOR
STRUCTURE COVER ADJUSTS

OHM:ARP

1 of 1

3/25/2026

a. Description. The work shall consist of adjusting existing structure covers to the proper elevation by removing the casting and setting it to the proper elevation. Structure covers in the roadway shall be a 4' circular poured reinforced concrete collar after paving for all structures in the roadway. Adjustments greater than 6 inches for all structure types shall be constructed with structure cover additional depth. Work shall be done in accordance with Section 403 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction, except as modified herein.

b. Materials. Materials used for this work shall meet the requirements of Section 403 of the 2020 MDOT Standard Specifications for Construction.

Water and sanitary structure cover adjusts must conform to City Standard Plans including coordination and compliance with inspector and/or inspection. All structure cover adjusts may require a manhole encapsulation system such as WrapidSeal, Riser-Wrap, or approved equal as directed by the Engineer.

All roadway structures shall have a minimum 4' circular Grade 3500 concrete collar poured around them with #4 green epoxy coated bar reinforcement. Changes to geometry or size of the collar must be approved by the Engineer. Concrete collars shall be placed after paving. No additional payment shall be made for temporary plating/lowering, locating buried structures, or any changes to the Maintenance of Traffic for this work.

c. Construction Methods. This work shall be done in accordance with Section 403 of the 2020 MDOT Standard Specifications for Construction.

d. Measurement and Payment. The completed work as measured will be paid for at the contract unit price for the following contract items (pay items):

Contract Item (Pay Item)	Pay Unit
Structure, Adj, Add Depth	Foot
Stm Structure Cover, Adj	Each
Structure, Point Up	Each

The unit price for structure cover adjusts includes all costs necessary to adjust structure covers the first 6" of proposed grade, waterproof the structure (if applies), coordinate with utility owners, temporarily plate covers, locate buried structures, maintenance of traffic changes, and place a concrete collar around structures in the roadway. The additional depth item includes all costs necessary to adjust structures with depth changes greater than 6 inches and will be measured on a per foot basis. Pointing Up includes all costs necessary to mud up the structure and pipe connections with mortar, reset or replace loose or broken bricks, clean the existing mortar and brick, and dispose of any sediment created.

CITY OF FENTON
SPECIAL PROVISION
FOR
CURB AND GUTTER, CONC, DET D2, MODIFIED

OHM:CEL

1 of 1

3/25/2026

a. Description. This work consists of constructing concrete curb and gutter as detailed in the plans. All work shall be done in accordance with Section 802 of the Michigan Department of Transportation (MDOT) 2020 Standard Specifications for Construction, as directed by the Engineer, and except as provided herein.

b. Materials. Materials used for this work shall meet the requirements of Section 802 of the 2020 MDOT Standard Specifications for Construction.

c. Construction Methods. This work shall be done in accordance with Section 802 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.

Match existing curb type through curb repair section. Curb type may be old '4b' type curb.

d. Measurement and Payment. The completed work as measured will be paid for at the contract unit price for the following contract items (pay items):

Contract Item (Pay Item)	Pay Unit
Curb and Gutter, Conc, Det D2, Modified	Foot

Curb and Gutter, Conc, Det D2, Modified shall be measured by the foot as measured along the gutter flow line. Payment includes all materials, labor, and equipment required to complete the work as specified.

CITY OF FENTON
SPECIAL PROVISION
FOR
POST MAILBOX, REMOVE AND RESET

OHM:CEL

1 OF 1

3/25/2026

- a. Description.** The CONTRACTOR shall remove mailboxes that may conflict with the new construction and replace to their original location in accordance with requirements of the U.S. Post Office. Any mailbox or post not indicated on the plans for removal or replacement that is damaged by the CONTRACTOR's operations shall be replaced in kind by the CONTRACTOR at no additional charge to CITY. If temporary street closures or construction activities occur which prohibit delivery of mail by the Post Office, then alternate provisions for mail delivery shall be provided by the CONTRACTOR and approved by the ENGINEER, also at no additional charge to the CITY. This includes, for example, the use of mailbox banks, cluster box units, or multiple mailboxes on a single mount at different locations.
- b. Materials.** The materials used shall be as defined in Section 807 of the 2020 Michigan Department of Transportation Standard Specifications for Construction. Replacement of mailboxes damaged by the CONTRACTOR shall be with the same or similar material as approved by the CITY.
- c. Construction Methods.** This work shall be done in accordance with Section 807 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.
- d. Measurement and Payment.** The completed work as measured for POST MAILBOX, REMOVE AND RESET will be paid for at the contract unit prices for the following contract item (pay item):

Contract Item (Pay Item)	Pay Unit
Post, Mailbox, Remove and Reset	Each

Post, Mailbox, Remove and Reset shall be measured and paid for on an each basis which shall be payment in full for all labor, materials, and equipment needed to accomplish this work, temporary or permanent. Payment for Post Mailbox, Remove and Reset shall include relocations or replacements (as needed) of mailbox, anchor post, finish and placement of new post, and existing decorative and/or structural improvements and shall be calculated based on the total number of the installed assemblies upon completion.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
BOULDER, RELOCATE

TAY:MB

1 of 1

APPR:JLB:DBP:05-21-21

a. Description. This work consists of removing large (> 2-foot diameter) decorative boulders at the locations noted on the plans, storing on the project site in a safe location, and relocating the boulders to locations designated on the plans or as directed by the Engineer.

b. Materials. None specified.

c. Construction. Use equipment of the appropriate size to safely lift and transport the boulder to designated location. Lift and place the boulder using nylon straps or similar lifting supports to evenly support the boulder and prevent damaging the surface of the boulder.

Use care when relocating the boulder to prevent scratching or gouging the surface of the boulder. Ensure boulders that are observed as significantly cracked or damaged during relocation are removed from the project site and replaced by the Contractor with a boulder of similar size and shape as approved by the Engineer at no expense to the contract.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Pay Item	Pay Unit
Boulder, Relocate	Each

CITY OF FENTON
SPECIAL PROVISION
FOR
SALVAGE LANDSCAPING AND LIGHTING

OHM:ARP

1 of 1

3/25/2026

- a. Description.** The work shall consist of removing, salvaging, and replacing landscaping including lighting/floodlights as to replicate the nature of the existing planting bed with the proposed work in consideration. Work shall be done in accordance with Section 815 and 818 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction, except as modified herein.
- b. Materials.** Materials used for this work shall meet the requirements of Section 815 and 818 of the 2020 MDOT Standard Specifications for Construction.
- c. Construction Methods.** This work shall be done in accordance with Section 815 and 818 of the 2020 Michigan Department of Transportation (MDOT) Standard Specifications for Construction.
- d. Measurement and Payment.** The completed work as measured will be paid for at the contract unit price for the following contract item (pay item):

Contract Item (Pay Item)	Pay Unit
Salvage Landscaping and Lighting	Each

Salvage Landscaping and Lighting includes all labor, materials, and equipment necessary to remove, salvage, and replace landscaping and lighting as to replicate the nature of the existing planting bed with the new pathway or roadway in consideration. Lighting includes, but is not limited to, rewiring, boring/open cutting conduit, replacing luminaires, bases, and covers.

The pay item shall be paid only once per parcel frontage and only as directed by the Engineer.

CITY OF FENTON
SPECIAL PROVISION
FOR
TURF ESTABLISHMENT, PERFORMANCE

OHM:ARP

1 of 6

3/25/2026

- a. Description.** For the work identified in this special provision paid for by the pay item Turf Establishment, Performance only, delete Section 816 of the Standard Specifications for Construction and replace it with this special provision. The Contractor is responsible for the performance and quality of turf growth in the areas indicated on the plans and as identified by the Engineer. Comply with all local, state, and federal laws when completing this work.

Establish a durable, permanent, weed-free, mature, perennial turf. The work consists of fundamental turf work, including but not limited to topsoiling, seeding, mulching, erosion control, maintenance, watering, and repair of turf as described herein during the life of the contract and during the life of any supplemental performance bond which may ensue.

Choose and implement proven turf establishment industry practices; provide all necessary labor and equipment; select and provide all turf establishment materials; and control erosion and any subsequent sedimentation at all times.

Perform a site analysis, interpret the results, and implement a turf establishment program to ensure compliance with this specification. The site analysis must take into consideration topsoil needs, fertilizer and pH requirements, seed mix, existing and future soil moisture levels, slopes and grades, required erosion control items and devices, maintenance requirements, local highway snow removal and deicing practices, and any other characteristics that influence and affect turf establishment.

Subsection 107.11 of the Standard Specifications for Construction is revised relative to the Contractor's responsibility for the repair of turf establishment work as follows. The Contractor is responsible, at no additional cost to the contract, for the repair of turf establishment work occasioned by storm events up to 3 inches of rain in a 24 hour period as documented by local meteorological data submitted to the Engineer for review and approval. All other portions of Subsection 107.11 remain unchanged.

1. Contractor Turf Establishment Experience Requirements. Ensure weed control is done by a commercial herbicide applicator, licensed by the State of Michigan and certified by the Michigan Department of Agriculture (MDA) in the appropriate category to apply herbicides. Use application procedures and materials according to federal, state, and local regulations. Use of restricted use chemicals is prohibited. Provide appropriate documentation and secure approval from the Engineer before application of herbicides.

At least 10 work days prior to start of turf establishment, provide documentation to the Engineer, from the Contractor performing the turf establishment work, that they meet one or both of the following requirements.

- A. At least one person employed by the Contractor performing the turf establishment work and assigned to the job site has a degree or certificate in Turf Management, Horticulture, or related field.

B. At least one person employed by the Contractor performing the turf establishment work and assigned to the job site has at least 5 years of experience in roadside turf establishment.

- b. **Materials.** Provide topsoil, seed, mulch, pesticide, herbicide, mulch blankets and any other unique erosion control materials as necessary to fulfill this specification, as detailed on the plans. Use additional materials, as necessary, to meet the standards set forth for turf establishment in this special provision. The use of sod on the project requires the prior approval of the Engineer and if approved, may be used at limited site locations only.

Selection of all materials is the responsibility of the Contractor with the following minimum conditions.

1. **Soil.** Provide furnished or salvaged topsoil, which may be blended compost, that will support vigorous growth. Ensure topsoil is humus bearing and placed at least 4 inches deep. Ensure it is free of stones larger than 1/2 inch (2 inches on freeway projects) in diameter and other debris. Trim and grade the finished slope in accordance with Subsection 205.03.N of the Standard Specifications for Construction.

2. **Seed.** Use a seeding mixture that is composed of four or more species of perennial grass. Use only species and their cultivars or varieties which are guaranteed hardy for Michigan.

Recommended species of perennial grasses include: Kentucky Bluegrass, Perennial Ryegrass, Hard Fescue, Creeping Red Fescue, Chewings Fescue, Turf-type Tall Fescue, Buffalo grass, and Alkaligrass-Fults Puccinellia distans. Select cultivars or varieties of grasses that are disease and insect resistant and of good color. Ensure that no one species in the mix is less than 5 percent, or more than 25 percent, of the mixture by weight. Do not select grass species considered noxious or objectionable, such as Quack Grass, Smooth Brome, Orchard Grass, Reed Canary Grass, and others.

A. Ensure the seed is legally saleable in Michigan. Ensure the seed product does not contain more than 10 percent inert materials. Ensure the seed source is an MDOT approved certified vender.

B. Adapt the species and varieties of seed to the site conditions, to the site use, and to the soils, moisture, and local climate. Site use may include, but is not limited to, detention pond, wildlife habitat, playground, wetlands, forested wetland, rural roadside, urban roadside and highly maintained front yard.

C. Ensure at least two of the species in the mixture proposed to be planted within 15 feet behind the curb or the shoulder are salt tolerant.

3. **Mulch.** Mulch seeded areas with the appropriate materials for the site conditions to promote germination and growth of seed and to mitigate soil erosion and sedimentation.

4. **Herbicides.** Comply with all federal, state, and local laws. As part of the MDA weed control application, the Contractor is required to make proper notifications and/or postings as per label and MDA requirements for all locations that will be sprayed. Notify the Engineer at least 48 hours prior to any applications being made. Furnish and apply herbicide(s) as

needed. It is the Contractor's responsibility to select the herbicide(s) and the rate at which it is used. Obtain the Engineer's approval of work methods and herbicide(s) selected prior to the application of the herbicide(s). Complete a spray log and submit to the Engineer each day an application is made.

Do not draw water from any waterway (i.e. river, ditch, creek, lake etc.) located on state, county or municipal right-of-way, for mixing with herbicides.

5. Fertilizers. Furnish and apply fertilizer(s) as needed. It is the Contractor's responsibility to select the fertilizer(s) and the rate at which it is used. Phosphorus is allowed for use only at the time of planting and when required by soil conditions. Obtain the Engineer's approval of work methods and fertilizer(s) prior to the application of the fertilizer(s).

6. Water. Furnish and apply water from an approved source at a rate to promote healthy growth.

- c. Construction Methods.** The Contractor is responsible for all work and all construction methods used in completing this work. Implementation of any part of the standard specifications or standard plans by the Contractor does not relieve the Contractor of responsibility for acceptability of the construction methods or for the quality of the work.

1. Inspection of the Work. The Contractor is responsible for all inspection of turf establishment work.

Use a Contractor's Daily Report, approved by the Engineer, to report inspections made and to document turf establishment work performed on this project. Complete and submit a Contractor's Daily Report to the Engineer when any work performed under this special provision is in progress.

Include all necessary materials documentation including tests slips, certifications, etc. with the associated Contractor's Daily Report.

The Engineer will determine the acceptability of the Contractor's Daily Report in terms of their completeness and accuracy. The Engineer reserves the right to verify all submitted measurements and computations. Failure by the Contractor to submit acceptable and timely reports to the Engineer may result in withholding of progress pay estimates on turf- related items until such time as reports are submitted and deemed acceptable.

The Engineer reserves the right to inspect the project for any reason in accordance with Subsection 104.01 of the Standard Specifications for Construction, including the fulfillment of other inspection requirements such as Soil Erosion and Sedimentation Control, NPDES, etc. Inspections made by the Engineer do not relieve the Contractor of the responsibility for inspections required by this special provision or the Contractor's responsibilities for erosion control and turf establishment.

2. Erosion Control. Control erosion at all times according to Section 208 of the Standard Specifications for Construction. Control of soil erosion is the responsibility of the Contractor. However, sedimentation controls must be placed as indicated on the plans or as directed by the Engineer. Continuously monitor the site for needed erosion repair from

any cause as addressed in the contract. Return all eroded areas to original grade as detailed in the contract.

Take immediate corrective action if sedimentation occurs in drainage structures or any watercourse or water containment area and stabilize all disturbed areas contributing to this sedimentation within 24 hours after the erosion occurrence. Remove sediment deposited as a result of the Contractor's inability to control the soil erosion at the Contractor's expense.

Reimburse the Department for any costs levied against the Department, such as fines, environmental costs, costs for remedies required, or any other costs as a result of the Contractor's failure to comply with this special provision and with federal, state, and local laws.

3. Erosion Repair. The Contractor is responsible for all repairs and liable for all consequences (legal, monetary, or other) associated with erosion or sedimentation damage to finished or unfinished work.

Report all erosion occurrences and the repairs made by the Contractor to the Engineer in the format and at the frequency required by the Engineer. Repair any erosion, displacement, or disturbance to ongoing or completed work by any cause at no additional cost to the contract unless otherwise noted herein.

The Contractor is responsible and liable for all traffic control and safety measures required to repair and protect damaged turf areas. Repair any eroded area that may affect the support of the roadbed or safety of the public within 24 hours of the erosion occurrence.

Place protective devices such as barriers, directional signs/signals, temporary fence, or any other safety measures immediately after any erosion damage occurs that has the potential of endangering the public. In these instances, provide the Engineer with a written summary of the immediate action taken describing the repairs made and the safety measures taken, within 24 hours of the occurrence of the damage.

4. Mowing and Weeding. Maintain turf to a visually appealing level, and not more than 8 inches in height at any time, prior to acceptance. Weeds must be controlled to less than 10 percent of the turf establishment area at all times during construction.

5. Final Acceptance and Supplemental Performance Bond.

A. Final Acceptance Parameters. Ensure before final acceptance of the turf establishment work all of the following minimum parameters are met throughout all exposed areas of the project designated on the plans or identified by the Engineer as turf establishment areas: there must be no exposed bare soil and the turf must be fully germinated, erosion free, weed free, disease free, dark green in color and in a vigorous growing condition.

The Engineer will notify the Contractor of the dates and times of all acceptance inspections. The Contractor may accompany the Engineer during these inspections. If the Contractor does not agree with the decision made by the Engineer, the Contractor may request an inspection by a mutually agreed upon third party (Michigan State University Extension service or other). A joint inspection, to include

the Engineer, the Contractor, and the third party, will be scheduled by the Engineer. Pay all expert fees and expenses charged by the third party.

B. Supplemental Performance Bond. In the event that all contract items of work are completed, including the placement of all turf establishment items of work, and the final acceptance of the project is delayed because the final acceptance parameters for the turf establishment work have not been fully met; the Contractor may propose to the Engineer the use of a supplemental performance bond.

The bond serves to secure the successful completion of turf establishment work and fulfillment of all final acceptance parameters for the turf establishment work. Ensure the supplemental performance bond, in all respects, is satisfactory and acceptable to the Department and executed by a surety company authorized to do business with the State of Michigan.

Ensure the bond is in an amount equal to 50 percent of the turf establishment work items covered by this special provision. Ensure the bond remains in place for two growing seasons. At the discretion of the Engineer, the bond may be reduced on a prorated basis as portions of the areas designated for turf establishment on the project meet the final acceptance parameters.

Prior to commencement of any work necessary to meet the acceptance parameters during the bonded period, the Contractor must apply for a permit to work within MDOT right-of-way using Form 2205. The permit fee and an individual permit performance bond will not be required. The permit insurance requirements, however, will be required.

- d. **Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

Contract Item (Pay Item)	Pay Unit
Turf Establishment, Performance.....	Square Yard

Turf Establishment, Performance will include all labor, equipment and materials required or selected by the Contractor to install, maintain, inspect, repair, and meet the acceptance parameters for turf establishment specified in this special provision, including preparation, updating and submittal of the Contractor’s Daily Reports.

Repairs made to damaged turf establishment areas as a result of a documented storm by local meteorological data resulting in rainfall amounts of more than 3 inches in a 24 hour period will be paid for as an increase to original quantities in accordance with Subsection 109.05 of the Standard Specifications for Construction.

The following schedule of payment applies to work performed according to this special provision. Upon completion of topsoil surfacing stage, 50 percent of the authorized amount for **Turf Establishment, Performance** will be paid to the Contractor. The remaining 50 percent of the authorized amount will be paid upon completion of all other work necessary to comply with this special provision and to meet all final acceptance parameters for **Turf Establishment, Performance** or at such time as the supplemental performance bond is accepted by the Department.

The supplemental performance bond and all costs associated with turf establishment work performed during the duration of the performance bond will not be paid for separately. These costs which may include, but are not limited to, mobilization, traffic control devices, and the required permit insurance are included in the unit price bid for **Turf Establishment, Performance.**

CITY OF FENTON
SPECIAL PROVISION
FOR
RECONSTRUCTING SPRINKLER SYSTEMS

OHM:ARP

1 of 2

3/25/2026

- a. Description.** To repair existing lawn irrigation systems in conflict with proposed construction. This work shall be done in accordance with the 2020 Michigan Department of Transportation Standard Specifications for Construction, except as herein provided.
- b. Materials.** The materials used to reconstruct the sprinkler system(s) shall be of equal or greater quality as originally installed.
- c. Construction.** Existing lawn sprinklers shall be relocated to accommodate the proposed construction. Additional sprinklers not shown on the plans may be encountered in the line of the work.

The Contractor shall exercise care in preserving and protecting existing lawn irrigation systems.

All necessary work associated with the relocation, replacement and reconnection of sprinkler systems shall be as directed by the Engineer.

Where replacement of portions of existing systems is necessary, the various components used for replacement shall match and duplicate the existing materials as closely as practicable. If the existing type of sprinkler head is no longer suitable for the proposed location and its surroundings, the appropriate type shall be used.

Sprinkler heads and underground piping shall be relocated, restored, and reconnected immediately following disruption by construction and grading operations.

Any and all sprinkler systems within the project limits, or impacted by the work of this contract, shall be repaired with at least equal quality materials and workmanship, to a functioning condition at least as good as existed prior to work beginning. For the contractor to be reimbursed for such repairs, before any contract work begins, contractor shall arrange a walk-through with the property owner or designated representative, accompanied by the project engineer or inspector, of each and every adjacent property, for the purpose of determining and evaluating the existing sprinkler system design (location and types of lines, heads, valves, controllers) and its functionality and integrity. This information will be documented with sketches, drawings, and narrative, by the contractor, to be submitted to and used by the project engineer to verify need and approve any payment for repairs to the system. No payment shall be made for repairs not deemed necessary and approved by the project engineer as a result of this walk-through and evaluation process. Failure of the contractor to fulfill these requirements shall cause the project engineer to make the repairs and charge the full cost to the contractor as a contract adjustment.

d. **Measurement and Payment.** The completed work as measured will be paid for at the contract unit price for the following contract item (pay item):

Contract Item (Pay Item)	Pay Unit
Sprinkler Head, Relocate.....	Each
Sprinkler Head, Replace.....	Each
Sprinkler Line.....	Foot

Payment for sprinkler items includes equipment, labor, and materials to complete this item as specified above. Relocating and replacing sprinkler heads will be measured as units, regardless of type (mist, rotary, impact, etc.). Sprinkler line, regardless of size, will be measured in linear feet.

Costs for connecting, testing, and adjusting the completed work will be included in the Contract unit prices for the above items. Contract unit prices for the above sprinkler items shall also include cost of furnishing all necessary materials and fittings, and for all necessary excavation, backfilling and disposal of surplus material. All necessary components shall be provided by the Contractor, but those not a designated contract pay item will not be paid for separately.

If Contractor chooses to install conduit under sidewalks, driveways, etc. to facilitate project related sprinkler installation in the future, the conduit will not be paid for separately.

CITY OF FENTON
SPECIAL PROVISION
FOR
WATER MAIN, DI, _ INCH, TR DET _

OHM:CEL

1 of 10

3/25/26

- a. Description.** This work shall consist of constructing new ductile iron (DI) water main and connecting it to an existing water main system. All work shall be performed in accordance with current City Standard Water Main Details and Specifications included in the plans, 2020 MDOT Standard Specifications for Construction, and MDOT Standard Plans, except as modified herein and elsewhere in the contract documents.
- b. Materials.** All pipes and fittings from 4" to 20" diameter shall be ductile iron pipe that meets Thickness Class 54 while conforming to the current revision of ANSI 1-A21.51 (AWWA C151). The pipe shall meet the outside diameter and pipe barrel thickness requirements shown in the following table unless otherwise specified:

INSIDE DIAMETER SIZE	OUTSIDE DIAMETER SIZE	PIPE BARREL THICKNESS	PRESSURE RATING
4 INCH	4.80 INCH	.35 INCH	350 PSI
6 INCH	6.90 INCH	.37 INCH	350 PSI
8 INCH	9.05 INCH	.39 INCH	350 PSI
12 INCH	13.20 INCH	.43 INCH	350 PSI
16 INCH	17.40 INCH	.46 INCH	350 PSI
20 INCH	21.60 INCH	.48 INCH	350 PSI

Tolerances permitted under AWWA C150 specifications shall apply to the above dimensions.

Piping shall be cement lined conforming to the current revision of AWWA C104 with bituminous seal coat.

All materials delivered to the project are subject to inspections and tests by the City, or authorized representative. All material rejected shall be removed from the City's premises by the Contractor within 14 calendar days after receiving. Test certificates in accordance with the current requirements of ASTM shall be provided upon request of the City or his representative.

Fittings

All fittings shall be mechanical joint type conforming to series 1100 "MEGALUG" Type fittings. Twist-off nuts shall be used to insure proper actuating of the restraining devices.

All fittings shall be approved by the Engineer prior to placement. All fittings shall conform the current revisions of AWWA C153.

All bolts on mechanical fittings shall be domestic origin high strength, low alloy COR-BLUE steel bolts or approved equal. Bolts shall meet the current provisions of ANSI A21.11-90 (AWWA C111). Bolt manufacturer's certificate of compliance must accompany each shipment.

Joints

Joints for the pipe shall be push-on type conforming to AWWA-C111 (ANSI A21.11). Mechanical or flanged joints will be allowed for special applications subject to the approval of

the Engineer. Sealing gaskets, retainer glands, and lubricants for joints shall meet the pipe manufacturer's specifications.

Joint Restraint

All pipe deflections greater than or equal to 11.25 degrees and all tees shall be restrained, tied, or harnessed in a manner acceptable to the Engineer. The restraint shall be applied to joints each way from the deflection or tee an adequate distance to resist the axial thrust of the test pressure. Details of all proposed joint restraint, showing type and locations, shall be submitted to the Engineer for approval. Details of the proposed joint restraint design shall be prepared in accordance with the recommendations of the pipe manufacturer and guidelines published by the Ductile Iron Pipe Research Association (DIPRA). All joint restraint shall be considered incidental to water main construction. Acceptable methods of joint restraint are listed below.

“Field-Lok” gasket by U.S. Pipe through 24” diameter

“TR Flex” by U.S. Pipe 4” and larger diameter

“Usiflex” by U.S. Pipe (river crossing pipe)

“Snap-Lok” by Griffin Pipe Products 6” to 24” diameter

The Contractor shall furnish and place concrete thrust blocks at all plugs, caps, tees, bends, and other fittings as indicated on the plans or as directed by the Engineer. The thrust blocks shall be made of 3,000 psi concrete and shall be of adequate size and shape to resist the design working and surge pressures to which the main will be subjected. The cost of installing thrust blocks shall be considered incidental to pipe installation.

Polyethylene Encasement

Polyethylene encasement shall consist of tube or sheet material of minimum eight (8) mil thickness and shall meet all the requirements of AWWA Standard C105. Polyethylene film shall have a minimum tensile strength of 3,600 psi, a minimum elongation of 800 percent, and a minimum dielectric strength of 800 volts/mil of thickness.

Tube size or sheet width for each pipe diameter shall be as follows:

Nominal Pipe Diameter (in.)	Minimum Flat Tube (in.)	Polyethylene Width in Sheet (in.)
6	16	32
8	20	40
12	27	54
16	34	68

Tracer Wire

Tracer wire shall be run and secured on the pipe and appurtenances per the City Standard provided in the plans.

- c. **Construction Methods.** Pipe shall be carefully laid to line and grade and shall have bearing over its entire length except at joints where the joint hole shall be of such size as to give adequate room for working. Pipe shall be laid with a minimum cover across the entire run of

pipe. Pipe installation shall be in accordance with AWWA C600, including the placement of pipe plugs per AWWA 600-93 3.3.6. This information shall be checked by the Contractor to ensure that the necessary equipment, materials, and procedures are provided.

Preparation of Trench Bottom

Trench bottom preparation and backfilling shall be as follows: The trench width shall be a minimum thirty (30) inches in width. Trench depths shall be as shown on the plans and shall provide no less than five feet six inches (5'-6") of cover from top of water main to final surface grade above such mains. The bottom of trench in rock or cohesive soil shall be excavated neatly to the required grade. The trench bottom shall be filled with approved granular material for bedding in accordance with the City Standard and shall be thoroughly compacted by tamping before the pipe is laid. The bedding shall be dug out at each bell end of the pipe to conform to the shape of the bell. Blocking under pipe is strictly prohibited.

Excavation to 18" Below Bottom of Pipe

As a result of the Contractor's construction procedure or where excavation has not uncovered a stable subgrade foundation at depth of six (6) inches below the bottom of the proposed pipe grade, the Contractor shall continue to excavate downward to a maximum depth of eighteen (18) inches below the bottom of pipe to reach an acceptable and stable soil foundation. The space resulting from such excavation and the pipe beddings shall be filled and constructed in the same manner as a subgrade undercut. All costs for such construction shall be borne by the Contractor. When excavations do not uncover stable foundations for pipe installation at depths greater than eighteen (18) inches below the bottom of pipe, the Contractor shall stop further excavation and immediately notify the Engineer of the condition. Any further excavation as directed by the Engineer, shall be paid for at the contract unit price for contract pay item for subgrade undercutting.

Handling Pipe & Fittings

All pipes and castings shall be unloaded and distributed along the line of work in such manner and with such care as will effectually avoid damage to any pipe or fitting. Dropping pipe or fittings directly from the truck will not be permitted. Care must also be taken to prevent abrasion of the pipe coating, especially on the inside of the pipe. When the pipe coating is damaged, in the opinion of the Engineer, the damaged area shall be thoroughly cleaned by brushing and then recoated with asphalt paint that is satisfactory to the Engineer and in accordance with the manufacturer's specifications. The Contractor shall keep on hand a supply of paint for such purposes.

Installation of Pipe

Installation of water main shall be made in accordance with the published installation guide of the pipe manufacturer except as otherwise specified herein. Whenever instructions given by the manufacturer are at variance with the provisions specified herein, the laying standards provided herein shall govern. Proper tools, including pipe pullers, special cutters, spacing yokes, machining tools, test caps, ring feeler gauges, etc. shall be provided at the site of the work for installation of the pipe. Immediately before laying each section of pipe or fitting, it shall be thoroughly cleaned of all debris, dirt, or other accumulated foreign material. It shall be inspected for damage to the coating or pipe material and repairs shall be made where required. If deemed irreparable by Engineer, then it shall be removed from the job site. Care shall be taken to keep the interior of previously laid pipe clean and free from dirt and other foreign material. Bulkheads or other means shall be used at the open end of the previously laid pipe for this purpose.

After a length of pipe is placed in the trench, the spigot shall be centered in the bell of the adjacent pipe, the pipe shoved into proper position in the collar or bell and brought into true alignment. The pipe shall then be secured with earth that is carefully tamped under on each side of the pipe.

Proper support of all pipes, including the full length of the barrel, shall be made by constructing of specified bedding as shown on the plans or as detailed herein. Special care shall be taken to avoid excessively loading the bell section of the bell and spigot pipe. Each pipe shall be pushed firmly against the previous section of laid pipe and carefully aligned. Tracer wire shall be run and secured on the pipe and appurtenances per City Standard.

Ledge rocks and large stones shall be removed from the trench to provide a clearance of at least 6 inches below and around all parts of the pipe, valves or fittings. A clearance of at least 9 inches below and on each side of the pipe shall be provided for 12 inch diameter pipe and larger. For pipe with a diameter less than 12 inches, the required clearance shall be 6 inches.

As determined by the Engineer, the following Water Main Trench Details may be used:

Water Main, Trench F

Where called for on the plans or as specified by the Engineer, "Trench F" shall conform to the requirements of MDOT Standard Plan R-83 Series Trench Detail F except that MDOT Class II granular material shall be used in place of MDOT Class IIIA granular material.

Water Main, Trench G

Where called for on the plans or as specified by the Engineer, "Trench G" shall conform to the requirements of MDOT Standard Plan R-83 Series Trench Detail G except that MDOT Class II granular material shall be used in place of MDOT Class III and Class IIIA granular materials.

Connection to Existing Mains

Where called for on the plans or as directed by the Engineer, connections of newly constructed water main to existing water main, or tie-ins, will be paid for on an each basis. This work shall be paid for at the contract unit price for contract pay item, "Connection to Existing Water Main." Payment shall include all materials, fittings, pipe, equipment, labor, excavation, proper disposal of the spoils, sheeting or bracing, draining, bedding, disinfecting, backfilling, cleanup, and all other work incidental to the construction of the connection. All new water main and fittings, including bends, sleeves, and pipe restraint, is considered incidental to the connection. The removal of existing thrust blocks and/or the construction of new thrust blocks if required will also be considered incidental to the connection. Any temporary cold patching or asphalt patching as needed or as directed by the Engineer shall be incidental to this item. Restoration is not included in this item and shall be paid for under the appropriate item(s). The Contractor shall verify the outside diameter of the existing water mains. Any use of oversize coupling, sleeves or any other fitting shall be considered incidental to the connection. Connection of existing mains to new mains will be done only after the new mains have been satisfactorily pressure-tested and are shown to be sterile by results of the bacteriological analysis.

Fittings

Valves, fittings, and hydrants shall be installed using manufacturer's specifications and City Standard. Wherever adapters are required to connect the proposed water main with an existing pipe of another material, the nominal inner diameter of the adapter shall not be smaller in diameter than either of the adjacent pipes. Special machined faced parts shall be provided

where required to connect to existing mains. Air release valves shall be provided at high points in the water main line.

Polyethylene Encasement

The polyethylene encasement shall prevent contact between the pipe and the surrounding backfill and bedding material but is not intended to be a completely airtight and water tight enclosure. Overlaps shall be secured by the use of adhesive tape, plastic string, or any material capable of holding the polyethylene encasement in place until backfilling operations are completed.

Installation Methods: This standard includes three different methods for the installation of polyethylene encasement on pipe. Methods A and B are for use with polyethylene tubes, and method C is for use on polyethylene sheets.

1. Method A: Cut polyethylene tube to a length approximately two (2) feet longer than that of the pipe section. Slip the tube around the pipe, centering it to provide a one (1) foot overlap on each adjacent pipe section, and bunching it accordion-fashion lengthwise until it clears the pipe ends. Lower pipe into trench and make up the pipe joint with the preceding section of pipe. A shallow bell hole must be made at joints to facilitate installation of the polyethylene tube. After assembling the pipe joint, make the overlap of the polyethylene tube. Pull the bunched polyethylene from the preceding length of pipe, slip it over the end of the new length of pipe, and secure in place. Then slip the end of the polyethylene from the new pipe section over the end of the first wrap until it overlaps the joint at the end of the preceding length of pipe. Secure the overlap in place. Take up the slack width to make a snug, but not tight, fit along the barrel of the pipe, securing the fold at quarter points. Repair any rips, punctures, or other damage to the polyethylene with adhesive tape or with a short length of polyethylene tube cut open, wrapped around the pipe, and secure in place. Proceed with installation of the next section of pipe in the same manner.
2. Method B: Cut polyethylene tube to a length approximately one (1) foot shorter than that of the pipe section. Slip the tube around the pipe, centering it to provide 6 inches of bare pipe at each end. Make polyethylene snug, but not tight, secure ends as described previously.

Before making up a joint, slip a three (3) foot length of polyethylene tube over the end of the preceding pipe section, bunching it accordion-fashion lengthwise. After completing the joint, pull the 3-foot length of polyethylene over the joint, overlapping the polyethylene previously installed on each adjacent section of pipe by at least one (1) foot, make snug and secure each end. Repair any rips, puncture, or other damage to the polyethylene. Proceed with installation of the next section of pipe in the same manner.

3. Method C: Cut polyethylene sheet to a length approximately two (2) feet longer than that of the pipe section. Center the cut length to provide a one (1) foot overlap on each adjacent pipe section, bunching it until it clears the pipe ends. Wrap the polyethylene around the pipe so that it circumferentially overlaps the top quadrant of the pipe. Secure the cut edge of polyethylene sheet at intervals of approximately three (3) feet. Lower wrapped pipe into the trench and make up the pipe joint with the preceding section of pipe. A shallow bell hole must be made at joints to facilitate installation of the polyethylene. After completing the joint, make the overlap as described previously. Repair any rips, punctures, or other damage to the polyethylene. Proceed with installation of the next section of pipe in the same manner.

Pipe-shaped appurtenances: Cover bends, reducers, hydrant barrels, offsets, and other pipe-shaped appurtenances with polyethylene in the same manner as the pipe.

Odd-shaped appurtenances: When valves, tees, crosses, and other odd-shaped pieces cannot be wrapped practically in a tube, wrap with a flat sheet or split length of polyethylene tube by passing the sheet under appurtenance and bringing it up around the body. Make seams by bringing edges together, folding over twice, and taping down. Handle width and overlaps at joints as described above. Tape polyethylene securely in place at valve stems and other penetrations.

Openings: Provide openings for branches, service taps, blow-offs, air valves, and similar appurtenances by making an X-shaped cut in the polyethylene and temporarily folding back the film. After the appurtenance is installed, tape the slack securely to the appurtenance and repair the cut, as well as any other damaged areas in the polyethylene, with tape.

Junctions: Where polyethylene wrapped pipe joins an adjacent pipe that is not wrapped, extend the polyethylene wrap to cover the adjacent pipe for a distance of at least two (2) feet. Secure the end with circumferential turns of tape.

Backfill: Use the same backfill material as that specified for pipe without polyethylene wrapping, exercising care to prevent damage to the polyethylene wrapping when placing backfill. Backfill material shall be free from cinders, refuse, boulders, rocks, stones, or other material that could damage polyethylene.

Water for Testing, Chlorination, and Flushing

The Contractor will need to obtain a meter from the City for the use of water during the construction.

Water for testing, chlorinating, and flushing shall be obtained from the most convenient potable water supply. The Contractor shall provide at his sole expense, all the water required and shall make all necessary arrangements with the authority that controls the source water system, and shall be governed in the use of water by all rules and regulations imposed there on by said authority.

Due to the multiple phasing of the project, there may be isolated water main segments, such as hydrant leads, where a potable water source is not readily available for water main flushing and testing. At these locations, the Contractor may be required to provide trucked-in potable water or have taps made in existing water mains that are called for abandonment, and provide piping and fittings in order to provide a water source for the flushing and testing of water mains. If this work is required, it shall be considered included in the contract unit prices for the water main and will not be paid for separately.

Flushing of Water Mains

Prior to disinfection and hydrostatic testing, newly constructed water mains less than twenty four (24) inches in diameter shall be thoroughly flushed to remove all accumulated debris that may have entered the line during construction. Flushing shall include the use of a "polly pig" or approved equal equipment, to remove accumulated deposits. The frequency of running the "polly pig" through the water mains shall be determined by the debris discharging from the effluent. Several passes with the "polly pig" through the newly constructed system may be

required before the main is acceptable. Procedures for use of the "polly pig", or approved equal equipment, shall be per the manufacturer's specifications. Mains twenty-four (24) inches in diameter and larger shall be manually cleaned and inspected during construction.

Water for testing, chlorinating, and flushing shall be obtained from the most convenient potable water supply. The Contractor at his own expense, shall provide all the water required, and shall make all necessary arrangements with the City as the source water system. The Contractor shall not operate any existing gate valves or tapping valves to control the flow of water from the existing mains. The Contractor shall contact the City to operate the valves when necessary.

Sterilization of Mains

After a satisfactory hydrostatic test is obtained, the new main shall be chlorinated by using a chlorine compound water mixture or a chlorine gas water mixture. The chlorine solution shall be applied through a corporation stop at the beginning of the main or valved section thereof. A slow flow of water shall be let into the main approximately at the point of injection of the chlorine solution, at a rate such that the chlorine dosage of the entering water shall be at least 25 parts per million. An open discharge shall be maintained at the far end of the section of main being chlorinated, and the introduction of chlorine solution and water shall continue until the water discharging at the far end carries the required dosage of chlorine. As the main is filled with chlorinated water, each outlet from the main shall be opened and sufficient water drawn off to assure that the full dosage of chlorine reaches each outlet.

Back pressure causing a reversal of flow in the main being chlorinated shall be prevented, and pressure in the main shall be held down to a point which will make it impossible for chlorinated water to be forced into other sections of the main or water system. The chlorine treated water shall remain in the main at least 24 hours, and at the end of that time the residual chlorine at pipe extremities and other representative points shall be at least 10 ppm. If residual chlorine is less than 10 ppm, at the end of 24 hours, further application of chlorine shall be made and the retention period repeated until the required 10 ppm residual is obtained.

Following chlorination, all treated water shall be thoroughly flushed from the main until the replacement water, both chemically and bacteriological, has been proven equal to the water quality in the source water supply system. The Contractor shall make arrangements with a state certified third-party testing facility. Once this has been completed and passed, the City and Engineer shall be copied on the results.

Should the initial treatment of all or any section of the mains, in the opinion of the Engineer, prove ineffective, the chlorination procedure shall be repeated until confirmed tests show that water sampled from the new main conforms to the foregoing requirements.

Hydrostatic Testing of Water Mains

Within a reasonable length of time following pipe laying and backfilling, the Contractor shall complete all work necessary to perform hydrostatic testing.

The hydrostatic testing shall be conducted in accordance with City Standard.

The Contractor shall perform all necessary preliminary hydrostatic tests and shall make all necessary repairs, including the repair of all visible leaks and cracks, and retest with his own forces to ready the water mains for final hydrostatic inspection and testing by the City.

Immediately after the water mains have passed such preliminary tests, the Contractor shall submit a written request to the City for final hydrostatic inspection and test.

The hydrostatic test shall be conducted before the new water main is connected to the existing water system, except as specified below. The Contractor shall furnish all necessary personnel, temporary blow-offs, plugs, bracing, test pumps and all other necessary apparatus for conducting the test and cost of same shall be incidental to the unit price bid for water main. Testing shall be conducted under the supervision of the Engineer.

At the option of the Engineer, the Contractor may test against closed valves providing that the new main to be tested and the testing apparatus are flushed and chlorinated in accordance with accepted procedure. After chlorination and subsequent flushing, test samples of water must show safe bacteriological results through a test by a recognized laboratory. In the event of an unsatisfactory hydrostatic test the Contractor will cut the new main, install caps or plugs, pressure test and re-chlorinate without additional cost or charge.

Before applying test pressure, all air shall be expelled from the pipe. If necessary to accomplish this, taps shall be made at points of highest elevation in the pipe and such openings subsequently closed, prior to test, with tight threaded brass plugs.

Test pressure shall be maintained at 150 psi at the point of highest elevation in the test section by pumping potable water into the pipe for a period of at least two (2) hours and in all cases long enough to permit assurance of a satisfactory test. Leakage is measured by the quantity of water pumped into the pipe to maintain 150 psi.

ALLOWABLE LEAKAGE PER FOOT OF PIPE (TWO HOUR TEST):

<u>PIPE DIAMETER</u>	<u>ALLOWABLE LOSS</u>
6"	0.00474 gal/ft.
8"	0.00632 gal/ft.
12"	0.00946 gal/ft.
16"	0.01262 gal/ft.

Minimum size pressure gauge is to be three and one-half (3-1/2) inch in one (1) pound increments. Any faulty pipe, fittings, gate valves or other accessories disclosed by testing shall be replaced with sound materials and the test shall be repeated as often as necessary until the specified requirements have been met.

The Contractor shall not disturb nor cut into any existing water main in service. When the operation of valves in any existing mains is required, the Contractor shall notify the City in advance so that the shut off can be coordinated. The Contractor shall notify affected property owners a minimum of 24 hours in advance of water shut offs. The City will operate the valves necessary for shut offs.

The Contractor shall complete the water main work in a manner that minimizes the disruption of water service. The water main tie-ins shall be made after 8:00 p.m. and be completed by 4:00 a.m. the following morning in order to minimize the disruption of water service. The existing water main shall remain in service until all existing services are transferred to the new water main.

Temporary Blow-Offs

Temporary blow-offs are primarily intended for use at the ends of new water mains that are to be, pressure tested, chlorinated, flushed and bacteriologically tested, after which the blow-offs are to be removed and final connections made to existing water mains or previously construction sections of water mains. Due to the phasing of this project, there will be locations where new water mains will need to terminate at phasing limits and then be extended as part of a future phase of construction. These locations have been generally identified on the plans, but the Contractor will need to assess the location of this work and revise accordingly based on their construction operation and sequence of construction.

Temporary blow-offs shall be installed using ductile iron fittings, AWWA valves, and materials and standards approved by the City and Engineer.

MDOT Class II granular material shall be used as backfill and shall meet the requirements of Section 902 of the 2020 MDOT Standard Specifications for Construction.

Particular care should be exercised in bracing the blow-off assembly against hydrostatic thrust. The capping of the main and construction of the required thrust block or pipe restraint, to facilitate the installation of the temporary blow-off, will be included in these pay items and will not be paid for separately.

Payment for installing temporary blow-offs will be considered inclusive to water main installation. It shall include full for all labor, materials, and equipment necessary to complete the work. It shall include the following: excavating, trenching, disposal of unsuitable or excess excavated materials, temporary sheeting, bracing and shoring of excavations, support of existing pipe lines; furnishing, placing and removing temporary blow-offs when they are no longer needed, MDOT Class II granular bedding and backfill material; all required fittings, valves, piping caps, pipe restraint, thrust blocks if required, adaptors, and curb stops; and cleanup and surface restoration.

The Contractor shall note that during the water main construction it may be necessary to adjust the pipe depth to allow for the crossing of existing sanitary sewer leads, which may be shallow. Any deviation from the pipe elevations or specified depths of cover called out on the plans must be approved in advance by the Engineer. In certain cases it may become necessary to remove and replace portions of the sewer leads which are impacted by the water main construction. When replacement is determined necessary by the Engineer, the Contractor shall remove and replace the affected portion of sewer lead.

- d. **Measurement and Payment.** The completed work as measured will be paid for at the contract unit price for the following contract items (pay items):

Contract Item (Pay Item) **Pay Unit**

Water Main, DI, 8 inch, Tr Det G Foot

Water main shall be measured in place horizontally by linear feet along the centerline of the pipe from center of end fittings or end-to-end, without deduction for intervening valves, gate wells, or structures.

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to construct the water main. Payment for water main shall include the following: removal of existing water main conflicts, excavating, trenching, disposal of unsuitable or excess excavated materials, temporary sheeting, bracing and shoring of excavations, support of existing pipe lines, furnishing and placing of pipe, poly wrap, tracer wire, jointing materials, all fittings, bulkheads, plugs, sleeves, adaptors, reducers, joint restraint, corporation stops, thrust blocks, portable lighting, flushing, cleaning, chlorination, sterilization, temporary blow offs, hydrostatic and bacteriological testing, dewatering trench, furnishing and placing of required bedding, backfill and fill materials, complete cleanup, and surface restoration.

Measurement will be taken from end to end with no reduction for fittings or valves. The reconnection of hydrants will require the removal of existing water main in order to construct the new lead. This work, in addition to any bulkheading, will be included as part of the water main construction and will not be paid for separately.

Payment for water main shall also include up to 18 inches of trench undercut and backfill with Class II granular material unless otherwise shown in the plan details. If additional undercut is required beyond 18 inches then it shall be paid for separately with the subgrade undercut pay item.

The contract unit price shall also include payment in full for dewatering of excavation as needed to perform the construction.

CITY OF FENTON
SPECIAL PROVISION
FOR
CONNECTION TO EXISTING WATER MAIN

OHM:CEL

1 of 1

3/25/26

- a. **Description.** This work shall consist of connecting water main from the proposed main line water main to the existing water main upon passing pressure and bacteriological testing and receiving authorization from the Engineer. All work shall be performed in accordance with current City Standard Water Main Details and Specifications included in the plans, 2020 MDOT Standard Specifications for Construction, and MDOT Standard Plans, except as modified herein and elsewhere in the contract documents.
- b. **Materials.** The Contractor shall provide all pipe, fittings, joints, joint restraint, thrust blocks, and bedding and backfill to make the connection. The pipe shall be of material specified by the Engineer and shall meet the requirements specified in the special provisions for water main.
- c. **Construction Methods.** Install pipe, poly wrap, tracer wire, fittings, joints, joint restraint, thrust blocks, excavation and backfill, and all other items necessary to make the permanent connection of the proposed main line water main to the existing water main. **All labor, materials, and equipment to connect from the proposed main line water main to the existing water main is included in this work.**
- d. **Measurement and Payment.** The completed work as measured will be paid for at the contract unit price for the following contract items (pay items):

Contract Item (Pay Item)	Pay Unit
Connection to Existing Water Main.....	Each

Where called for on the plans or as directed by the Engineer, connections from the proposed main line water main to the existing water main will be paid for on an each basis. The contract unit price shall be payment in full for all labor, materials, and equipment necessary to connect the new water main to the existing water main. Payment shall include the following: removal of pipe, excavating, trenching, disposal of unsuitable or excess excavated materials, temporary sheeting, bracing and shoring of excavations, support or relocation or replacement or connection or reconnection of existing pipe lines, furnishing and placing of pipe, poly wrap, tracer wire, jointing materials, all fittings, bulkheads, plugs, sleeves, adaptors, reducers, joint restraint, corporation stops, thrust blocks, portable lighting, flushing, cleaning, chlorination, sterilization, temporary blow offs, hydrostatic and bacteriological testing, dewatering trench, furnishing and placing of required bedding, backfill and fill materials, complete cleanup, and surface restoration.

This work shall include the proper removal, disposal, or abandonment of the existing water main in the connection area shall be considered incidental to the work.

The Contractor shall field verify the material and size of the existing water main. Any oversize coupling, sleeves, or other fittings needed to complete the connection will not be paid for separately. The Contractor shall not receive payment for this item if the connection is made by tapping sleeve, valve, and well.

CITY OF FENTON

SPECIAL PROVISION
FOR
HYDRANT, REM

OHM:ARP

1 of 1

3/25/26

- a. **Description.** This work shall consist of removing fire hydrants that are connected to existing water mains where shown on the plans or as directed by the Engineer. All work shall be performed in accordance with current City Water Main Details and Specifications included in the plans, 2020 MDOT Standard Specifications for Construction and MDOT Standard Plans, except as modified herein and elsewhere in the contract documents.
- b. **Materials.** MDOT Class II granular material shall be used as backfill and shall meet the requirements of Section 902 of the 2020 MDOT Standard Specifications for Construction.
- c. **Construction Methods.** The Contractor shall remove the hydrant, including thrust block and portions of water main and service valve and box that are located within the required excavation. The capping of the adjacent water mains, where required, will be paid for as separate contract pay items. The Contractor shall carefully salvage the hydrant and stockpile on site as directed by the Engineer.

The Contractor shall backfill the resulting excavation with MDOT Class II granular material, compacted to at least 95% of its maximum unit weight. The material shall be placed in maximum 12-inch lifts or as directed by the Engineer. The removal and replacement of surface materials (such as, but not limited to HMA, concrete, etc.) that are required as part of the work, will be covered by separate contract pay items included in the proposal.

- d. **Measurement and Payment.** The completed work as measured for “Hydrant, Rem” will be paid for at the contract unit price for the following contract item (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
Hydrant, Rem	Each

The contract unit price for **Hydrant, Rem** shall include all labor, materials and equipment necessary to complete the work. It shall include the following: saw cutting and removing water main, service valve and box, and hydrant; furnishing and placing caps and/or plugs and necessary thrust blocks on the remaining water main ends after the removals are complete; salvaging and storing the old hydrant assembly at a secure location; excavating; disposal of removed materials that are not to be salvaged; temporary sheeting, bracing and shoring of excavations; support of existing pipe lines; and furnishing, placing and properly compacting MDOT Class II granular backfill.

The contract unit price for **Hydrant, Rem** shall also include payment in full for dewatering of normally expected and anticipated conditions through the use of portable trash, submersible or positive displacement pumps.

CITY OF FENTON
SPECIAL PROVISION
FOR
FIRE HYDRANT

OHM:CEL

1 of 2

3/25/26

- a. Description.** This work shall consist of furnishing and installing fire hydrants where called for on the plans or as directed by the Engineer. All work shall be performed in accordance with current City Water Main Details and Specifications included in the plans, 2020 MDOT Standard Specifications for Construction and MDOT Standard Plans, except as modified herein and elsewhere in the contract documents.
- b. Materials.** Fire hydrants shall be in accordance with the current edition of AWWA C502, the Owner's requirements, and FHWA's statutory provisions for Buy America, found in Title 23 United States Code, Section 313. Drain holes shall be plugged and watertight.

All hydrants shall be E.J.I.W. #5BR-250-Traffic Model and shall conform to AWWA Spec. C-502 as amended, and shall have a minimum 5 1/4" valve opening that closes with the water pressure. Hydrants shall be traffic style with breakable flange and coupling.

Hydrants shall have a swivel flange to allow bonnet to be turned 360 degrees without removing the bonnet, and barrel flanges shall be integrally cast with the barrel. Inlet shoe shall have a bronze valve seat, which can be removed without digging.

Inlet connection shall be 6" mechanical joint, ASA-A21-11. Stem threads shall be sealed with double "O" rings and shall be permanently lubricated with all weather grease.

Hose connections: Two (2) 4 1/2" pumper nozzles, one (1) with Harrington Integral Hydrant Storz nozzle and one (1) with City of Detroit Fire Department (DFD) threads. The Storz nozzle shall have a brass metal face seal and hard anodized aluminum Storz ramps and lugs. The aluminum's finish shall be hardcoat anodized to Mil-A-8625f, Type 3 dark gray. The adapter shall be made of forged or extruded 6061-T6 aluminum. The blind cap shall have hard anodized aluminum Storz ramps and lugs, made of forged or extruded 6061-T6 aluminum. The center cap shall be equipped with a suction seal. The cap shall be connected to the adapter or the hydrant with a 0.125" vinyl coated aircraft cable.

Operating Nut: (1) 1 1/2" P-F pentagon, open left. 5.5' cover or specified on plans. A suitable nozzle lock shall be in place to prevent inadvertent nozzle removal. Wedge locks and/or ductile iron retainer rings to secure nozzles shall not be allowed.

Hydrants shall be painted red above the ground and black below, with a finish coat of Glamortex 501 enamel, color 314 vermilion, or approved equal. Top flange shall be painted with JDL Industries (305) 599-2022, Bright White Reflective paint, color No.1460 or taped with 3M Scotchlite High Intensity Reflective Tape #3870. Nozzle cap shall be painted Fire Dept. requirements: White - 4" mains, Red - 6" mains, Orange - 8" mains, Green - 12" mains, Blue - 16" or larger mains. DO NOT paint Storz nozzle.

If hydrants are furnished with drain outlets, the outlets shall be left unplugged.

Hydrants shall be set such that grade ring is 0.1 foot above finished grade at the hydrant base.

Retainer glands are to conform to series 1100 "megalug" type fittings. Twist-off nuts shall be used to insure proper actuating of the restraining devices. All fittings shall be approved by the City Engineer prior to placement. All fittings shall conform to the current revisions of AWWA C153.

All hydrants shall be painted and are to be 5'-6" bury unless otherwise specified.

- c. **Construction Methods.** Hydrants shall be carefully examined, cleaned and placed in a true vertical position and shall be located as shown on the plans, but in any case shall be located as to be convenient for access and to avoid obstruction to traffic. When placed between the sidewalk and the curb, the hydrant barrel shall be set so that no portion of the nozzle caps shall be located closer than 18 inches from the gutter face of the curb.

The ground shall be excavated to a depth of at least 12" below the hydrant base and over an area of approximately 9 square feet. The excavation shall be backfilled with clean coarse gravel or crushed stone up to the elevation of the hydrant base and compacted. After the joint has been made, adequate thrust blocking shall be placed on the side opposite the branch connection from the hydrant to the solid undisturbed earth of the excavation wall, keeping below the hydrant drain. After the thrust block has been placed, an additional 12" lift of gravel shall be spread and tamped around the hydrant.

In such cases where a hydrant extension is necessary to bring the hydrant to the proper grade, the Contractor shall provide the materials necessary to properly perform the extension. Labor and equipment necessary to perform hydrant extensions is incidental to this item.

Hydrant Testing - Each hydrant and lead shall be tested by the Contractor in conjunction with the constructed water mains in accordance with the testing requirements of the City.

- d. **Measurement and Payment.** The completed work as measured for "Fire Hydrant" will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Fire Hydrant.....	Each

The contract unit price shall be payment in full for all labor, materials and equipment necessary to construct the Fire Hydrant complete as shown on the plan details. Payment for Fire Hydrants shall include the following (except such items for which separate prices are received on the bid form): excavating; disposal of unsuitable or excess excavated materials; temporary sheeting, bracing and shoring of excavations; support, relocation, replacement, connection or reconnection of existing pipe lines, and utilities; furnishing and placing the fire hydrant, water main pipe, jointing materials, restrained joints, companion shut off valve and box, fittings, plugs, and thrust blocks; cleaning; furnishing and placing of required bedding, backfill and fill materials; complete cleanup and surface restoration.

The fire hydrant work shall include the hydrant, 6-inch diameter ductile iron pipe, 6-inch gate valve and box, and additional pipe, bends and fittings to place it at the specified location and depth.

The contract unit price shall also include payment in full for dewatering of excavation.

CITY OF FENTON
SPECIAL PROVISION
FOR
GATE VALVE AND WELL, _ INCH

OHM:ARP

1 of 3

3/25/26

a. Description. This work shall consist of furnishing and installing valves and wells for the proposed water main. All work shall be performed in accordance with current City Water Main Details and Specifications included in the plans, 2020 MDOT Standard Specifications for Construction and MDOT Standard Plans, except as modified herein and elsewhere in the contract documents.

b. Materials.

Gate Valves

Gate Valves be manufactured in conformance with requirements of AWWA Standard C500, C509, C515 latest revised editions, and FHWA's statutory provisions for Buy America, found in Title 23 United States Code, Section 313.

Gate valves shall be ductile iron body and bonnet, fully bronze mounted, E.J.I.W. resilient wedge valves with non-rising stems opening counterclockwise. Valves shall be arranged with two-inch square nuts tapering to 1-15/16-inch square at the top for key operation. The body, bonnet and seal plate shall be fusion bonded epoxy coated surfaces inside and out per AWWA C550 & NSF 61. The body, bonnet, seal plate and wedge shall be ductile iron that meets or exceeds ASTM A536. The wedge shall be a fully encapsulated ductile iron wedge that meets or exceeds ASTM D429. All bolts used in the gate valve assembly shall be stainless steel.

All gate valves with operating nuts at a distance greater than 5' below ground surface shall be provided with an extension stem. The length of the extension shall be such that it will be within 5' of ground surface when an extension stem is used. It shall be held in place by two extension stem guide assemblies. Each assembly shall be comprised of a "J" bracket and "L" bracket supplied by EJIW. The stem guides shall be located opposite from each other, and shall be suitably fastened to the wall of the gate well. In addition, a "stop" shall be welded to the extension stem in a location that will prevent the extension stem from slipping off the operating nut. Details of extension stem and method of installation shall be approved by the engineer prior to installation.

Valve Wells

Valve wells shall be constructed of reinforced concrete sections in accordance with the City Standard Water Main Details included in plans. All water valves are to be placed in a valve well unless otherwise shown on the plans or directed by the Engineer.

All pre cast concrete gate well sections shall be manufactured to conform with ASTM C478, standard specifications for precast reinforced concrete manhole sections, except wall thickness shall be as shown on these details. All joints for precast concrete gate well sections shall be "modified grooved tongue" with gasket manufactured to conform with ASTM C443, standard specification for joints for circular concrete sewer and culvert pipe using rubber gaskets. Base slab for structures shall be precast reinforced concrete, ASTM C478. When approved by the Engineer, poured-in-place concrete may be used. Base slab shall conform to the Detail Drawings.

Manhole steps shall be reinforced polypropylene plastic No. PS- 2PFS as manufactured by M.A. Industries, Inc. of Peachtree, GA, cast iron No. 8500 as manufactured by East Jordan Iron Works, or approved equal. Grade rings shall conform to ASTM C478 and shall have a minimum thickness of three (3) inches. Brick shall conform to MDOT Specification 913 (concrete bricks). Mortar for use in sewer structures shall conform to MDOT Specification 702, Type R-2. Concrete for poured in place construction and blocks shall be of the grade 30P called for on the plans and shall conform to MDOT Specification.

All valve wells shall have an East Jordan Iron Works model 1040 frame as approved by the Engineer. All valve well covers in pavement shall receive a **Grade 3500 concrete collar** larger than the 1040 frame as detailed in the Plans.

Pipe openings shall be flexible rubber joints such as Press Wedge II, Res-Seal, Link-Seal or Kor-N-Seal. All openings for pipe shall be fabricated at the time of manufacture. No valve wells will be accepted where openings have been made in precast units at the site of the works.

Corporation stops shall be provided within valve wells as shown on the City Standard Water Main Details and in the installation plans. Corporation stops shall be 1-inch and shall comply with City specifications and details included in the installation plans.

All fittings shall be mechanical joint type conforming to series 1100 "MEGALUG" Type fittings. Twist-off nuts shall be used to insure proper actuating of the restraining devices.

MDOT Class II granular material shall be used as backfill and shall meet the requirements of Section 902 of the 2020 MDOT Standard Specifications for Construction.

- c. **Construction Methods.** The Contractor shall construct water valves and wells where called for on the plans or as directed by the Engineer in accordance with these contract documents. Upon excavating to place the valve well base, the Contractor shall compact the earth grade to receive the base. The Contractor may use MDOT 6A stone to level the base, provided that it is compacted. The base and subsequent structure must be level and placed to a true vertical position. Upon installing the water main and making the necessary connections, the Contractor shall backfill the excavation with MDOT Class II granular material, compacted to at least 95% of its maximum unit weight. The material shall be placed in maximum 12-inch lifts or as directed by the Engineer.

Upon installing the water valve and well, whether in a new or existing water main, it may be necessary to install a cutting-in sleeve or other fittings to provide main separation until the new water main is properly tested and ready to place in service. This work, including the addition of a corporation(s) and jumper connection to fill and flush the main will be considered in this pay item and will not be paid for separately.

- d. **Measurement and Payment.** The completed work as measured for Gate Valve and Well will be paid for at the contract unit price for the following contract items (pay items):

<u>Pay Item</u>	<u>Pay Unit</u>
Gate Valve and Well, _ inch	Each

The contract unit price for **Gate Valve and Well, _ inch** shall be payment in full for all labor, materials, and equipment necessary to construct the valves and valve wells as shown on the plans

and as specified. Payment shall include the following: furnishing and placing of valve, fittings, joint restraint, jointing materials, bulkheads, corporation stops, and plugs; connections to water main; cleaning; testing; and complete cleanup. Payment shall also include the following: excavating; disposal of unsuitable or excess excavated materials; temporary sheeting, bracing and shoring of excavations; support, relocation, replacement, connection or reconnection of existing pipe lines, and utilities; furnishing and placing of well, jointing materials, steps, and frames and covers; cleaning; furnishing and placing of required bedding, backfill and fill materials

Payment for **Gate Valve and Well, _ inch** shall also include payment in full for dewatering of normally expected and anticipated conditions through the use of portable trash, submersible or positive displacement pumps.

CITY OF FENTON
SPECIAL PROVISION
FOR
GATE WELL, REM

OHM:ARP

1 of 1

3/25/26

- a. Description.** This work shall consist of removing gate well structures from existing water mains where shown on the plans or as directed by the Engineer. All work shall be performed in accordance with current City Water Main Details and Specifications included in the plans, 2020 MDOT Standard Specifications for Construction and MDOT Standard Plans, except as modified herein and elsewhere in the contract documents.
- b. Materials.** MDOT Class II granular material shall be used as backfill and shall meet the requirements of Section 902 of the 2020 MDOT Standard Specifications for Construction.
- c. Construction Methods.** The Contractor shall remove the entire structure, including, but not limited to the casting and cover, portions of water main and valve that is located within the required excavation. The capping of the adjacent water mains and installation of thrust blocks, where required will be paid for as separate contract pay items. The Contractor shall carefully salvage the valve and transport it to the City’s Utility Yard for their sole use.

The Contractor shall backfill the resulting excavation with MDOT Class II granular material, compacted to at least 95% of its maximum unit weight. The material shall be placed in maximum 12-inch lifts or as directed by the Engineer. The removal and replacement of surface materials (such as, but not limited to HMA, concrete, etc.) that are required as part of the work, will be covered by separate contract pay items as included in the Bid Form.

- d. Measurement and Payment.** The completed work as measured for “Gate Well, Rem” will be paid for at the contract unit price for the following contract item (pay item):

<u>Pay Item</u>	<u>Pay Unit</u>
Gate Well, Rem.....	Each

The contract unit price for **Gate Well, Rem** shall include all labor, materials, and equipment necessary to complete the work. It shall include the following: saw cutting and removing the entire structure, including the casting and cover, affected water main and valve; salvaging valve and storing onsite in a secure location; excavating; disposal of removed materials that are not to be salvaged; temporary sheeting, bracing and shoring of excavations; support of existing pipe lines; furnishing, placing and properly compacting MDOT Class II granular backfill, and cleanup and surface restoration. The contract unit price shall include any water main removal within five feet of the gate well structure.

The contract unit price for **Gate Well, Rem** shall also include payment in full for dewatering of normally expected and anticipated conditions through the use of portable trash, submersible or positive displacement pumps.

CITY OF FENTON
SPECIAL PROVISION
FOR
WATER SERVICES

OHM:CEL

1 of 2

3/25/26

- a. Description.** This work shall consist of furnishing and installing water services including the abandonment, capping, or removal of old services, and the removal and installation of new curb stop and box. All work shall be performed in accordance with current City Standard Water Main Details and Specifications included in the plans, 2020 MDOT Standard Specifications for Construction, and MDOT Standard Plans, except as modified herein and elsewhere in the contract documents.
- b. Materials.** Pipe for water services shall be new Type K Copper of the size specified within the project and shall adhere to the FHWA's statutory provisions for Buy America, found in Title 23 United States Code, Section 313.

All curb stops shall be in accordance with current City Standard Water Main Details and Specifications. Curb stop box shall be an arch pattern including support, base, lid, and 42" rod with stainless steel cotter pin. The curb stop shall adhere to the FHWA's statutory provisions for Buy America, found in Title 23 United States Code, Section 313.

When joining new copper services to existing services the Contractor shall use Mueller H-15400 Copper Flare Connections or Engineer approved corporation stops with flared connections.

Tracer wire and poly wrap shall be run and secured on the pipe and appurtenances per the City Standard provided in the plans.

MDOT Class II granular material shall be used as backfill and shall meet the requirements of Section 902 of the 2020 MDOT Standard Specifications for Construction.

- c. Construction Methods.** The Contractor shall verify the location of the water service with the Engineer prior to placement. If the existing service is constructed of copper it may be reused, subject to having to be lengthened or shortened as required based on the position of the new water main. If the service is constructed of materials other than copper and lead, the services will be replaced in copper to the right-of-way line. If a lead service is encountered, the requirements of the Lead and Copper Rule (LCR) by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) shall be followed.

The Contractor may be required to construct segments of new copper services and then temporarily connect them to existing services leads in order to maintain service. The Contractor may be required to terminate a new service at a corporation stop that will be positioned to be resumed later. The Contractor may be required to install 2-inch or 3-inch diameter schedule 40 PVC pipe sleeves to limit future extension.

The Contractor shall verify the location of the curb stop and box with the Engineer prior to placement. In some cases, the new curb stop and box may be placed at a new location. This work will include connecting the new curb stops to existing or proposed copper services. Service boxes may be replaced at the discretion of the Engineer. The work may include removing existing curb stops and/or boxes and properly disposing of them off site. New curb

stops and boxes shall be placed on 21AA stone bedding and backfilled with MDOT Class II granular material compacted to at least 95% of its maximum unit weight.

When curb stop boxes are to be placed in concrete or asphalt surfaces, they shall be placed in a standard hydrant valve box centered in a 2'x2' Grade 3500 concrete collar matching the adjacent pavement depth (6" minimum) as directed by the Engineer. The cost associated with furnishing and installing this specialty application shall be considered incidental to this pay item.

- d. **Measurement and Payment.** The completed work as measured will be paid for at the contract unit price for the following contract items (pay items):

Contract Item (Pay Item)	Pay Unit
Water Serv	Each
Water Serv, Long	Each

Water services including curb stop & boxes shall be measured by each. The contract unit price shall be payment in full for all labor, materials, and equipment necessary to construct the water service.

Payment for Water Services shall include the following: excavating; trenching; disposal of unsuitable or excess excavated materials; temporary sheeting, bracing and shoring of excavations; support, relocation, replacement, connection or reconnection of existing pipe lines, building leads and utilities; furnishing and placing of pipe, jointing materials, fit-tings, plugs, adaptors, joint restraint, corporation stops, water stop boxes, tapping water main, connection to existing services; boring or pulling in place where service is installed under existing pavement; cleaning and testing; sterilization; furnishing and placing of required bedding, backfill and fill materials; complete cleanup and surface restoration.

Payment shall also include the following: Curb boxes, fittings (including reducers to connect to existing pipe), jointing materials, backfill and any necessary bracing or shoring of excavation per City Standard Details and specifications.

Payment for water services shall also include up to 18 inches of trench undercut and backfill with Class II granular material unless otherwise shown in the plan details. If additional undercut is required beyond 18 inches then it shall be paid for separately with the subgrade undercut pay item.

The contract unit price shall also include payment in full for dewatering of excavation as needed to perform the construction.

CITY OF FENTON
SPECIAL PROVISION
FOR
WATER MAIN, ABANDON WITH FLOWABLE FILL

OHM:ARP

1 of 2

3/25/26

- a. Description.** This work shall consist of cutting and plugging the existing water main for the purposes of abandoning the existing water main with pressure grouted flowable fill. All work shall be performed in accordance with current City Standard Water Main Details and Specifications included in the plans, 2020 MDOT Standard Specifications for Construction, and MDOT Standard Plans, except as modified herein and elsewhere in the contract documents.
- b. Materials.** Plugs shall meet the requirements for fittings as described in the water main special provision. MDOT Class II granular material shall be used as backfill and shall meet the requirements of Section 902 of the 2020 MDOT Standard Specifications for Construction. Flowable fill to be used shall be **pressure grouted** and approved by the Engineer.
- c. Construction Methods.** The Contractor shall cut and plug existing water mains that are to be abandoned as defined by the plans and the Engineer. The Contractor will need to assess the locations of this work and revise accordingly based on their construction operations and sequences to properly isolate the existing water main to be abandoned. The work will require excavations, cutting and removing existing water mains, and backfilling the excavation with MDOT Class II granular material compacted to at least 95% of its maximum unit weight.

The Contractor shall not disturb or cut into any existing water main that is in service. When the operation of valves for any existing mains is required, the Contractor shall notify the Engineer a minimum of 3 working days in advance so that the shut off can be coordinated with the City. The Contractor shall notify affected property owners a minimum of 24 hours in advance of water shut offs. The City DPW will operate the valves necessary for shut offs.

Once hydrostatic and bacteriological testing of the water main and appurtenances have passed and the connection of the new water main to the existing water system has been made, pressure grouted flowable filling may commence with Engineer approval. The Contractor shall construct the required thrust block and complete backfill operations.

- d. Measurement and Payment.** The completed work as measured will be paid for at the contract unit price for the following contract items (pay items):

Contract Item (Pay Item)	Pay Unit
Water Main, Abandon with Flowable Fill	Lump Sum

The contract unit price shall be payment in full for all labor, materials, and equipment necessary to cut and plug the existing water main and abandon it with pressure grouted

flowable fill. Payment shall include the following: furnishing and installation of necessary plugs and joint restraints on all open ends of water main to isolate the abandoned water main and the furnishing and installation of materials used for filling of water main such as pressure grouted flowable fill, blow-offs, risers, ball valves, etc. Any excavation necessary to place the plugs as well as furnishing, placing, and compacting of MDOT Class II granular material backfill to a minimum of 95% of the maximum unit weight shall be considered incidental. Removal of water main and appurtenances shall be paid for separately.

The contract unit price shall also include payment in full for dewatering of excavation as needed to perform the construction.

CITY OF FENTON
SPECIAL PROVISION
FOR
AUDIO VIDEO ROUTE SURVEY

OHM:ARP

1 of 4

3/25/26

a. Description. This work shall consist of conducting an Audio Video Route Survey of the project site. This work shall be done in accordance with this special provision.

b. Materials.

1. Equipment. All equipment, accessories, and materials necessary to perform this service shall be furnished by the CONTRACTOR and the digital recording firm, except for the plans of the proposed area to be digitally recorded which are to be furnished by the ENGINEER. The CONTRACTOR shall be responsible for providing any temporary warning signs or barricades if required during the digital recording operations. Digital recordings shall be on high-quality DVDs for lossless picture quality, suitable for playback on standard home DVD player as well as a DVD ROM drive.

In some instances, digitally recorded coverage may not be suitable for recording necessary details. In such instances, the ENGINEER may specify digital still photographs to provide coverage. Digital photography must be used and the firm shall provide a CD of all images. A suitable labeling system and description of the location of the photograph shall accompany the photographs in PDF form on the CD with the digital photographs.

2. Digital Recording. Each DVD shall begin with the current date, project name, and municipality as well as the general location or station, name of the street, viewing side, and direction of progress. Houses and buildings shall be identified by address.

When conventional wheeled vehicles are used, the distance from camera lens to the ground shall not be less than ten (10) feet to insure proper perspective.

In some instances, digitally recorded coverage will be required in areas that are not accessible by conventional wheeled vehicles. Such coverage shall be obtained by walking or special conveyance approved by the ENGINEER.

The Engineering stationing numbers shall be continuous and accurate and shall correspond to the project stationing within the field of view. Standard Engineering symbols (for example, 14 + 84) shall appear in the upper left of the viewing screen.

Beneath the Engineering stationing, periodic transparent alphanumeric information consisting of the project name, location, direction of travel, viewing side, etc., shall appear.

Global Positioning System Satellites may be used in place of or in addition to Engineering stationing numbers where available. The global positioning system shall provide updates at one (1) per second and have an accuracy of fifteen (15) feet or less

spherical accuracy. The GPS coordinate display will be at three (3) feet longitude and three (3) feet latitude. (example: 3000N423 9456W294)

To preclude the possibility of tampering or editing in any manner, all digital recordings shall, by electronic means, display continuously and simultaneously generated transparent digital information to include the date and time of recording, as well as corresponding GPS coordinates and/or Engineering stationing numbers. The date information will contain the month, day and year (for example, 10/5/06) and be placed directly below the time information. The time information shall consist of hours, minutes and seconds separated by colons (for example 10:35:18). This transparent information shall appear on the extreme upper left-hand of the screen.

3. Digital Video Tracks. Digital recordings shall consist of one (1) video and two (2) audio tracks, all of which must be recorded simultaneously. All tracks shall consist of original live recordings and thus shall not be copies of other audio or digital video recordings. Audio track one (1) shall contain the narrative commentary of the camera technician and shall be recorded simultaneously with his fixed elevation video record of the area of construction. Audio track two (2) shall contain the narrative commentary and evaluations of the ground level remote technician whose function shall be to provide a complete circumspedition of any features that are not adequately visible to the camera technician. In order to maintain viewer orientation, transition from a fixed camera overview to a remote camera picture shall be accomplished by means of an electronic dissolve.
4. Lighting Requirements. In order to produce proper detail and perspective, adequate lighting will be required to fill in the shadow areas caused by trees, utility poles, road signs and other such objects.

For interior and exterior surfaces of existing buildings, video lighting must be sufficient to provide shadowless light to enable all objects to be distinctive and clearly video taped with correct detail in order to obtain proper perspective. The CONTRACTOR shall provide all power required for lighting.

5. Digital Video Coverage.

Construction Zone. Digital video coverage shall include all surface features located within the zone of influence of construction and shall be supported by appropriate audio description. Such coverage shall include, but not be limited to, public right-of-way, easement areas, adjacent private property, all existing driveways, sidewalks, curbs, ditches, roadways, landscaping, trees, shrubs, fences, culverts, headwalls, retaining walls, and buildings located within such zone of influence. Of particular concern shall be the existence of any faults, fractures, or defects.

Houses and buildings shall be identified visually by house number when visible. Manholes or other utility structures shall also be identified.

The rate of travel used during digital recording shall not exceed forty-eight (48) feet per minute. Panning rates and zoom-in/zoom-out rates shall be controlled sufficiently such that stop action during playback will produce clarity of the object viewed.

The ENGINEER shall have the authority to designate areas for which coverage may be added or omitted.

All property being digitally recorded for interior record must have a permanent exterior front view recorded on video displayed in upper right-hand corner of the viewing screen for positive identification of property. This view will be no larger than twenty percent (20%) of the picture area and must begin by showing the address. The camera technician shall pan and zoom in and out as necessary to control the clarity of objects being viewed.

All digital recording shall be done during regular business hours unless otherwise authorized by the ENGINEER or agreed to by an affected property Engineer.

6. Digital Recording Firm Responsibilities. The digital recording firm may televise and record areas within public rights-of-way, along municipal-owned easements, through municipal-owned parks, and municipal buildings. When digital recording is to be done on private property, the digital recording firm shall give the ENGINEER sufficient prior notice so that the property Engineers may be contacted and their permission obtained for the work.

Three (3) attempts must be logged by the camera technician to complete the video project at each location, and a log sheet describing the day, time, and disposition of the contact must be kept.

At no time will the digital recording firm be allowed to use any electrical circuits located inside or outside buildings on private property. The digital recording firm must enter and leave property in a professional and orderly manner.

7. Video Identification and submittal. All DVD (discs and cases) shall be properly identified by DVD number, location, project name, and municipality in a manner that is acceptable to the ENGINEER.

A record of the contents of each DVD shall be supplied by a log sheet that identifies each segment in the digital recording by location, roll number, street or road viewing, DVD counter number, viewing side, starting point, traveling direction, and ending point.

A minimum of three complete sets of DVDs shall be provided upon final approval and acceptance of the videos by the ENGINEER and ENGINEER (one set each for the ENGINEER, ENGINEER, and CONTRACTOR). Additional sets shall be furnished if requested by the ENGINEER.

c. Methods.

1. Scope. Prior to commencing work, the CONTRACTOR shall have a continuous color audio-video digital recording taken along the designated length of the project to serve as a record of existing conditions. All DVD and written records shall become the property of the ENGINEER.

- 2. Firm Background. The CONTRACTOR shall engage the services of a professional digital recording firm that is actively engaged in color audio-video recordings for various municipalities. The firm shall have a minimum of two years experience in audio-video digital recording of construction projects.

The ENGINEER may make such investigation as he deems necessary to determine the ability of the digital recording firm to perform the work. The CONTRACTOR shall furnish the ENGINEER all such information and data for this purpose as the ENGINEER may request. The ENGINEER reserves the right to reject any digital recording firm if the investigation fails to satisfy the ENGINEER that such firm is properly qualified to carry out the work specified herein. Upon rejection of a digital recording firm, the CONTRACTOR shall engage the services of another firm that shall undergo the review and approval process as previously discussed.

- 3. Schedule. All digital recording shall be done during times of good visibility. No recording shall be done during periods of visible precipitation or when more than ten (10) percent of the ground is covered with snow or standing water unless otherwise authorized by the ENGINEER.

Digital recording shall be done prior to placement of materials or equipment in the construction area. DVDs shall be furnished to the ENGINEER at least one week prior to the preconstruction meeting.

No construction shall begin prior to review and approval of the digital video by the ENGINEER.

The ENGINEER shall have authority to reject all or any portion of the digital recording that does not conform to the specifications. Any coverage that is not acceptable to the ENGINEER shall be rerecorded at no additional charge. The CONTRACTOR shall reschedule unacceptable coverage within five (5) days after being notified.

- d. Measurement and Payment.** The completed work as measured for AUDIO VIDEO ROUTE SURVEY will be paid for at the contract lump sum price for the following contract item

<u>Pay Item</u>	<u>Pay Unit</u>
Audio Video Route Survey	Lump Sum

The lump sum price shall be payment in full for all labor, materials, and equipment necessary to prepare the audio video route survey in accordance with the specifications.

Payment shall include the provision of two sets of DVDs containing the complete recordings to the Engineer.

CITY OF FENTON
SPECIAL PROVISION
FOR
CREW DAYS

OHM:ARP

1 of 2

3/25/2026

1. All construction operations will require full time observation by the OWNER's representative. Construction observation is shown in the Bid Form as a bid item on the basis of Crew Days. This item is included in the Bid Form in order to expedite construction and ensure the CONTRACTOR's expedient pursuit of completion of the Contract.
2. The Bid Form lists the unit cost for Crew Days. The CONTRACTOR is directed to fill in the number of days required to complete the project, with any adjustments for the number of crews working, etc. and extend this item.
3. A Crew Day is defined as one technician working eight (8) hours. Additional hours over and above eight (8) hours per day will be charged one-quarter (0.25) of a Crew Day for each two (2) hours or part thereof.
4. The CONTRACTOR shall notify both the ENGINEER and the OWNER a minimum of seventy-two (72) hours prior to any work being performed. If the CONTRACTOR should move off-site for a period of more than two days, excluding weekends and holidays, both the ENGINEER and OWNER shall be notified. The CONTRACTOR shall then notify both the ENGINEER and OWNER a minimum of forty-eight (48) hours prior to returning to the site.
5. If work is stopped due to inclement weather, observation time charged will be for actual time on the job, but not less than four (4) hours. If the work is stopped after 3:00 p.m., the charge for observation will be one Crew Day.
6. If the CONTRACTOR stops work for any reason and fails to notify the ENGINEER's office of such, resulting in the technician being sent to the work site, four (4) hours minimum crew time shall accrue directly to the CONTRACTOR.
7. The cost of show-up time shall be at the CONTRACTOR's expense and shall be deducted from monies owed to the CONTRACTOR. Observation time resulting from the CONTRACTOR's failure to notify the ENGINEER's office shall accrue against the Crew Days bid.
8. Notification shall be given to the technician before the technician leaves the work site the day prior to work stoppage or to the ENGINEER's office before 5:00 p.m. the day prior to the work stoppage.
9. **If more than one technician is required due to working schedule, number of crews, distance of operation, etc., additional technicians will be provided at the stated rate. One crew day is required per technician for each crew. Example: 3 technicians with 3 crews all working on the same day equals 3 crew days.**

10. As Crew Days are used, the costs will be deducted from the item "Crew Day" amount until completion of the Contract via periodic estimates due to the CONTRACTOR. The cost is the number of days used multiplied by the daily rate in the Bid Form.
11. After all the money in the item "Crew Day" is depleted, the incurred observation costs shall be deducted from periodic Contract pay estimates due to the CONTRACTOR.
12. The CONTRACTOR will not be paid for any unused days if a positive balance of days is left in the "Crew Day" item at the end of the project.