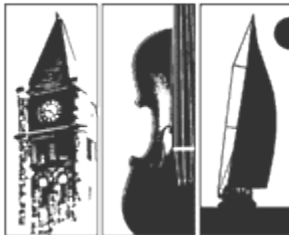


PROJECT MANUAL

CITY OF MUSKEGON
MUSKEGON COUNTY, MI



MUSKEGON

SPLASH PAD RECONSTRUCTION

IN COOPERATION WITH

MICHIGAN DEPARTMENT OF NATURAL RESOURCES
SPARK GRANT PROGRAM – ARPA-0309



April 2024
Project No. 863730



SECTION 00 91 13

ADDENDUM

Addendum No. 3

Owner:	City of Muskegon		
Contract:	Splash Pad Reconstruction		
Project:	Splash Pad Reconstruction	Date:	May 1, 2024
Owner's Contract No.:		Engineer's Project No.:	863730
Engineer:	Fleis & VandenBrink Engineering, Inc.		

NOTICE TO ALL PROSPECTIVE BIDDERS

BIDS DUE: 2:00 pm local time, May 21, 2024, <CHANGED> - ISSUED TO ALL PLANHOLDERS OF RECORD

=====

This Addendum is a part of the Contract Documents and modifies the previously issued Bidding Documents. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may result in rejection of the Bid.

SPECIFICATION CHANGES

ITEM NO. 1:

Section 00 11 13 Advertisement For Bids

The bidding due date TIME has changed to **2:00 pm** local time, May 21, 2024. Everything else remains the same. The revised Advertisement For Bids is attached and is to be incorporated into the bidding documents.

DRAWING CHANGES – Not Used

ATTACHMENTS:

- Section 00 11 13 Advertisement for Bids

END OF SECTION

SECTION 00 11 13

ADVERTISEMENT FOR BIDS

**City of Muskegon
Splash Pad Reconstruction**

City of Muskegon is requesting Bids for the reconstruction of Splash Pad Improvements located at Federal Square. Bids for the construction of the project will be received at the City of Muskegon City Hall located at 933 Terrace St, Muskegon, MI 49440 until **2:00 p.m. local time, May 21, 2024**. At that time the Bids received will be publicly opened and read.

This project consists of construction of splash pad improvements at Federal Square that is located on the west corner of First Street and Western Avenue. Work will include removal of existing concrete pavement, removal of existing water feature system and concrete curb, installing decorative concrete sidewalk, water service, sanitary connection, fountain drain, fountain, water and electrical service, and all associated work.

Prospective Bidders may request the Bidding Documents from the Issuing Office. The Issuing Office of the Bidding Documents is: Fleis & VandenBrink Engineering; email: bidroom@fveng.com Telephone 616.977.1000. Bidding Documents will be emailed in portable document format (PDF) at no charge; hard copy documents are not available. Non-biddable documents may be viewed at the following:

- F&V On-line Bid Room: www.fveng.com/bid-room/

The date the Bidding Documents are transmitted by the Issuing Office will be considered the Bidder's date of receipt of the Bidding Documents.

A pre-bid conference will not be held.

Prevailing wages and Davis Bacon compliance are required as part of this project. Contractors performing work on the project must comply with all requirements of 1976 PA 453 (Elliott-Larsen Civil Rights Act) and 1976 PA 220 (Persons with Disabilities Civil Rights Act), as amended.

For all further requirements regarding bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

Each proposal shall be accompanied by a certified check or Bid Bond by a recognized surety in the amount of five percent (5%) of the Bidder's maximum Bid price in the name of City of Muskegon.

The City of Muskegon reserves the right to accept any bid, reject any or all bids, to waive informalities and make the award in any manner deemed in the best interest of the City of Muskegon.

Ann Meisch
City Clerk

SECTION 00 91 13

ADDENDUM

Addendum No. 2

Owner:	<u>City of Muskegon</u>		
Contract:	<u>Splash Pad Reconstruction</u>		
Project:	<u>Splash Pad Reconstruction</u>	Date:	<u>April 30, 2024</u>
Owner's Contract No.:	<u></u>	Engineer's Project No.:	<u>863730</u>
Engineer:	<u>Fleis & VandenBrink Engineering, Inc.</u>		

NOTICE TO ALL PROSPECTIVE BIDDERS

BIDS DUE: 3:00 pm local time, May 21, 2024 <CHANGED> - ISSUED TO ALL PLANHOLDERS OF RECORD

=====

This Addendum is a part of the Contract Documents and modifies the previously issued Bidding Documents. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may result in rejection of the Bid.

SPECIFICATION CHANGES

ITEM NO. 1:

Section 00 11 13 Advertisement For Bids

The bidding due date has changed to 3:00 pm local time, May 21, 2024. Everything else remains the same. The Revised Advertisement For Bids is attached and is to be incorporated into the bidding documents.

DRAWING CHANGES – Not Used

ATTACHMENTS:

- Section 00 11 13 Advertisement for Bids

END OF SECTION

SECTION 00 11 13

ADVERTISEMENT FOR BIDS

**City of Muskegon
Splash Pad Reconstruction**

City of Muskegon is requesting Bids for the reconstruction of Splash Pad Improvements located at Federal Square. Bids for the construction of the project will be received at the City of Muskegon City Hall located at 933 Terrace St, Muskegon, MI 49440 until **3:00 p.m. local time, May 21, 2024**. At that time the Bids received will be publicly opened and read.

This project consists of construction of splash pad improvements at Federal Square that is located on the west corner of First Street and Western Avenue. Work will include removal of existing concrete pavement, removal of existing water feature system and concrete curb, installing decorative concrete sidewalk, water service, sanitary connection, fountain drain, fountain, water and electrical service, and all associated work.

Prospective Bidders may request the Bidding Documents from the Issuing Office. The Issuing Office of the Bidding Documents is: Fleis & VandenBrink Engineering; email: bidroom@fveng.com Telephone 616.977.1000. Bidding Documents will be emailed in portable document format (PDF) at no charge; hard copy documents are not available. Non-biddable documents may be viewed at the following:

- F&V On-line Bid Room: www.fveng.com/bid-room/

The date the Bidding Documents are transmitted by the Issuing Office will be considered the Bidder's date of receipt of the Bidding Documents.

A pre-bid conference will not be held.

Prevailing wages and Davis Bacon compliance are required as part of this project. Contractors performing work on the project must comply with all requirements of 1976 PA 453 (Elliott-Larsen Civil Rights Act) and 1976 PA 220 (Persons with Disabilities Civil Rights Act), as amended.

For all further requirements regarding bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

Each proposal shall be accompanied by a certified check or Bid Bond by a recognized surety in the amount of five percent (5%) of the Bidder's maximum Bid price in the name of City of Muskegon.

The City of Muskegon reserves the right to accept any bid, reject any or all bids, to waive informalities and make the award in any manner deemed in the best interest of the City of Muskegon.

Ann Meisch
City Clerk

SECTION 00 91 13

ADDENDUM

Addendum No. 1

Owner: City of Muskegon
Contract: Splash Pad Reconstruction
Project: Splash Pad Reconstruction Date: April 17, 2024
Owner's Contract No.: _____ Engineer's Project No.: 863730
Engineer: Fleis & VandenBrink Engineering, Inc.

NOTICE TO ALL PROSPECTIVE BIDDERS

BIDS DUE: 3:00 pm local time, April 30, 2024 -- ISSUED TO ALL PLANHOLDERS OF RECORD

=====

This Addendum is a part of the Contract Documents and modifies the previously issued Bidding Documents. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may result in rejection of the Bid.

SPECIFICATION CHANGES

ITEM NO. 1:

Section: 00 01 10 Table of Contents

Appendix A (Soils Investigation Reports / Soil Boring Logs) and Appendix B (Permits) are to be removed from the Table of Contents. These sections are not relevant to this project and are not being provided.

ITEM NO. 2:

Section: 00 61 13 Performance Bond

This section was mistakenly left out of the original Project Manual and is attached to be included in the bidding documents.

ITEM NO. 3:

Section: 00 61 14 Payment Bond

This section was mistakenly left out of the original Project Manual and is attached to be included in the bidding documents.

DRAWING CHANGES – Not Used

ATTACHMENTS:

- Specification Section 00 61 13 Performance Bond
- Specification Section 00 61 14 Payment Bond

END OF SECTION

SECTION 00 61 13

PERFORMANCE BOND

<p>Contractor</p> <p>Name: [Full formal name of Contractor]</p> <p>Address (<i>principal place of business</i>): [Address of Contractor's principal place of business]</p>	<p>Surety</p> <p>Name: [Full formal name of Surety]</p> <p>Address (<i>principal place of business</i>): [Address of Surety's principal place of business]</p>
<p>Owner</p> <p>Name: [Full formal name of Owner]</p> <p>Mailing address (<i>principal place of business</i>): [Address of Owner's principal place of business]</p>	<p>Contract</p> <p>Description (<i>name and location</i>): [Owner's project/contract name, and location of the project]</p> <p>Contract Price: [Amount from Contract]</p> <p>Effective Date of Contract: [Date from Contract]</p>
<p>Bond</p> <p>Bond Amount: [Amount]</p> <p>Date of Bond: [Date] <i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 16</p>	
<p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.</p>	
Contractor as Principal	Surety
_____ <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 for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
 - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 - 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in

whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
 - 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
 - 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.
12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
14. Definitions
 - 14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
 - 14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
 - 14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
 - 14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

16. Modifications to this Bond are as follows: **[Describe modification or enter “None”]**

SECTION 00 61 14

PAYMENT BOND

<p>Contractor</p> <p>Name: [Full formal name of Contractor]</p> <p>Address <i>(principal place of business)</i>: [Address of Contractor’s principal place of business]</p>	<p>Surety</p> <p>Name: [Full formal name of Surety]</p> <p>Address <i>(principal place of business)</i>: [Address of Surety’s principal place of business]</p>
<p>Owner</p> <p>Name: [Full formal name of Owner]</p> <p>Mailing address <i>(principal place of business)</i>: [Address of Owner’s principal place of business]</p>	<p>Contract</p> <p>Description <i>(name and location)</i>: [Owner’s project/contract name, and location of the project]</p> <p>Contract Price: [Amount, from Contract]</p> <p>Effective Date of Contract: [Date, from Contract]</p>
<p>Bond</p> <p>Bond Amount: [Amount]</p> <p>Date of Bond: [Date]</p> <p><i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form: <input type="checkbox"/> None <input type="checkbox"/> See Paragraph 18</p>	
<p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.</p>	
Contractor as Principal	Surety
<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 to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
 - 5.1. Claimants who do not have a direct contract with the Contractor
 - 5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2. Pay or arrange for payment of any undisputed amounts.
 - 7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

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

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

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ADVERTISEMENT FOR BIDS

**City of Muskegon
Splash Pad Reconstruction**

City of Muskegon is requesting Bids for the reconstruction of Splash Pad Improvements located at Federal Square. Bids for the construction of the project will be received at the City of Muskegon City Hall located at 933 Terrace St, Muskegon, MI 49440 until 3:00 p.m. local time, April 30, 2024. At that time the Bids received will be publicly opened and read.

This project consists of construction of splash pad improvements at Federal Square that is located on the west corner of First Street and Western Avenue. Work will include removal of existing concrete pavement, removal of existing water feature system and concrete curb, installing decorative concrete sidewalk, water service, sanitary connection, fountain drain, fountain, water and electrical service, and all associated work.

Prospective Bidders may request the Bidding Documents from the Issuing Office. The Issuing Office of the Bidding Documents is: Fleis & VandenBrink Engineering; email: bidroom@fveng.com Telephone 616.977.1000. Bidding Documents will be emailed in portable document format (PDF) at no charge; hard copy documents are not available. Non-biddable documents may be viewed at the following:

- F&V On-line Bid Room: www.fveng.com/bid-room/

The date the Bidding Documents are transmitted by the Issuing Office will be considered the Bidder's date of receipt of the Bidding Documents.

A pre-bid conference will not be held.

Prevailing wages and Davis Bacon compliance are required as part of this project. Contractors performing work on the project must comply with all requirements of 1976 PA 453 (Elliott-Larsen Civil Rights Act) and 1976 PA 220 (Persons with Disabilities Civil Rights Act), as amended.

For all further requirements regarding bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

Each proposal shall be accompanied by a certified check or Bid Bond by a recognized surety in the amount of five percent (5%) of the Bidder's maximum Bid price in the name of City of Muskegon.

The City of Muskegon reserves the right to accept any bid, reject any or all bids, to waive informalities and make the award in any manner deemed in the best interest of the City of Muskegon.

Ann Meisch
City Clerk

SECTION 00 21 13

INSTRUCTIONS TO BIDDERS

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.
 - B. *Plan Holders* – Entities that obtain Bidding Documents from the Issuing Office.

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 may establish a Bidding Documents Website as indicated in the Advertisement or invitation to bid. Owner requires that Bidder register as a plan holder with the Issuing Office at such website, and obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are complete, unless an omission is blatant. Registered Plan Holders will receive Addenda issued by Owner.
- 2.04 Bidders registered as a plan holder can 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.
- 2.05 Plan rooms (including construction information subscription services, and electronic and virtual plan rooms) will make the Bidding Documents available for examination. Those prospective bidders that obtain an electronic (digital) copy of the Bidding Documents from a plan room are required to register as Plan Holders from the Bidding Documents Website or Issuing Office. Owner is not responsible for omissions in Bidding Documents or other documents obtained from plan rooms, or for a Bidder's failure to obtain Addenda from a plan room.

2.06 *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 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, after submitting its Bid and within five days of Owner's request, Bidder must submit the following information:
 - A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.
 - B. A written statement that Bidder is authorized to do business in the state where the Project is located, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.
 - C. Bidder's state or other contractor license number, if applicable.
 - D. Subcontractor and Supplier qualification information.
 - E. Other required information regarding qualifications.
- 3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.03 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.
 - d. Technical Data contained in such reports and drawings.
 - 2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
 - 3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.
 - 4. *Geotechnical Baseline Report/Geotechnical Data Report*: The Bidding Documents contain a Geotechnical Baseline Report (GBR) and Geotechnical Data Report (GDR).
 - a. As set forth in the Supplementary Conditions, the GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations ("Baseline Conditions"). The GBR is a Contract Document.
 - b. The Baseline Conditions in the GBR 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 GBR, all other Contract Documents, Technical Data, other available information, and observable surface conditions. Not all potential subsurface conditions are baselined.
 - c. Nothing in the GBR 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 GDR is a Contract Document containing data prepared by or for the Owner in support of the GBR.

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

5.03 *Other Site-related Documents*

- A. In addition to the documents regarding existing Site conditions referred to in Paragraph 5.02.A, record drawings at or adjacent to the Site are known to Owner and made available to Bidders for reference. Owner will make copies of these other Site-related documents available to any Bidder on request.
- B. Owner has not verified the contents of these other Site-related documents, and Bidder may not rely on the accuracy of any data or information in such documents. Bidder is responsible for any interpretation or conclusion Bidder draws from the other Site-related documents.
- C. The other Site-related documents are not part of the Contract Documents.
- D. Bidders are encouraged to review the other Site-related documents, but Bidders will not be held accountable for any data or information in such documents. The requirement to review and take responsibility for documentary Site information is limited to information in (1) the Contract Documents and (2) the Technical Data.
- E. No other Site-related documents are available.

5.04 *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. If a pre-bid conference is held, a Site visit may be held immediately following the conference.
- C. Bidder may conduct a Site visit on publicly available lands at Bidders convenience.
- D. Bidder may request a Site visit on private property and restricted areas during normal working hours.
- E. Bidders visiting the Site are required to arrange their own transportation to the Site.
- F. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- G. 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.

- H. 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.
- I. 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.

5.05 *Owner's Safety Program*

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

5.06 *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 5% of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 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 91 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid 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, and those "or-equal" or substitute or materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an "or-equal" or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer within 10 days of the issuance of the Advertisement for Bids or invitation to Bidders. Each such request must comply with the requirements of Paragraphs 7.05 and 7.06 of the General Conditions, and the review of the request will be governed by the principles in those paragraphs. The burden of proof of the merit of the proposed item is upon Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all registered Bidders. Bidders cannot rely upon approvals made in any other manner.
- 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 If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder will submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.
- 11.03 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.07 of the General Conditions.

ARTICLE 12 - PREPARATION OF BID

- 12.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must 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.
- B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."
- 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.
- 12.12 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder's state contractor license number, if any, must also be shown on the Bid Form.

ARTICLE 13 - BASIS OF BID

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.

ARTICLE 14 - SUBMITTAL OF BID

- 14.01 The Bidding Documents include the Bid Form, and, if required, the Bid Bond Form. The Bid Form is to be printed, 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 a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 15.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

ARTICLE 16 - OPENING OF BID

- 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.
- 18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.

- 18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.
- 18.05 *Evaluation of Bids*
- A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- B. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.
- 18.06 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 18.07 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 19 - BONDS AND INSURANCE

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

ARTICLE 20 - SIGNING OF THE 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.

END OF SECTION

SECTION 00 41 00

BID FORM

ARTICLE 1 - OWNER & BIDDER

- 1.01 This Bid is submitted to: City of Muskegon
933 Terrace Street
Muskegon, MI 49440
- 1.02 Name of Project: Splash Pad Reconstruction
ARPA Grant No. 0309
- 1.03 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - ATTACHMENTS TO THIS BID

- 2.01 The following documents are submitted with and made a condition of this Bid.
- A. Required Bid security;
 - B. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;
 - C. Contractor's license number as evidence of Bidder's State Contractor's License or a covenant by Bidder to obtain said license within the time for acceptance of Bids;

ARTICLE 3 - BASIS OF BID

- 3.01 *Unit Price Bids*
- A. Bidder will perform the following Work at the indicated unit prices:

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
1	General Conditions, Bonds, and Insurance, Max 5%	LSUM	1		
2	Soil Erosion Control	LSUM	1		
3	Site Preparation & Grading	LSUM	1		
4	Removals	LSUM	1		
5	4" Dia. Sanitary Lateral	FT	20		
6	6" Dia. Sanitary Lateral	FT	20		
7	Water Service	LSUM	1		
8	6" Planter Curb	FT	32		
9	Conc. Sidewalk, Integral Color A, w/ sand cast finish	SFT	620		

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
10	Conc. Sidewalk, Integral Color B	SFT	120		
11	Conc. Sidewalk, Integral Color C	SFT	460		
12	Conc. Sidewalk, Micro Top Finish	SFT	440		
13	Splash Pad Installation	LSUM	1		
14	Electrical Service	LSUM	1		
15	Surface Restoration	LSUM	1		
Total of All Unit Price Bid Items				\$	

B. 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 and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 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

5.04 *Subcontractor and Supplier List:*

A. Bid is submitted on the basis of the use of the following Subcontractors

WORK ITEM	FIRM	CITY
Concrete Work		
Splash Pad Components		
Plumbing		
Electrical		
Surface Restoration		

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.

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 8.02.A:
 - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
 - b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
 - c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
 - d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

BIDDER hereby submits this Bid as set forth above:

Bidder: _____
(typed or printed name of organization)

By: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

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

Attest: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

Address for giving notices:

Bidder's Contact:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Phone: _____

Email: _____

Address: _____

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

END OF SECTION

Not For Bid

SECTION 00 43 13

BID BOND

<p>Bidder Name: [Full formal name of Bidder] Address (<i>principal place of business</i>): [Address of Bidder's principal place of business]</p>	<p>Surety Name: [Full formal name of Surety] Address (<i>principal place of business</i>): [Address of Surety's principal place of business]</p>
<p>Owner Name: [Full formal name of Owner] Address (<i>principal place of business</i>): [Address of Owner's principal place of business]</p>	<p>Bid Project (<i>name and location</i>): [Owner project/contract name, and location of the project] Bid Due Date: [Enter date bid is due]</p>
<p>Bond Penal Sum: [Amount] Date of Bond: [Date]</p>	
<p>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.</p>	
<p>Bidder</p>	<p>Surety</p>
<p align="center"><i>(Full formal name of Bidder)</i></p>	<p align="center"><i>(Full formal name of Surety) (corporate seal)</i></p>
<p>By: _____ <i>(Signature)</i></p>	<p>By: _____ <i>(Signature) (Attach Power of Attorney)</i></p>
<p>Name: _____ <i>(Printed or typed)</i></p>	<p>Name: _____ <i>(Printed or typed)</i></p>
<p>Title: _____</p>	<p>Title: _____</p>
<p>Attest: _____ <i>(Signature)</i></p>	<p>Attest: _____ <i>(Signature)</i></p>
<p>Name: _____ <i>(Printed or typed)</i></p>	<p>Name: _____ <i>(Printed or typed)</i></p>
<p>Title: _____</p>	<p>Title: _____</p>
<p><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></p>	

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.

SECTION 00 45 46

GOVERNMENTAL CERTIFICATIONS AND DOCUMENTS

PART 1 - GENERAL

1.01 SUMMARY:

- A. This Section provides for inclusion of various governmental certifications and forms into the Contract Documents.

1.02 Michigan Department of Natural Resources Natural Resources Trust Fund Grant Program Requirements are as follows:

- A. The contractor and all subcontractors must comply with all requirements of 1976 PA 453 (Elliott Larsen Civil Rights Act), the 1976 PA 220 (Persons with Disabilities Civil Rights Act), and Executive Directive 201909, as amended. In accordance with these laws, all contracts the grantee enters into must contain a covenant by the contractor and any subcontractors not to discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, marital status, partisan considerations, or a disability or genetic information that is unrelated to the individual's ability to perform the duties of a particular job or position.
- B. The State of Michigan has a number of laws pertaining to the rights of persons with disabilities and the requirements for barrier-free construction of buildings and other facilities, including the Persons with Disabilities Civil Rights Act (1976 PA 220, as amended); the Utilization of Public Facilities by Physically Limited Act (1966 PA 1, as amended) and the Sidewalks; Persons with Disabilities Act (1973 PA 8, as amended).
- C. Awards cannot be made to a contract or subcontract to an employer whose name appears in the Michigan Debarred Vendor List or Federal Debarred Vendor List compiled by the Michigan Department of Technology, Management and Budget pursuant to Sections 261 and 264, MCL 18.261 and 18.264, 1980 PA 278 (State Contracts with Certain Employers Prohibited). Awards cannot be made to a contractor or subcontract to a supplier who appears on the Unfair Labor Practice Register.
- D. Federal Davis-Bacon Wage Rates- Grant funding provided with American Rescue Plan Act (ARPA) funds and compliance with the federal Davis-Bacon Act (40 USC 276a to 276a-7) is required.
- E. For all work, relevant state or federal requirements shall apply.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SECTION 00 45 46

GOVERNMENTAL CERTIFICATIONS AND DOCUMENTS

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- B. The State of Michigan has a number of laws pertaining to the rights of persons with disabilities and the requirements for barrier-free construction of buildings and other facilities, including the Persons with Disabilities Civil Rights Act (1976 PA 220, as amended); the Utilization of Public Facilities by Physically Limited Act (1966 PA 1, as amended) and the Sidewalks; Persons with Disabilities Act (1973 PA 8, as amended).
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- D. Federal Davis-Bacon Wage Rates- Grant funding provided with American Rescue Plan Act (ARPA) funds and compliance with the federal Davis-Bacon Act (40 USC 276a to 276a-7) is required.
- E. For all work, relevant state or federal requirements shall apply.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SECTION 3 CLAUSE

All Section 3 covered contracts shall include the following clause (referred to as the "Section 3 Clause"):

A. The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). The purpose of Section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by Section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

B. The parties to this contract agree to comply with HUD's regulations in 24 CFR Part 135, which implement Section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.

C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this Section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

D. The contractor agrees to include this Section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this Section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR Part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR Part 135.

E. The contractor will certify that any vacant employment positions, including training positions that are filled (1) after the contractor is selected by before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.

F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

G. With respect to work performed in connection with Section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of Section 3 and Section 7(b) agree to comply with Section 3 to the maximum extent feasible, but not in derogation of compliance with Section 7(b).

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) Minimum Wages. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section I(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

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

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

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

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

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

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

of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

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

communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i) except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

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

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

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

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

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A.3.(ii)(b).

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

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

4. Apprentices and Trainees.

(i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who

is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by

the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

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

6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

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

8. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract

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

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

awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1 01 0, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration..... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable where the amount of the prime contract exceeds \$100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

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

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

C. Health and Safety. The provisions of this paragraph C are applicable where the amount of the prime contract exceeds \$100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96). 40 USC 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

Equal Employment Opportunity is **THE LAW**

Private Employers, State and Local Governments, Educational Institutions, Employment Agencies and Labor Organizations

Applicants to and employees of most private employers, state and local governments, educational institutions, employment agencies and labor organizations are protected under Federal law from discrimination on the following bases:

RACE, COLOR, RELIGION, SEX, NATIONAL ORIGIN

Title VII of the Civil Rights Act of 1964, as amended, protects applicants and employees from discrimination in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment, on the basis of race, color, religion, sex (including pregnancy), or national origin. Religious discrimination includes failing to reasonably accommodate an employee's religious practices where the accommodation does not impose undue hardship.

DISABILITY

Title I and Title V of the Americans with Disabilities Act of 1990, as amended, protect qualified individuals from discrimination on the basis of disability in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment. Disability discrimination includes not making reasonable accommodation to the known physical or mental limitations of an otherwise qualified individual with a disability who is an applicant or employee, barring undue hardship.

AGE

The Age Discrimination in Employment Act of 1967, as amended, protects applicants and employees 40 years of age or older from discrimination based on age in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment.

SEX (WAGES)

In addition to sex discrimination prohibited by Title VII of the Civil Rights Act, as amended, the Equal Pay Act of 1963, as amended, prohibits sex discrimination in the payment of wages to women and men performing substantially equal work, in jobs that require equal skill, effort, and responsibility, under similar working conditions, in the same establishment.

GENETICS

Title II of the Genetic Information Nondiscrimination Act of 2008 protects applicants and employees from discrimination based on genetic information in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment. GINA also restricts employers' acquisition of genetic information and strictly limits disclosure of genetic information. Genetic information includes information about genetic tests of applicants, employees, or their family members; the manifestation of diseases or disorders in family members (family medical history); and requests for or receipt of genetic services by applicants, employees, or their family members.

RETALIATION

All of these Federal laws prohibit covered entities from retaliating against a person who files a charge of discrimination, participates in a discrimination proceeding, or otherwise opposes an unlawful employment practice.

WHAT TO DO IF YOU BELIEVE DISCRIMINATION HAS OCCURRED

There are strict time limits for filing charges of employment discrimination. To preserve the ability of EEOC to act on your behalf and to protect your right to file a private lawsuit, should you ultimately need to, you should contact EEOC promptly when discrimination is suspected:

The U.S. Equal Employment Opportunity Commission (EEOC), 1-800-669-4000 (toll-free) or 1-800-669-6820 (toll-free TTY number for individuals with hearing impairments). EEOC field office information is available at www.eeoc.gov or in most telephone directories in the U.S. Government or Federal Government section. Additional information about EEOC, including information about charge filing, is available at www.eeoc.gov.

Employers Holding Federal Contracts or Subcontracts

Applicants to and employees of companies with a Federal government contract or subcontract are protected under Federal law from discrimination on the following bases:

RACE, COLOR, RELIGION, SEX, NATIONAL ORIGIN

Executive Order 11246, as amended, prohibits job discrimination on the basis of race, color, religion, sex or national origin, and requires affirmative action to ensure equality of opportunity in all aspects of employment.

INDIVIDUALS WITH DISABILITIES

Section 503 of the Rehabilitation Act of 1973, as amended, protects qualified individuals from discrimination on the basis of disability in hiring, promotion, discharge, pay, fringe benefits, job training, classification, referral, and other aspects of employment. Disability discrimination includes not making reasonable accommodation to the known physical or mental limitations of an otherwise qualified individual with a disability who is an applicant or employee, barring undue hardship. Section 503 also requires that Federal contractors take affirmative action to employ and advance in employment qualified individuals with disabilities at all levels of employment, including the executive level.

DISABLED, RECENTLY SEPARATED, OTHER PROTECTED, AND ARMED FORCES SERVICE MEDAL VETERANS

The Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, 38 U.S.C. 4212, prohibits job discrimination and requires affirmative action to employ and advance in employment disabled veterans, recently separated veterans (within

three years of discharge or release from active duty), other protected veterans (veterans who served during a war or in a campaign or expedition for which a campaign badge has been authorized), and Armed Forces service medal veterans (veterans who, while on active duty, participated in a U.S. military operation for which an Armed Forces service medal was awarded).

RETALIATION

Retaliation is prohibited against a person who files a complaint of discrimination, participates in an OFCCP proceeding, or otherwise opposes discrimination under these Federal laws.

Any person who believes a contractor has violated its nondiscrimination or affirmative action obligations under the authorities above should contact immediately:

The Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, 200 Constitution Avenue, N.W., Washington, D.C. 20210, 1-800-397-6251 (toll-free) or (202) 693-1337 (TTY). OFCCP may also be contacted by e-mail at OFCCP-Public@dol.gov, or by calling an OFCCP regional or district office, listed in most telephone directories under U.S. Government, Department of Labor.

Programs or Activities Receiving Federal Financial Assistance

RACE, COLOR, NATIONAL ORIGIN, SEX

In addition to the protections of Title VII of the Civil Rights Act of 1964, as amended, Title VI of the Civil Rights Act of 1964, as amended, prohibits discrimination on the basis of race, color or national origin in programs or activities receiving Federal financial assistance. Employment discrimination is covered by Title VI if the primary objective of the financial assistance is provision of employment, or where employment discrimination causes or may cause discrimination in providing services under such programs. Title IX of the Education Amendments of 1972 prohibits employment discrimination on the basis of sex in educational programs or activities which receive Federal financial assistance.

INDIVIDUALS WITH DISABILITIES

Section 504 of the Rehabilitation Act of 1973, as amended, prohibits employment discrimination on the basis of disability in any program or activity which receives Federal financial assistance. Discrimination is prohibited in all aspects of employment against persons with disabilities who, with or without reasonable accommodation, can perform the essential functions of the job.

If you believe you have been discriminated against in a program of any institution which receives Federal financial assistance, you should immediately contact the Federal agency providing such assistance.

EMPLOYEE RIGHTS UNDER THE DAVIS-BACON ACT

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

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

PREVAILING WAGES

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

OVERTIME

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

ENFORCEMENT

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

APPRENTICES

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

PROPER PAY

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

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



For additional information:

1-866-4-USWAGE

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



WWW.WAGEHOUR.DOL.GOV

EMPLOYEE RIGHTS UNDER THE FAMILY AND MEDICAL LEAVE ACT

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

LEAVE ENTITLEMENTS

Eligible employees who work for a covered employer can take up to 12 weeks of unpaid, job-protected leave in a 12-month period for the following reasons:

- The birth of a child or placement of a child for adoption or foster care;
- To bond with a child (leave must be taken within 1 year of the child's birth or placement);
- To care for the employee's spouse, child, or parent who has a qualifying serious health condition;
- For the employee's own qualifying serious health condition that makes the employee unable to perform the employee's job;
- For qualifying exigencies related to the foreign deployment of a military member who is the employee's spouse, child, or parent.

An eligible employee who is a covered servicemember's spouse, child, parent, or next of kin may also take up to 26 weeks of FMLA leave in a single 12-month period to care for the servicemember with a serious injury or illness.

An employee does not need to use leave in one block. When it is medically necessary or otherwise permitted, employees may take leave intermittently or on a reduced schedule.

Employees may choose, or an employer may require, use of accrued paid leave while taking FMLA leave. If an employee substitutes accrued paid leave for FMLA leave, the employee must comply with the employer's normal paid leave policies.

While employees are on FMLA leave, employers must continue health insurance coverage as if the employees were not on leave.

Upon return from FMLA leave, most employees must be restored to the same job or one nearly identical to it with equivalent pay, benefits, and other employment terms and conditions.

An employer may not interfere with an individual's FMLA rights or retaliate against someone for using or trying to use FMLA leave, opposing any practice made unlawful by the FMLA, or being involved in any proceeding under or related to the FMLA.

An employee who works for a covered employer must meet three criteria in order to be eligible for FMLA leave. The employee must:

- Have worked for the employer for at least 12 months;
- Have at least 1,250 hours of service in the 12 months before taking leave;* and
- Work at a location where the employer has at least 50 employees within 75 miles of the employee's worksite.

*Special "hours of service" requirements apply to airline flight crew employees.

Generally, employees must give 30-days' advance notice of the need for FMLA leave. If it is not possible to give 30-days' notice, an employee must notify the employer as soon as possible and, generally, follow the employer's usual procedures.

Employees do not have to share a medical diagnosis, but must provide enough information to the employer so it can determine if the leave qualifies for FMLA protection. Sufficient information could include informing an employer that the employee is or will be unable to perform his or her job functions, that a family member cannot perform daily activities, or that hospitalization or continuing medical treatment is necessary. Employees must inform the employer if the need for leave is for a reason for which FMLA leave was previously taken or certified.

Employers can require a certification or periodic recertification supporting the need for leave. If the employer determines that the certification is incomplete, it must provide a written notice indicating what additional information is required.

Once an employer becomes aware that an employee's need for leave is for a reason that may qualify under the FMLA, the employer must notify the employee if he or she is eligible for FMLA leave and, if eligible, must also provide a notice of rights and responsibilities under the FMLA. If the employee is not eligible, the employer must provide a reason for ineligibility.

Employers must notify its employees if leave will be designated as FMLA leave, and if so, how much leave will be designated as FMLA leave.

Employees may file a complaint with the U.S. Department of Labor, Wage and Hour Division, or may bring a private lawsuit against an employer.

The FMLA does not affect any federal or state law prohibiting discrimination or supersede any state or local law or collective bargaining agreement that provides greater family or medical leave rights.

BENEFITS & PROTECTIONS

ELIGIBILITY REQUIREMENTS

REQUESTING LEAVE

EMPLOYER RESPONSIBILITIES

ENFORCEMENT

For additional information or to file a complaint:

1-866-4-USWAGE

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

www.dol.gov/whd

U.S. Department of Labor | Wage and Hour Division



EMPLOYEE RIGHTS

UNDER THE FAIR LABOR STANDARDS ACT

FEDERAL MINIMUM WAGE

\$7.25

 PER HOUR

BEGINNING JULY 24, 2009

The law requires employers to display this poster where employees can readily see it.

OVERTIME PAY At least 1½ times the regular rate of pay for all hours worked over 40 in a workweek.

CHILD LABOR An employee must be at least 16 years old to work in most non-farm jobs and at least 18 to work in non-farm jobs declared hazardous by the Secretary of Labor. Youths 14 and 15 years old may work outside school hours in various non-manufacturing, non-mining, non-hazardous jobs with certain work hours restrictions. Different rules apply in agricultural employment.

TIP CREDIT Employers of “tipped employees” who meet certain conditions may claim a partial wage credit based on tips received by their employees. Employers must pay tipped employees a cash wage of at least \$2.13 per hour if they claim a tip credit against their minimum wage obligation. If an employee’s tips combined with the employer’s cash wage of at least \$2.13 per hour do not equal the minimum hourly wage, the employer must make up the difference.

NURSING MOTHERS The FLSA requires employers to provide reasonable break time for a nursing mother employee who is subject to the FLSA’s overtime requirements in order for the employee to express breast milk for her nursing child for one year after the child’s birth each time such employee has a need to express breast milk. Employers are also required to provide a place, other than a bathroom, that is shielded from view and free from intrusion from coworkers and the public, which may be used by the employee to express breast milk.

ENFORCEMENT The Department has authority to recover back wages and an equal amount in liquidated damages in instances of minimum wage, overtime, and other violations. The Department may litigate and/or recommend criminal prosecution. Employers may be assessed civil money penalties for each willful or repeated violation of the minimum wage or overtime pay provisions of the law. Civil money penalties may also be assessed for violations of the FLSA’s child labor provisions. Heightened civil money penalties may be assessed for each child labor violation that results in the death or serious injury of any minor employee, and such assessments may be doubled when the violations are determined to be willful or repeated. The law also prohibits retaliating against or discharging workers who file a complaint or participate in any proceeding under the FLSA.

ADDITIONAL INFORMATION

- Certain occupations and establishments are exempt from the minimum wage, and/or overtime pay provisions.
- Special provisions apply to workers in American Samoa, the Commonwealth of the Northern Mariana Islands, and the Commonwealth of Puerto Rico.
- Some state laws provide greater employee protections; employers must comply with both.
- Some employers incorrectly classify workers as “independent contractors” when they are actually employees under the FLSA. It is important to know the difference between the two because employees (unless exempt) are entitled to the FLSA’s minimum wage and overtime pay protections and correctly classified independent contractors are not.
- Certain full-time students, student learners, apprentices, and workers with disabilities may be paid less than the minimum wage under special certificates issued by the Department of Labor.



WAGE AND HOUR DIVISION
UNITED STATES DEPARTMENT OF LABOR

1-866-487-9243
TTY: 1-877-889-5627
www.dol.gov/whd



PAYROLL

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

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



Rev. Dec. 2008

NAME OF CONTRACTOR OR SUBCONTRACTOR ADDRESS PROJECT OR CONTRACT NO.

PAYROLL NO. FOR WEEK ENDING PROJECT AND LOCATION

(1) NAME AND INDIVIDUAL IDENTIFYING NUMBER (e.g., LAST FOUR DIGITS OF SOCIAL SECURITY NUMBER) OF WORKER	(2) EXEMPTIONS OR REASON FOR NON-PAYMENT	(3) WORK CLASSIFICATION	(4) DAY AND DATE			(5) TOTAL HOURS	(6) RATE OF PAY	(7) GROSS AMOUNT EARNED	(8) DEDUCTIONS			(9) NET WAGES PAID FOR WEEK
			MON	TUE	WED				THUR	FRI	FICA	
						0.00	\$0.00					\$0.00
						0.00	\$0.00					\$0.00
						0.00	\$0.00					\$0.00
						0.00	\$0.00					\$0.00
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						0.00	\$0.00					\$0.00
						0.00	\$0.00					\$0.00

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

Public Burden Statement

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

(over)

Date _____

I, _____ (Name of Signatory Party) _____ (Title) do hereby state:

(1) That I pay or supervise the payment of the persons employed by _____ (Contractor or Subcontractor) on the _____ (Building or Work); that during the payroll period commencing on the _____ day of _____, _____, and ending the _____ day of _____, _____, all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said _____ (Contractor or Subcontractor) from the full _____ weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part 3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

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

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

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

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

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

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

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:

NAME AND TITLE	SIGNATURE
THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 3729 OF TITLE 31 OF THE UNITED STATES CODE.	

EQUAL OPPORTUNITY CLAUSE (EXECUTIVE ORDER 11246)

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advancements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sept.

24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States." [Sec. 202 amended by EO 11375 of Oct. 13, 1967, 32 FR 14303, 3 CFR, 1966-1970 Comp., p. 684, EO 12086 of Oct. 5, 1978, 43 FR 46501, 3 CFR, 1978 Comp., p. 230]

Amended July 2014 - Effective April 8, 2015

Executive Order 11246, As Amended - (last amended by EO 13672 of July 21, 2014)

Equal Employment Opportunity

SOURCE: The provisions of Executive Order 11246 of Sept. 24, 1965, appear at 30 FR 12319, 12935, 3 CFR, 1964-1965 Comp., p.339, unless otherwise noted.

Subpart B - Contractors' Agreements

SEC. 202. Except in contracts exempted in accordance with Section 204 of this Order, all Government contracting agencies shall include in every Government contract hereafter entered into the following provisions:

During the performance of this contract, the contractor agrees as follows:

1. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.
2. The contractor will, in all solicitations or advancements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
3. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
5. The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the

contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

6. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sept. 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
7. The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States." [Sec. 202 amended by EO 11375 of Oct. 13, 1967, 32 FR 14303, 3 CFR, 1966-1970 Comp., p. 684, EO 12086 of Oct. 5, 1978, 43 FR 46501, 3 CFR, 1978 Comp., p. 230, EO 13672 of July 21, 2014, 79 FR 42971]

SEC. 203.

- a. Each contractor having a contract containing the provisions prescribed in Section 202 shall file, and shall cause each of his subcontractors to file, Compliance Reports with the contracting agency or the Secretary of Labor as may be directed. Compliance Reports shall be filed within such times and shall contain such information as to the practices, policies, programs, and employment policies, programs, and employment statistics of the contractor and each subcontractor, and shall be in such form, as the Secretary of Labor may prescribe.
- b. Bidders or prospective contractors or subcontractors may be required to state whether they have participated in any previous contract subject to the provisions of this Order, or any preceding similar Executive order, and in that event to submit, on behalf of themselves and their proposed subcontractors, Compliance Reports prior to or as an initial part of their bid or negotiation of a contract.
- c. Whenever the contractor or subcontractor has a collective bargaining agreement or other contract or understanding with a labor union or an agency referring workers or providing or supervising apprenticeship or training for such workers, the Compliance Report shall include such information as to such labor union's or agency's practices and policies affecting compliance as the Secretary of Labor may prescribe: Provided, That to the extent such information is within the exclusive possession of a labor union or an agency referring workers or providing or supervising apprenticeship or training and such labor union or agency shall refuse to furnish such information to the contractor, the contractor shall so

certify to the Secretary of Labor as part of its Compliance Report and shall set forth what efforts he has made to obtain such information.

- d. The Secretary of Labor may direct that any bidder or prospective contractor or subcontractor shall submit, as part of his Compliance Report, a statement in writing, signed by an authorized officer or agent on behalf of any labor union or any agency referring workers or providing or supervising apprenticeship or other training, with which the bidder or prospective contractor deals, with supporting information, to the effect that the signer's practices and policies do not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, or national origin, and that the signer either will affirmatively cooperate in the implementation of the policy and provisions of this Order or that it consents and agrees that recruitment, employment, and the terms and conditions of employment under the proposed contract shall be in accordance with the purposes and provisions of the order. In the event that the union, or the agency shall refuse to execute such a statement, the Compliance Report shall so certify and set forth what efforts have been made to secure such a statement and such additional factual material as the Secretary of Labor may require.

[Sec. 203 amended by EO 11375 of Oct. 13, 1967, 32 FR 14303, 3 CFR, 1966-1970 Comp., p. 684; EO 12086 of Oct. 5, 1978, 43 FR 46501, 3 CFR, 1978 Comp., p. 230, EO 13672 of July 21, 2104, 79 FR 42971]

SEC. 204

- a. The Secretary of Labor may, when the Secretary deems that special circumstances in the national interest so require, exempt a contracting agency from the requirement of including any or all of the provisions of Section 202 of this Order in any specific contract, subcontract, or purchase order.
- b. The Secretary of Labor may, by rule or regulation, exempt certain classes of contracts, subcontracts, or purchase orders (1) whenever work is to be or has been performed outside the United States and no recruitment of workers within the limits of the United States is involved; (2) for standard commercial supplies or raw materials; (3) involving less than specified amounts of money or specified numbers of workers; or (4) to the extent that they involve subcontracts below a specified tier.
- c. Section 202 of this Order shall not apply to a Government contractor or subcontractor that is a religious corporation, association, educational institution, or society, with respect to the employment of individuals of a particular religion to perform work connected with the carrying on by such corporation, association, educational institution, or society of its activities. Such contractors and subcontractors are not exempted or excused from complying with the other requirements contained in this Order.
- d. The Secretary of Labor may also provide, by rule, regulation, or order, for the exemption of facilities of a contractor that are in all respects separate and distinct from activities of the contractor related to the performance of the contract: provided, that such an exemption will not interfere with or impede the effectuation of the purposes of this Order: and provided

Amended July 2014 – Effective April 8, 2015

further, that in the absence of such an exemption all facilities shall be covered by the provisions of this Order."

[Sec. 204 amended by EO 13279 of Dec. 16, 2002, 67 FR 77141, 3 CFR, 2002 Comp., p. 77141 - 77144]

Contract and Subcontract Activity

U.S. Department of Housing and Urban Development

OMB Approval No.: 2535-0117 (exp. 1/31/2013)

Public Reporting Burden for this collection of information is estimated to average .50 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This information is voluntary. HUD may not collect this information, and you are not required to complete this form, unless it displays a currently valid OMB Control Number.

Executive Order 12421 dated July 14, 1983, directs the Minority Business Development Plans shall be developed by each Federal Agency and that these annual plans shall establish minority business development objectives. The information is used by HUD to monitor and evaluate MBE activities against the total program activity and the designated minority business enterprise (MBE) goals. The Department requires the information to provide guidance and oversight for programs for the development of minority business enterprise concerning Minority Business Development. If the information is not collected HUD would not be able to establish meaningful MBE goals nor evaluate MBE performance against these goals. While no assurances of confidentiality is pledged to respondents, HUD generally discloses this data only in response to a Freedom of Information request.

Privacy Act Notice - The United States Department of Housing and Urban Development, Federal Housing Administration, is authorized to solicit the information requested in this form by virtue of Title 12, United States Code, Section 1701 et seq., and regulations promulgated thereunder at Title 12, Code of Federal Regulations. It will not be disclosed or released outside the United States Department of Housing and Urban Development without your consent, except as required or permitted by law.

1. Grantee/Project Owner/Developer/Sponsor/Builder/Agency	Check if: PHA <input type="checkbox"/> IHA <input type="checkbox"/>	2. Location (City, State, ZIP Code)		
3a. Name of Contact Person	3b. Phone Number (Including Area Code)	4. Reporting Period <input type="checkbox"/> Oct. 1 - Sept. 30 (Annual-FY)	5. Program Code (Not applicable for CPD programs.) See explanation of codes at bottom of page. Use a separate sheet for each program code.	6. Date Submitted to Field Office

Grant/Project Number or HUD Case Number or other identification of property, subdivision, dwelling unit, etc. 7a.	Amount of Contract or Subcontract 7b.	Type of Trade Code (See below) 7c.	Contractor or Subcontractor Business Racial/Ethnic Code (See below) 7d.	Woman Owned Business (Yes or No) 7e.	Prime Contractor Identification (ID) Number 7f.	Sec. 3 7g.	Subcontractor Identification (ID) Number 7h.	Sec. 3 7i.	Contractor/Subcontractor Name and Address 7j.										
									Name	Street	City	State	Zip Code						

- | | | |
|--|--|--|
| CPD:
1 = New Construction
2 = Education/Training
3 = Other | 7c: Type of Trade Codes:
Housing/Public Housing:
1 = New Construction 6 = Professional
2 = Substantial Rehab. 7 = Tenant Services
3 = Repair 8 = Education/Training
4 = Service 9 = Arch./Engrg. Appraisal
5 = Project Mangt. 0 = Other | 7d: Racial/Ethnic Codes:
1 = White Americans
2 = Black Americans
3 = Native Americans
4 = Hispanic Americans
5 = Asian/Pacific Americans
6 = Hasidic Jews |
| 5: Program Codes (Complete for Housing and Public and Indian Housing programs only):
1 = All insured, including Section 8 5 = Section 202
2 = Flexible Subsidy 6 = HUD-Held (Management)
3 = Section 8 Noninsured, Non-HFDA 7 = Public/Indian Housing
4 = Insured (Management) | | |

This report is to be completed by grantees, developers, sponsors, builders, agencies, and/or project owners for reporting contract and subcontract activities of \$10,000 or more under the following programs: Community Development Block Grants (entitlement and small cities); Urban Development Action Grants; Housing Development Grants; Multifamily Insured and Noninsured; Public and Indian Housing Authorities; and contracts entered into by recipients of CDBG rehabilitation assistance.

Contracts/subcontracts of less than \$10,000 need be reported only if such contracts represent a significant portion of your total contracting activity. Include only contracts executed during this reporting period.

This form has been modified to capture Section 3 contract data in columns 7g and 7i. Section 3 requires that the employment and other economic opportunities generated by HUD financial assistance for housing and community development programs shall, to the greatest extent feasible, be directed toward low- and very low-income persons, particularly those who are recipients of government assistance for housing. Recipients using this form to report Section 3 contract data must also use Part I of form HUD-60002 to report employment and training opportunities data. Form HUD-2516 is to be

completed for public and Indian housing and most community development programs. Form HUD-60002 is to be completed by all other HUD programs including State administered community development programs covered under Section 3.

A Section 3 contractor/subcontractor is a business concern that provides economic opportunities to low- and very low-income residents of the metropolitan area (or nonmetropolitan county), including a business concern that is 51 percent or more owned by low- or very low-income residents; employs a substantial number of low- or very low-income residents; or provides subcontracting or business development opportunities to businesses owned by low- or very low-income residents. Low- and very low-income residents include participants in Youthbuild programs established under Subtitle D of Title IV of the Cranston-Gonzalez National Affordable Housing Act.

The terms "low-income persons" and "very low-income persons" have the same meanings given the terms in section 3(b)(2) of the United States Housing Act of 1937. Low-income persons mean families (including single persons) whose incomes do not exceed 80 per centum of the median income for the area, as determined by the Secretary, with adjustments for smaller and larger families, except that the Secretary

may establish income ceilings higher or lower than 80 per centum of the median for the area on the basis of the Secretary's findings that such variations are necessary because of prevailing levels of construction costs or unusually high or low-income families. Very low-income persons means low-income families (including single persons) whose incomes do not exceed 50 per centum of the median family income for the area, as determined by the Secretary with adjustments for smaller and larger families, except that the Secretary may establish income ceilings higher or lower than 50 per centum of the median for the area on the basis of the Secretary's findings that such variations are necessary because of unusually high or low family incomes.

Submit two (2) copies of this report to your local HUD Office within ten (10) days after the end of the reporting period you checked in item 4 on the front.

Complete item 7h. only once for each contractor/subcontractor on each semi-annual report.

Enter the prime contractor's ID in item 7f. for all contracts and subcontracts. Include only contracts executed during this reporting period. PHAs/IHAs are to report all contracts/subcontracts.

Community Development Programs

1. **Grantee:** Enter the name of the unit of government submitting this report.
3. **Contact Person:** Enter name and phone of person responsible for maintaining and submitting contract/subcontract data.
- 7a. **Grant Number:** Enter the HUD Community Development Block Grant Identification Number (with dashes). For example: B-32-MC-25-0034. For Entitlement Programs and Small City multi-year comprehensive programs, enter the latest approved grant number.
- 7b. **Amount of Contract/Subcontract:** Enter the dollar amount rounded to the nearest dollar. If subcontractor ID number is provided in 7f, the dollar figure would be for the subcontract only and not for the prime contract.
- 7c. **Type of Trade:** Enter the numeric codes which best indicates the contractor's/subcontractor's service. If subcontractor ID number is provided in 7f., the type of trade code would be for the subcontractor only and not for the prime contractor. The "other" category includes supply, professional services and all other activities except construction and education/training activities.
- 7d. **Business Racial/Ethnic/Gender Code:** Enter the numeric code which indicates the racial/ethnic /gender character of the owner(s) and controller(s) of 51% of the business. When 51% or more is not owned and controlled by any single racial/ethnic/gender category, enter the code which seems most appropriate. If the subcontractor ID number is provided, the code would apply to the subcontractor and not to the prime contractor.
- 7e. **Woman Owned Business:** Enter Yes or No.
- 7f. **Contractor Identification (ID) Number:** Enter the Employer (IRS) Number of the Prime Contractor as the unique identifier for prime recipient of HUD funds. Note that the Employer (IRS) Number must be provided for each contract/subcontract awarded.
- 7g. **Section 3 Contractor:** Enter Yes or No.
- 7h. **Subcontractor Identification (ID) Number:** Enter the Employer (IRS) Number of the subcontractor as the unique identifier for each subcontract awarded from HUD funds. When the subcontractor ID Number is provided, the respective Prime Contractor ID Number must also be provided.
- 7i. **Section 3 Contractor:** Enter Yes or No.
- 7j. **Contractor/Subcontractor Name and Address:** Enter this information for each

Previous editions are obsolete.

firm receiving contract/subcontract activity only one time on each report for each firm.

Multifamily Housing Programs

1. **Grantee/Project Owner:** Enter the name of the unit of government, agency or mortgagor entity submitting this report.
3. **Contact Person:** Same as item 3 under CPD Programs.
4. **Reporting Period:** Check only one period.
5. **Program Code:** Enter the appropriate program code.
- 7a. **Grant/Project Number:** Enter the HUD Project Number or Housing Development Grant or number assigned.
- 7b. **Amount of Contract/Subcontract:** Same as item 7b. under CPD Programs.
- 7c. **Type of Trade:** Same as item 7c. under CPD Programs.
- 7d. **Business Racial/Ethnic/Gender Code:** Same as item 7d. under CPD Programs.
- 7e. **Woman Owned Business:** Enter Yes or No.
- 7f. **Contractor Identification (ID) Number:** Same as item 7f. under CPD Programs.
- 7g. **Section 3 Contractor:** Enter Yes or No.
- 7h. **Subcontractor Identification (ID) Number:** Same as item 7h. under CPD Programs.
- 7i. **Section 3 Contractor:** Enter Yes or No.
- 7j. **Contractor/Subcontractor Name and Address:** Same as item 7j. under CPD Programs.

Public Housing and Indian Housing Programs

PHAs/IHAs are to report all contracts/subcontracts. Include only contracts executed during this reporting period.

1. **Project Owner:** Enter the name of the unit of government, agency or mortgagor entity submitting this report. Check box as appropriate.
3. **Contact Person:** Same as item 3 under CPD Programs.
4. **Reporting Period:** Check only one period.
5. **Program Code:** Enter the appropriate program code.
- 7a. **Grant/Project Number:** Enter the HUD Project Number or Housing Development Grant or number assigned.
- 7b. **Amount of Contract/Subcontract:** Same as item 7b. under CPD Programs.
- 7c. **Type of Trade:** Same as item 7c. under CPD Programs.
- 7d. **Business Racial/Ethnic/Gender Code:** Same as item 7d. under CPD Programs.
- 7e. **Woman Owned Business:** Enter Yes or No.
- 7f. **Contractor Identification (ID) Number:** Same as item 7f. under CPD Programs.
- 7g. **Section 3 Contractor:** Enter Yes or No.
- 7h. **Subcontractor Identification (ID) Number:** Same as item 7h. under CPD Programs.
- 7i. **Section 3 Contractor:** Enter Yes or No.
- 7j. **Contractor/Subcontractor Name and Address:** Same as item 7j. under CPD Programs.

"General Decision Number: MI20240067 01/05/2024

Superseded General Decision Number: MI20230067

State: Michigan

Construction Type: Heavy

County: Muskegon County in Michigan.

Heavy, Includes Water, Sewer Lines and Excavation (Excludes Hazardous Waste Removal; Coal, Oil, Gas, Duct and other similar Pipeline Construction)

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number Publication Date
0 01/05/2024

CARP0100-009 06/01/2023

	Rates	Fringes
CARPENTER, Includes Form Work....	\$ 27.63	20.93

ELEC0275-001 06/01/2022

	Rates	Fringes
ELECTRICIAN.....	\$ 34.41	9.27+28%

ENGI0325-016 09/01/2023

POWER EQUIPMENT OPERATORS: Underground Construction (Including Sewer)

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1.....	\$ 39.27	25.25
GROUP 2.....	\$ 34.38	25.25
GROUP 3.....	\$ 33.88	25.25
GROUP 4.....	\$ 33.60	25.25

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Boring Machine, Roller, Scraper, Trencher (over 8 ft. digging capacity)

GROUP 2: Trencher (8-ft digging capacity and smaller)

GROUP 3: Boom Truck (non-swinging, non- powered type boom)

GROUP 4: Broom/ Sweeper, Fork Truck, Tractor, Bobcat/ Skid Steer /Skid Loader

ENGI0326-009 06/01/2023

EXCLUDES UNDERGROUND CONSTRUCTION

	Rates	Fringes
OPERATOR: Power Equipment		
GROUP 1.....	\$ 39.53	25.25
GROUP 2.....	\$ 37.82	25.25
GROUP 3.....	\$ 37.82	25.25
GROUP 4.....	\$ 31.96	25.25

PAID HOLIDAYS: New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

Swing Boom Truck Operator over 12 tons-\$.50 per hour

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Boring Machine; Roller; Scraper; Tractor; Trencher

GROUP 2: Bobcat/Skid Loader; Broom/Sweeper; Fork Truck (over 20' lift)

GROUP 3: Boom truck (non-swinging)

GROUP 4: Fork Truck (20' lift and under for masonry work)

IRON0025-011 06/01/2023

	Rates	Fringes
IRONWORKER (REINFORCING).....	\$ 31.43	34.77
IRONWORKER (STRUCTURAL).....	\$ 34.85	38.44

LABO0334-006 09/01/2022

SCOPE OF WORK:
OPEN CUT CONSTRUCTION: Excavation of earth and sewer,
utilities, and improvements, including underground
piping/conduit (including inspection, cleaning, restoration,
and relining)

	Rates	Fringes
LABORER		
(1) Common or General.....	\$ 22.42	12.95
(2) Mason Tender- Cement/Concrete.....	\$ 22.55	12.95
(4) Grade Checker.....	\$ 22.73	12.95

LABO0355-019 06/01/2022

EXCLUDES OPEN CUT CONSTRUCTION

	Rates	Fringes
LABORER		
Common or General; Grade Checker; Mason Tender - Cement/Concrete.....	\$ 26.70	12.95

PAIN0845-017 05/21/2014

	Rates	Fringes
PAINTER: Brush, Roller and Spray.....	\$ 21.89	11.85

PLAS0016-017 04/01/2014

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 21.15	12.78

PLUM0174-003 07/01/2022

	Rates	Fringes
PLUMBER.....	\$ 39.80	23.82

TEAM0007-010 06/01/2023

	Rates	Fringes
TRUCK DRIVER		
Lowboy/Semi-Trailer Truck...	\$ 31.55	.75 + a+b

FOOTNOTE:

- a. \$470.70 per week.
- b. \$68.70 daily.

SUMI2010-065 11/09/2010

	Rates	Fringes
LABORER: Landscape.....	\$ 12.21 **	1.96
LABORER: Pipelayer.....	\$ 15.54 **	4.16
OPERATOR: Backhoe/Excavator.....	\$ 20.94	8.15
OPERATOR: Bulldozer.....	\$ 20.48	6.14
OPERATOR: Crane.....	\$ 18.50	5.10
OPERATOR: Grader/Blade.....	\$ 16.64 **	0.00
OPERATOR: Loader.....	\$ 17.52	5.51
TRUCK DRIVER: Dump Truck.....	\$ 17.00 **	5.71
TRUCK DRIVER: Off the Road Truck.....	\$ 20.82	3.69
TRUCK DRIVER: Tractor Haul Truck.....	\$ 16.50 **	4.89

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

=====
** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.20) or 13658 (\$12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union

average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION"

SECTION 00 51 00

NOTICE OF AWARD
(on Engineer's Letterhead)

Date of Issuance:

Owner:

Owner's Project No.:

Engineer:

Engineer's Project No.:

Project:

Contract Name: *(Insert name of Contract as it appears in the Bidding Documents)*

Bidder:

Bidder's Address:

you are notified that Owner has accepted your Bid dated _____ for the above Contract, and that you are the Successful Bidder and are awarded a Contract for: _____

(describe Work, alternates, or sections of Work awarded)

The Contract Price of the awarded Contract is \$ _____. 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.

An electronic counterpart of the Agreement accompanies this Notice of Award and an electronic copy of the Contract Documents will be made available upon request.

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

1. Deliver to Engineer:
 - One pdf formatted counterpart of the Agreement, signed by Bidder (as Contractor).
 - EJCDC *[or other as specified]* Contract Security (Bonds) as specified in the Instructions to Bidders, General Conditions, and Supplementary Conditions.
 - Do not date the bonds. The date will be entered on the bonds after the Agreement is signed by the Owner. This is necessary to ensure the date on the Bonds do not precede the date of the Agreement.
 - Fully dated Bonds will be delivered to the Contractor after the Contract Documents are fully executed.
 - Certificates of Insurance as specified in the General Conditions and Supplementary Conditions.

2. Other conditions precedent (if any): *[Describe other conditions that require Successful Bidder's compliance]*

Electronic signatures (e-signatures) and scanned copies of handwritten signatures are acceptable forms of signatures in the pdf documents.

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.

The information provided will be reviewed, bound into the Contract Documents, submitted to the Owner for signature, and distributed to the appropriate parties.

Sincerely,

[Project Manager]
Fleis & VandenBrink Engineering, Inc.

By: _____
Signature

Title

cc: [Owner]

END OF SECTION

SECTION 00 52 00

AGREEMENT

This Agreement is by and between **City of Muskegon** ("Owner") and _____ ("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: Splash Pad Reconstruction

ARTICLE 2 - THE PROJECT

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

ARTICLE 3 - ENGINEER

3.01 The Owner has retained Fleis & VandenBrink Engineering, Inc. ("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 Engineer.

ARTICLE 4 - CONTRACT TIMES

4.01 *Time of the Essence*

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

4.02 Contract Times: Days

A. The Work will not begin before September 11, 2024 and once started will be substantially complete by October 25, 2024, as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions by November 1, 2024.

4.03 Liquidated Damages

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. *Substantial Completion*: Contractor shall pay Owner \$500.00 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.
 2. *Completion of Remaining Work*: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner \$500.00 for each day that expires after such time until the Work is completed and ready for final payment.
- B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

ARTICLE 5 - CONTRACT PRICE

- 5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract.
- A. For all Unit Price Work, an amount equal to the sum of the extended prices (established for each separately identified item of Unit Price Work by multiplying the unit price times the actual quantity of that item).

The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer.

ARTICLE 6 - PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

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

6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on the basis of Contractor's Applications for Payment each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.
1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.
 - a. 90 percent of the value of the Work completed (with the balance being retainage).
- B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less such amounts set off

by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 200 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

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.

6.04 *Consent of Surety*

- A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

6.05 *Interest*

- A. All amounts not paid when due will bear interest at the percent per annum rate 2.0% higher than the Prime Rate on the date of bid opening.

ARTICLE 7 - CONTRACT DOCUMENTS

7.01 *Contents*

- A. The Contract Documents consist of all of the following:
 - 1. This Agreement.
 - 2. Bonds
 - a. Performance bond (together with power of attorney).
 - b. Payment bond (together with power of attorney).
 - 3. General Conditions.
 - 4. Supplementary Conditions.
 - 5. Specifications as listed in the table of contents of the project manual.
 - 6. Drawings (not attached but incorporated by reference) consisting of 5 sheets with each sheet bearing the following general title: Splash Pad Reconstruction
 - 7. Addenda (numbers _____ to _____, inclusive).
 - 8. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid.
 - b. Documentation submitted by Contractor prior to Notice of Award.
 - 9. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Orders.
- 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, if any, 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 _____, 20_____ (which is the Effective Date of the Contract).

<p>Owner:</p> <p>_____</p> <p style="text-align: center;"><i>(typed or printed name of organization)</i></p> <p>By: _____</p> <p style="text-align: center;"><i>(individual's signature)</i></p> <p>Date: _____</p> <p style="text-align: center;"><i>(date signed)</i></p> <p>Name: _____</p> <p style="text-align: center;"><i>(typed or printed)</i></p> <p>Title: _____</p> <p style="text-align: center;"><i>(typed or printed)</i></p> <p>Attest: _____</p> <p style="text-align: center;"><i>(individual's signature)</i></p> <p>Title: _____</p> <p style="text-align: center;"><i>(typed or printed)</i></p> <p>Address for giving notices:</p> <p>_____</p> <p>_____</p>	<p>Contractor:</p> <p>_____</p> <p style="text-align: center;"><i>(typed or printed name of organization)</i></p> <p>By: _____</p> <p style="text-align: center;"><i>(individual's signature)</i></p> <p>Date: _____</p> <p style="text-align: center;"><i>(date signed)</i></p> <p>Name: _____</p> <p style="text-align: center;"><i>(typed or printed)</i></p> <p>Title: _____</p> <p style="text-align: center;"><i>(typed or printed)</i></p> <p><i>(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)</i></p> <p>Attest: _____</p> <p style="text-align: center;"><i>(individual's signature)</i></p> <p>Title: _____</p> <p style="text-align: center;"><i>(typed or printed)</i></p> <p>Address for giving notices:</p> <p>_____</p> <p>_____</p>
--	--

Designated Representative:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address: _____

Phone: _____

Email: _____

Designated Representative:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Address: _____

Phone: _____

Email: _____

License No.: _____
(where applicable)

State: _____

END OF SECTION

SECTION 00 55 00

NOTICE TO PROCEED
(on ENGINEER's letterhead)

Dated _____

Owner: _____ Owner's Project No.: _____

Engineer: _____ Engineer's Project No.: _____

Contractor: _____ Contractor's Project No.: _____

Project: _____

Contract Name: _____

OWNER's Contract No. _____ ENGINEER's Project No. _____

On behalf of [Owner], you are hereby notified that the Contract Times under the above Contract will commence to run on _____ 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: ***Note to user: select one of the two below paragraphs, fill in the blanks and modify to be consistent with the Contract Times section of the Agreement. ***

The date by which Substantial Completion must be achieved is [date for Substantial Completion, from Agreement], and the date by which readiness for final payment must be achieved is [date for readiness, from Agreement].

[or]

The number of days to achieve Substantial Completion is [number of days, from Agreement] from the date stated above for the commencement of the Contract Times, resulting in a date for Substantial Completion of [date, calculated from commencement date above]; and the number of days to achieve readiness for final payment is [number of days, from Agreement] from the commencement date of the Contract Times, resulting in a date for readiness for final payment of [date, calculated from commencement date above].

Before starting any Work at the Site, you must comply with the following:

[Note any access limitations, security procedures, or other restrictions]

Sincerely,
Fleis & VandenBrink Engineering, Inc.

By: _____
Signature

Title

cc: [Owner]

END OF SECTION

SECTION 00 62 67
PAYMENT APPLICATION FORM

PART 1 - GENERAL

Not Used.

PART 2 - PRODUCTS

Not Used.

PART 3 - SUMMARY

3.01 SCHEDULES:

- A. Attached are the following forms:
 - 1. Pay Application Form; EJCDC No. C-620, 2018 Edition

END OF SECTION

Contractor's Application for Payment

Owner: _____	Owner's Project No.: _____
Engineer: _____	Engineer's Project No.: _____
Contractor: _____	Contractor's Project No.: _____
Project: _____	
Contract: _____	
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)			\$

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: _____

Progress Estimate - Lump Sum Work				Contractor's Application for Payment					
Owner:				Owner's Project No.:					
Engineer:				Engineer's Project No.:					
Contractor:				Contractor's Project No.:					
Project:									
Contract:									
Application								Application Date:	
Application Period:			From		to				
A	B	C	D	E	F	G	H	I	
Item No.	Description	Scheduled Value (\$)	Work Completed		Materials Currently	Work Completed	% of Scheduled	Balance to Finish (C - G)	
			(D + E) From	This Period					
Original Contract									
Original Contract Totals									
Change Orders									
Change Order Totals									
Original Contract and Change Orders									
Project Totals									

Progress Estimate - Unit Price							Contractor's Application for				
Owner:								Owner's Project			
Engineer:								Engineer's Project			
Contractor								Contractor's			
Project:											
Contract:											
Applicatio		Application	From		to					Application Date:	
A	B	C	D	E	F	G	H	I	J	K	L
Bid Item	Description	Contract Information				Work Completed		Materials Currently	Work Complete	% of Valu	Balance to Finish (F -
		Item	Units	Unit	Value of	Estimated	Value of				
Original Contract											
Original Contract Totals					\$		\$	\$	\$		\$
Change Orders											
Change Order Totals					\$		\$	\$	\$		\$
Original Contract and Change Orders											
Project Totals					\$		\$	\$	\$		\$

Stored Materials Summary						Contractor's Application for Payment						
Owner:							Owner's Project No.:					
Engineer:							Engineer's Project No.:					
Contractor:							Contractor's Project No.:					
Project:												
Contract:												
Application No.:		Application Period:		From	to			Application Date:				
A	B	C	D	E	F	G	H	I	J	K	L	M
Item No. (Lump Sum Tab) or Bid Item No. (Unit Price Tab)	Supplier Invoice No.	Submittal No. (with Specification Section No.)	Description of Materials or Equipment Stored	Storage Location	Application No. When Materials Placed in Storage	Materials Stored			Incorporated in Work			Materials Remaining in Storage (I-L) (\$)
						Previous Amount Stored (\$)	Amount Stored this Period (\$)	Amount Stored to Date (G+H) (\$)	Amount Previously Incorporated in the Work (\$)	Amount Incorporated in the Work this Period (\$)	Total Amount Incorporated in the Work (J+K) (\$)	
Totals						\$	\$	\$	\$	\$	\$	\$

SECTION 00 72 00
GENERAL CONDITIONS

EJCDC NO. C-700 (2018 EDITION)
2 TITLE PAGES, TABLE OF CONTENTS PAGES 1 TO 5, AND PAGES 1 THROUGH 70

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

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By



Endorsed By



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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

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

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

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers’ instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

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

- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

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

2.02 *Copies of Documents*

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

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

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

2.05 *Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
 - 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.

SECTION 00 73 00

SUPPLEMENTARY CONDITIONS

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

1.01 *Defined Terms*

SC-1.01 Add the following new paragraph immediately after Paragraph 1.01.A.50:

51. Bulletin - A document outlining possible changes to the Contract Documents which is issued by Engineer on behalf of Owner requesting add or deduct costs from Contractor.

ARTICLE 2 – PRELIMINARY MATTERS

2.02 *Copies of Documents:*

SC-2.02 Delete Paragraph 2.02.A. in its entirety and insert the following new paragraph in its place:

- A. Owner shall furnish to Contractor one copy of conformed Contract Documents incorporating all addenda and any amendments negotiated prior to the Effective Date of the Contract (including one fully signed counterpart of the Agreement) in electronic portable document format (PDF). Printed copies of the conformed Contract Documents will be furnished upon request at the cost of reproduction.

2.06 *Electronic Transmittals*

SC-2.06 Delete Paragraphs 2.06.B and 2.06.C in their entirety and insert the following in their place:

- B. Electronic Documents Protocol: The parties shall conform to the following provisions in Paragraphs 2.06.B and 2.06.C, together referred to as the Electronic Documents Protocol ("EDP" or "Protocol") for exchange of electronic transmittals.

1. Basic Requirements

- a. To the fullest extent practical, the parties agree to and will transmit and accept Electronic Documents in an electronic or digital format using the procedures described in this Protocol. Use of the Electronic Documents and any information contained therein is subject to the requirements of this Protocol and other provisions of the Contract.

- b. The contents of the information in any Electronic Document will be the responsibility of the transmitting party.
 - c. Electronic Documents as exchanged by this Protocol may be used in the same manner as the printed versions of the same documents that are exchanged using non-electronic format and methods, subject to the same governing requirements, limitations, and restrictions, set forth in the Contract Documents.
 - d. Except as otherwise explicitly stated herein, the terms of this Protocol will be incorporated into any other agreement or subcontract between a party and any third party for any portion of the Work on the Project, or any Project-related services, where that third party is, either directly or indirectly, required to exchange Electronic Documents with a party or with Engineer. Nothing herein will modify the requirements of the Contract regarding communications between and among the parties and their subcontractors and consultants.
 - e. When transmitting Electronic Documents, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the receiving party's use of software application packages, operating systems, or computer hardware differing from those established in this Protocol.
 - f. Nothing herein negates any obligation 1) in the Contract to create, provide, or maintain an original printed record version of Drawings and Specifications, signed and sealed according to applicable Laws and Regulations; 2) to comply with any applicable Law or Regulation governing the signing and sealing of design documents or the signing and electronic transmission of any other documents; or 3) to comply with the notice requirements of Paragraph 18.01 of the General Conditions.
2. System Infrastructure for Electronic Document Exchange
- a. Each party will provide hardware, operating system(s) software, internet, e-mail, and large file transfer functions ("System Infrastructure") at its own cost and sufficient for complying with the EDP requirements. With the exception of minimum standards set forth in this EDP, and any explicit system requirements specified by attachment to this EDP, it is the obligation of each party to determine, for itself, its own System Infrastructure.
 - 1) The maximum size of an email attachment for exchange of Electronic Documents under this EDP is 10 MB. Attachments larger than that may be exchanged using large file transfer functions or physical media.
 - 2) Each Party assumes full and complete responsibility for any and all of its own costs, delays, deficiencies, and errors associated with converting, translating, updating, verifying, licensing, or otherwise enabling its System Infrastructure, including operating systems and software, for use with respect to this EDP.
 - b. Each party is responsible for its own system operations, security, back-up, archiving, audits, printing resources, and other Information Technology ("IT") for maintaining operations of its System Infrastructure during the Project, including coordination with the party's individual(s) or entity responsible for managing its System Infrastructure and capable of addressing routine communications and other IT issues affecting the exchange of Electronic Documents.

- c. Each party will operate and maintain industry-standard, industry-accepted, ISO-standard, commercial-grade security software and systems that are intended to protect the other party from: software viruses and other malicious software like worms, trojans, adware; data breaches; loss of confidentiality; and other threats in the transmission to or storage of information from the other parties, including transmission of Electronic Documents by physical media such as CD/DVD/flash drive/hard drive. To the extent that a party maintains and operates such security software and systems, it shall not be liable to the other party for any breach of system security.
- d. In the case of disputes, conflicts, or modifications to the EDP required to address issues affecting System Infrastructure, the parties shall cooperatively resolve the issues; but, failing resolution, the Owner is authorized to make and require reasonable and necessary changes to the EDP to effectuate its original intent.
- e. Each party is responsible for its own back-up and archive of documents sent and received during the term of the contract under this EDP, each party remains solely responsible for its own post-Project back-up and archive of Project documents after the term of the Contract, for as long as required by the Contract and as each party deems necessary for its own purposes.
- f. If a receiving party receives an obviously corrupted, damaged, or unreadable Electronic Document, the receiving party will advise the sending party of the incomplete transmission.
- g. The parties will bring any non-conforming Electronic Documents into compliance with the EDP. The parties will attempt to complete a successful transmission of the Electronic Document or use an alternative delivery method to complete the communication.

C. Software Requirements for Electronic Document Exchange; Limitations

- 1. Each party will acquire the software and software licenses necessary to create and transmit Electronic Documents and to read and to use any Electronic Documents received from the other party (and if relevant from third parties), using the software formats required in this section of the EDP.
 - a. Prior to using any updated version of the software required in this section for sending Electronic Documents to the other party, the originating party will first notify and receive concurrence from the other party for use of the updated version or adjust its transmission to comply with this EDP.
- 2. The parties agree not to intentionally edit, reverse engineer, decrypt, remove security or encryption features, or convert to another format for modification purposes any Electronic Document or information contained therein that was transmitted in a software data format, including Portable Document Format (PDF), intended by sender not to be modified, unless the receiving party obtains the permission of the sending party or is citing or quoting excerpts of the Electronic Document for Project purposes.
- 3. Software and data formats for exchange of Electronic Documents will conform to the requirements below, including software versions, if listed.

Item	Electronic Documents	Transmittal Means	Data Format	Note (1)
a.1	General communications, transmittal covers, meeting notices and responses to general information requests for which there is no specific prescribed form.	Email	Email	
a.2	Meeting agendas, meeting minutes, RFI's and responses to RFI's, and Contract forms.	Email w/ Attachment	PDF	(2)
a.3	Contractors Submittals (Shop Drawings, "or equal" requests, substitution requests, documentation accompanying Sample submittals and other submittals) to Owner and Engineer, and Owner's and Engineer's responses to Contractor's Submittals, Shop Drawings, correspondence, and Applications for Payment.	Email w/ Attachment	PDF	
a.4	Correspondence; milestone and final version Submittals of reports, layouts, Drawings, maps, calculations and spreadsheets, Specifications, Drawings and other Submittals from Contractor to Owner or Engineer and for responses from Engineer and Owner to Contractor regarding Submittals.	Email w/ Attachment or LFE	PDF	
a.5	Layouts and drawings to be submitted to Owner for use.	Email w/ Attachment or LFE	DWG	
a.6	Spreadsheets and data to be submitted to Owner for future data processing use and modification.	Email w/ Attachment or LFE	EXC	
Notes				
(1)	All exchanges and uses of transmitted data are subject to the appropriate provisions of Contract Documents.			
(2)	Transmittal of written notices is governed by Paragraph 18.01 of the General Conditions.			
Key				
Email	Standard Email formats (.htm, .rtf, or .txt). Do not use stationery formatting or other features that impair legibility of content on screen or in printed copies			
LFE	Agreed upon Large File Exchange method (FTP, CD, DVD, hard drive)			
PDF	Portable Document Format			
DWG	Autodesk® Civil 3D .dwg format Version 18			
EXC	Microsoft® Excel .xls or .xml format			

SC-2.06 Supplement Paragraph 2.06 of the General Conditions by adding the following paragraph:

D. Requests by Contractor for Electronic Documents in Other Formats

1. Release of any Electronic Document versions of the Project documents in formats other than those identified in the Electronic Documents Protocol (if any) or elsewhere in the Contract will be at the sole discretion of the Owner.
2. To extent determined by Owner, in its sole discretion, to be prudent and necessary, release of Electronic Documents versions of Project documents and other Project information requested by Contractor ("Request") in formats other than those identified in the Electronic Documents Protocol (if any) or elsewhere in the Contract will be

subject to the provisions of the Owner's response to the Request, and to the following conditions to which Contractor agrees:

- a. The content included in the Electronic Documents created by Engineer and covered by the Request was prepared by Engineer as an internal working document for Engineer's purposes solely, and is being provided to Contractor on an "AS IS" basis without any warranties of any kind, including, but not limited to any implied warranties of fitness for any purpose. As such, Contractor is advised and acknowledges that the content may not be suitable for Contractor's application, or may require substantial modification and independent verification by Contractor. The content may include limited resolution of models, not-to-scale schematic representations and symbols, use of notes to convey design concepts in lieu of accurate graphics, approximations, graphical simplifications, undocumented intermediate revisions, and other devices that may affect subsequent reuse.
 - b. Electronic Documents containing text, graphics, metadata, or other types of data that are provided by Engineer to Contractor under the request are only for convenience of Contractor. Any conclusion or information obtained or derived from such data will be at the Contractor's sole risk and the Contractor waives any claims against Engineer or Owner arising from use of data in Electronic Documents covered by the Request.
 - c. Contractor shall indemnify and hold harmless Owner and Engineer and their subconsultants from all claims, damages, losses, and expenses, including attorneys' fees and defense costs arising out of or resulting from Contractor's use, adaptation, or distribution of any Electronic Documents provided under the Request.
 - d. Contractor agrees not to sell, copy, transfer, forward, give away or otherwise distribute this information (in source or modified file format) to any third party without the direct written authorization of Engineer, unless such distribution is specifically identified in the Request and is limited to Contractor's subcontractors. Contractor warrants that subsequent use by Contractor's subcontractors complies with all terms of the Contract Documents and Owner's response to Request.
3. In the event that Owner elects to provide or directs the Engineer to provide to Contractor any Contractor-requested Electronic Document versions of Project information that is not explicitly identified in the Contract Documents as being available to Contractor, the Owner shall be reimbursed by Contractor on an hourly basis at Engineer's standard hourly rates for any engineering costs necessary to create or otherwise prepare the data in a manner deemed appropriate by Engineer.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

No 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 in its entirety and insert the following:

- A. The Contract Times will commence to run on the date indicated in the Notice to Proceed.

4.05 *Delays in Contractor's Progress*

SC-4.05 Amend Paragraph 4.05.C by adding the following subparagraphs:

5. Weather-Related Delays

- a. If "abnormal weather conditions" as set forth in Paragraph 4.05.C.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: 1) that weather conditions were abnormal for the period of time in which the delay occurred, 2) that such weather conditions could not have been reasonably anticipated, and 3) that such weather conditions had an adverse effect on the Work as scheduled. Extreme or unusual weather that is typical for a given region, elevation, or season should not be considered abnormal weather conditions. Requests for time extension due to abnormal weather conditions will be submitted to the Engineer within five days of the end of the abnormal weather condition event. It is the responsibility of the Contractor to provide the information listed in SC 4.05.C.5b.
- b. Should the Contractor wish to claim a delay due to adverse weather, it is the Contractor's responsibility to provide adequate documentation for the claim.

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

5.03 *Subsurface and Physical Conditions*

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

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
None		

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		

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 Fleis & VandenBrink, 2960 Lucerne Dr SE, Grand Rapids, MI 49546, during regular business hours, or may request copies from Engineer

5.06 *Hazardous Environmental Conditions*

SC-5.06 Add the following new paragraphs immediately after Paragraph 5.06.A.3:

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		

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

Drawings Title	Date of Drawings	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.A:

Required Performance Bond Form: The performance bond that Contractor furnishes will be in the form of EJCDC® C 610, Performance Bond (2018 edition).

Required Payment Bond Form: The payment bond that Contractor furnishes will be in the form of EJCDC® C 615, Payment Bond (2018 edition).

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, and pollution liability must include as additional insureds (in addition to Owner and Engineer) the following: **None**

Waiver of subrogation shall apply to additional insured.

E. *Workers' Compensation and Employer's Liability*: Contractor shall purchase and maintain workers' compensation and employer's liability insurance (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
Employer's Liability	
Each accident	\$500,000
Each employee	\$500,000
Policy limit	\$500,000

- 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	\$2,000,000
Personal and Advertising Injury	\$1,000,000
Bodily Injury and Property Damage—Each Occurrence	\$1,000,000

- 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:
Combined Single Limit (Bodily Injury & 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	\$1,000,000
General Aggregate	\$1,000,000

- L. *Contractor's Pollution Liability Insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage, including cleanup costs, as a result of pollution conditions arising from Contractor's operations and completed operations. This insurance must be maintained for no less than three years after final completion.

Contractor's Pollution Liability	Policy limits of not less than:
Each Occurrence/Claim	\$1,000,000
General Aggregate	\$1,000,000

6.06 *Owner's Protective Liability Insurance*

SC-6.06 Add the following new paragraph immediately after Paragraph 6.06:

6.07 Contractor shall purchase Owner's Protective Liability Insurance written in the name of the Owner in the amount of One Million Dollars (\$1,000,000), Each Occurrence Limit and \$2,000,000 Aggregate Limit. Entities and persons identified as additional insureds in SC 6.03.D, except OWNER, shall be named as additional insureds in Owners's Protective Liability Insurance.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.03 *Labor; Working Hours*

SC-7.03 Delete Paragraph 7.03.C in its entirety and insert the following in its place:

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 shall be performed during regular working hours, Monday through Friday. Contractor will not perform Work on Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with the Owner's written consent.

1. Regular working hours will be 7:00 a.m. through 7:00 p.m. Monday through Friday.
2. Owner's legal holidays are:
 - a. January 1st.
 - b. Memorial Day weekend from 5:00 p.m. the Friday before Memorial Day through 7:00 a.m. the Tuesday after Memorial Day.
 - c. 5:00 p.m. Wednesday July 3rd, 2024 through 7:00 a.m. Monday July 8th, 2024.
 - d. Labor Day weekend from 5:00 p.m. the Friday before Labor Day through 7:00 a.m. the Tuesday after Labor Day.
 - e. Thanksgiving Day and the day after thanksgiving.
 - f. December 24th and 25th.
 - g. Red Flannel; Festival: Friday, October 4, 2024 at 7:00 am through 7:00 am Monday, October 7, 2024.

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 outside of regular working hours or during legal holidays. If Contractor is responsible but does not pay, or if the parties are unable to agree as to the amount owed, the Owner may impose a reasonable set-off against payments due under Article 15.

7.13 *Safety and Protection*

SC-7.13 Add the following new paragraph immediately after Paragraph 7.13.J:

- K. Contractor shall indemnify, defend and hold harmless Owner and Engineer from any liability, loss, cost, penalty, damage or expense, including attorney's fees, arising from any claim, damage, proceeding, citation, or work stoppage in any way connected with Contractor's performance of the Work and violation of any requirement of public authority or applicable Laws and Regulations, including state and federal OSHA.

ARTICLE 8 – OTHER WORK AT THE SITE

No Supplementary Conditions in this Article.

ARTICLE 9 – OWNER'S RESPONSIBILITIES

No Supplementary Conditions in this Article.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

10.03 *Resident Project Representative*

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

- C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:
1. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.
 2. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.
 3. *Liaison*
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.
 4. *Review of Work; Defective Work*
 - a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Observe whether any Work in place appears to be defective.
 - c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.

5. *Inspections and Tests*

- a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.
- b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.

6. *Payment Requests: Review Applications for Payment with Contractor*

7. *Completion*

- a. Participate in Engineer's visits regarding Substantial Completion.
- b. Assist in the preparation of a punch list of items to be completed or corrected.
- c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
- d. Observe whether items on the final punch list have been completed or corrected.

D. The RPR will not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 11 – CHANGES TO THE CONTRACT

No Supplementary Conditions in this Article.

ARTICLE 12 – CLAIMS

No Supplementary Conditions in this Article.

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

13.01 *Unit Price Work*

SC-13.01 Delete Paragraph 13.03.E in its entirety and insert the following in its place:

E. Adjustments in Unit Price:

1. Owner reserves the right to add or delete work to the Contract using the unit prices bid. No adjustment in unit prices will be allowed.

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

No Supplementary Conditions in this Article.

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

15.01 *Progress Payments*

SC-15.01 Delete Paragraph 15.01.D.1 in its entirety and insert the following in its place

1. 30 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.

15.03 *Substantial Completion*

SC-15.03 Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

No Supplementary Conditions in this Article.

ARTICLE 17 – FINAL RESOLUTIONS OF DISPUTES

17.01 *Methods and Procedures*

SC-17.01 Add the following new paragraphs immediately after Paragraph 17.01.

17.02 *Mediation*

- A. Before any claim, dispute or other matter between Owner and Contractor is submitted to arbitration or litigation, the Parties agree that they shall first negotiate in good faith utilizing the Chairperson of any Board or governing body and/or the President of the company in an effort to resolve the dispute(s). That negotiation shall take place within fifteen (15) days of notice of any dispute. The negotiation is a condition precedent to any continued dispute resolution proceedings. If the parties are unable to resolve the dispute through negotiation, within thirty (30) days thereafter, the parties shall mediate the matter before an experienced, professional mediator mutually agreeable to the parties. All offers, promises, conduct and statements, whether oral or written, made in the course of the negotiation by any of the Parties, their agents, employees, experts and attorneys shall be confidential, privileged and inadmissible for any purpose. Unless otherwise agreed, the mediation will

occur at the location of the project and each party shall bear the costs of mediation equally. The mediation is a condition precedent to any continued dispute resolution proceedings. The mediation shall continue until an impasse is called by the appointed mediator. In the event that the attempt to resolve the matter through mediation fails then the matter may be submitted to arbitration.

17.03 *Arbitration*

- A. All matters subject to final resolution under this Article, and any related claims, shall be resolved 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, then 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 with fifteen (15) or more years of experience. 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. 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 and binding. 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 or to the extent disclosure is necessary to enforce the award by attaching a true copy to pleadings. 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 Supplementary Conditions in this Article.

END OF SECTION

SECTION 00 91 13

ADDENDUM

Addendum No. _____

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

NOTICE TO ALL PROSPECTIVE BIDDERS

BIDS DUE: _____ -- ISSUED TO ALL PLANHOLDERS OF RECORD

=====

This Addendum is a part of the Contract Documents and modifies the previously issued Bidding Documents. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may result in rejection of the Bid.

SPECIFICATION CHANGES

ITEM NO. 1:
 Section _____ [Title] _____
 [Paragraph] _____

 [Paragraph] _____

ITEM NO. 2:
 Section _____ [Title] _____
 [Paragraph] _____

DRAWING CHANGES

ITEM NO. 3:
 Sheet(s) _____:

ITEM NO. 4:
 Sheet(s) _____:

ATTACHMENTS:

END OF SECTION

SECTION 01 11 00
SUMMARY OF WORK

PART 1 - GENERAL

1.01 SUMMARY OF WORK:

This project consists of reconstruction of existing splash pad at Federal Square on the west corner of First Street and Western Avenue. Work will include removal of existing concrete pavement, removal of existing water feature system and concrete curb, installing decorative concrete sidewalk, water service, sanitary connection, fountain drain, fountain, water and electrical service, and all associated work.

END OF SECTION

SECTION 01 22 00

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 SUMMARY:

This Section includes, but is not necessarily limited to, descriptions of the method of measurement and basis of payment criteria applicable to the Work.

1.02 MEASUREMENT OF QUANTITIES:

- A. Measurement devices:
 - 1. Weigh scales:
 - a. Inspected, tested and certified.
 - 2. Platform scales:
 - a. Of enough size and capacity to accommodate the conveying vehicle.
 - 3. Metering devices:
 - a. Inspected, tested and certified.
- B. Measurement by weight:
 - 1. Concrete reinforcing steel rolled or formed steel or other metal shapes will be measured by handbook weights.
 - 2. Welded assemblies will be measured by handbook weights.
- C. Measurement by volume:
 - 1. Measured by cubic dimension using mean length, width and height or thickness.
- D. Measurement by area:
 - 1. Measured by square dimension using mean length and width or radius.
- E. Linear measurement:
 - 1. Measured by linear dimension, at the item centerline.

1.03 MEASUREMENT AND PAYMENT SCHEDULE:

- A. The following schedule outlines the method of measurement and basis of payment to be used on the project. Requirements for materials and methods described under each item are included in the related specification SECTION.

- Item 1. General Conditions, Bonds, and Insurance, Max 5%: Shall be paid for on a lump sum basis for the Contractor's costs to provide required bonds and insurances, mobilization and miscellaneous requirements stipulated in Contract Documents. This quantity shall not exceed five percent (5%) of the total contract amount.
 - 50% will be paid on the first Application for Payment.
 - 25% will be paid when 40%* of the project is complete.
 - 25% will be paid when 80%* of the project is complete.

*Measured as the value of the Work completed relative to the current contract value not including the value of this item.

- Item 2. Soil Erosion Control: Shall be paid for on a lump sum basis complete, installed, maintained, moved, and removed. Measures include permitting, silt fence, filter socks/rolls, inlet protection fabric drops and other measures necessary for site stabilization. Payment of sixty percent (60%) will be made in the first Pay Application after setup and twenty percent (20%) will be paid on subsequent applications until one hundred percent (100%) is paid.
- Item 3. Site Preparation & Grading: Measured and paid as a lump sum. This item shall include rough grading, shaping, fill material, fine grading, removal of excess gravel, soil undercutting, soil erosion control and earthwork necessary to construct the proposed splash pad improvements and all related work.
- Item 4. Removals: Paid for on a lump sum basis, including all labor, materials, and equipment necessary to remove existing concrete sidewalk, concrete planter curb, landscaping, existing splash pad jets, piping, equipment vaults and related items as shown on the plans.
- Item 5. 4" Sanitary Lateral: Measured and paid by the unit length for the size identified and measured on the ground surface along the pipe centerline from wyes and connection points, including excavation, backfill, main line risers, fittings, and contractor supplied witness measurements. No payment will be made for non-witnessed or improperly witnessed installations.
- Item 6. 6" Sanitary Lateral: Measured and paid by the unit length for the size identified and measured on the ground surface along the pipe centerline from wyes and connection points, including excavation, backfill, main line risers, fittings, and contractor supplied witness measurements. No payment will be made for non-witnessed or improperly witnessed installations.
- Item 7. Water service: Lump sum including misc. fittings, 2" dia. copper water service from the existing meter pit and all related work for the full intent of plans and specifications and all related fees and permits.
- Item 8. Planter Curb: Measured and paid by the unit length as measured along edge of metal including expansion materials and reinforcing bars. This item Includes all shapes and sizes of curb & gutter as specified.
- Item 9. Concrete Sidewalk, Sand Cast Finish: Measured and paid for by the square foot including set up, reinforcing, concrete, integral color additive, saw cutting joints, and sealer for specified thickness and color per plans.
- Item 10. Concrete Sidewalk, Integral Color B: Measured and paid for by the square foot including set up, reinforcing, concrete, integral color additive, saw cutting joints and sealer for specified thickness and color per plans.
- Item 11. Concrete Sidewalk, Integral Color C: Measured and paid for by the square foot including set up, reinforcing, concrete, integral color additive, saw cutting joints and sealer for specified thickness and color per plans
- Item 12. Concrete Sidewalk, Micro Top Finish: Measured and paid for by the square foot for specified pattern and color per plans.

Item 13. Splash Pad Installation: Lump sum including all items specified per plans and specifications prepared by Vortex Aquatic Structures or engineer approved equal. To include labor and material for the following, but not limited to: installation of equipment supplied by Owner as listed in manufacturer drawings for items to be supplied by manufacturer including control cabinet, jets, junction boxes and vent caps. Contractor to supply and install all other necessary material including but not limited to excavation, concrete for anchor pads for vaults, drain inlet, water supply lines, display discharge piping, manifolds, control cabinet, electrical wiring for LED jet lights and any other related work to ensure fountain operation as indicated on plans.

Item 14. Electrical Service: Paid for on a lump sum basis, including all items specified per plans. To include labor and materials for the following, but not limited to, coordination to connect to existing underground electrical utility and related fees, service panel, meter base, conduit, wiring, permits, and related items as shown and detailed on the plans.

Item 15. Surface Restoration: Measured and paid on a square yard basis to the grading limits as shown on the plans. Grading, spreading and preparation of new shredded bark mulch are included as part of this item.

Other:

- Sawcutting existing bituminous or concrete pavement:
 - Included in removal items.
- Dewatering for Construction:
 - Included in cost of the utility.
- Granular material trench back-fill:
 - Included in cost of the utility.
- Bedding area trench backfill:
 - Included in cost of the utility.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01 26 00

CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY:

- A. This Section includes, but is not necessarily limited to, the forms and procedures for modifying the Contract Documents.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.01 SCHEDULES:

- A. Attached are the following forms:
 - 1. Bulletin.
 - 2. Field Order.
 - 3. Change Order.

END OF SECTION

BULLETIN
Page 1 of 2

CONTRACT FOR:

BULLETIN NO. _____

OWNER:

DATE: _____

DUE DATE: _____

CONTRACTOR:

ENGINEER:

DRAWING REVISION NO.: _____

DRAWING SHEETS ISSUED HEREWITH: _____

DISTRIBUTION: _____

=====

The items below are being considered as possible changes to the Contract Documents for this Project. CONTRACTOR is requested to submit changes in cost, if any, for each item and indicate whether it is an addition to or deduction from the Contract Price. Include all labor, materials, overhead and profit. After reviewing the effects of those changes in the Work, OWNER may issue a Change Order specifying which changes are to be incorporated in the Work, if any.

This Bulletin is not a Change Order and is not to be deemed authorization to proceed with the changes listed.

Additional work or materials, where proposed, shall meet the requirements of the Contract Documents, except where noted.

CONTRACTOR will be responsible for notifying ENGINEER, in writing, concerning any revision or clarification which causes a change in the Contract Documents, but are not specifically mentioned as a cost item in this Bulletin.

CONTRACTOR shall return three (3) completed and signed copies of the Bulletin to ENGINEER on or before the due date noted above.

Each proposed change has been described briefly with additional information provided concerning detailed changes required for the major trades concerned. Only one total cost figure has been requested for each item on the Bulletin; however, a complete breakdown is required for each item as supporting documentation. This will allow OWNER to more easily evaluate the proposed cost changes. Each Bulletin item is an all-inclusive item and may concern work from several trades or Subcontractors. It is CONTRACTOR's responsibility to ensure that all work for each item has been included in the total cost figure provided to OWNER.

BULLETIN
Page 2 of 2

BULLETIN NO. _____

DATE: _____

SPECIFICATION CHANGES

Item No. 1:

Section _____ - _____

[Paragraph] _____
_____ Add/Deduct \$ _____

Item No. 2:

Section _____ - _____

[Paragraph] _____
_____ Add/Deduct \$ _____

DRAWING CHANGES

Item No. 3:

Sheet(s) _____:

_____ Add/Deduct \$ _____

Item No. 4:

Sheet(s) _____:

_____ Add/Deduct \$ _____

CONTRACTOR:

Signature

Name and Title of Signatory

Date

FIELD ORDER NO.: [Number of Field Order]

Owner:
Engineer:
Contractor:
Project:
Contract Name:

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

Date Issued:

Effective Date of Field
Order:

Contractor is hereby directed to promptly perform the Work described in this Field Order, issued in accordance with Paragraph 11.04 of the General Conditions, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference:

Specification Section(s):

Drawing(s) / Details (s):

Description:

[Description of the change to the Work]

Attachments:

[List documents supporting change]

Issued by Engineer

By: _____

Title: _____

Date: _____

CHANGE ORDER NO.: [Number of Change Order]

Owner: _____ Owner's Project No.: _____
 Engineer: _____ Engineer's Project No.: _____
 Contractor: _____ Contractor's Project No.: _____
 Project: _____
 Contract Name: _____
 Date Issued: _____ Effective Date of Change Order: _____
 The Contract is modified as follows upon execution of this Change Order:

Description:
[Description of the change]

Attachments:
[List documents related to the change]

Change in Contract Price	Change in Contract Times [State Contract Times as either a specific date or a number of days]
Original Contract Price: \$ _____	Original Contract Times: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] from previously approved Change Orders No. 1 to No. [Number of previous Change Order] : \$ _____	[Increase] [Decrease] from previously approved Change Orders No.1 to No. [Number of previous Change Order] : Substantial Completion: _____ Ready for final payment: _____
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] this Change Order: \$ _____	[Increase] [Decrease] this Change Order: Substantial Completion: _____ Ready for final payment: _____
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for final payment: _____

Recommended by Engineer (if required)

By: _____
 Title: _____
 Date: _____

Authorized by Contractor

Authorized by Owner

By: _____
 Title: _____
 Date: _____

Approved by Funding Agency (if applicable)

SECTION 01 31 19
PROJECT MEETINGS

PART 1 - GENERAL

1.01 REQUIREMENTS INCLUDED:

- A. The Owner will schedule and administer the preconstruction conference and periodic progress meetings.
 - 1. Prepare the agenda for the meetings.
 - 2. Distribute written notice of each meeting in advance of meeting date.
 - 3. Make physical arrangements for meeting.
 - 4. Preside at meetings.
 - 5. Record the minutes.
 - 6. Distribute copies of the minutes to meeting attendees and affected parties.
- B. Representatives of Contractor, subcontractors and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.

1.02 PRECONSTRUCTION CONFERENCE:

- A. Schedule: Meeting will be prior to the start of work at a time and place designated by the Owner.
- B. Attendance:
 - 1. Owner.
 - 2. Engineer.
 - 3. Contractor.
 - 4. Major Subcontractors.
 - 5. Utility companies.
 - 6. Governmental agencies.
 - 7. Contractor's Safety representative.
- C. Agenda:
 - 1. Utility conflicts.
 - 2. Responsibilities
 - 3. General contract terms.
 - 4. Supervision.
 - 5. Schedules and seasonal limitations.
 - 6. Approvals and testing.
 - 7. Clearances and notices.
 - 8. Construction procedures.
 - 9. Payments and estimates.
 - 10. Labor requirements.
 - 11. Safety.

1.03 PROGRESS MEETINGS:

- A. Schedule: Meetings will be scheduled a minimum of once each month at a time and place designated by the Owner.

B. Attendance:

1. Owner.
2. Contractor.
3. Subcontractors as pertinent to agenda.
4. Government agencies as pertinent to agenda.
5. Safety representatives.

C. Agenda:

1. Review and approve minutes of previous meeting.
2. Review of work progress since previous meeting.
3. Field observations, problems, conflicts.
4. Problems which impede construction schedule.
5. Review of off-site fabrication and delivery schedules.
6. Corrective measures and procedures to regain projected schedule.
7. Revisions to construction schedule.
8. Proposed work during the succeeding work period.
9. Coordination of schedules.
10. Review of submittal schedules.
11. Review of proposed changes for effect on construction schedule and on completion date.
12. Safety report.
13. Review new business.
14. Establish date for next meeting.

END OF SECTION

SECTION 01 33 00

SUBMITTALS

PART 1 - GENERAL

1.01 CONSTRUCTION SCHEDULES:

- A. General:
 - 1. Coordinate with work by others as explained in SECTION 00 72 00 GENERAL CONDITIONS.
 - 2. Contractor shall notify Engineer/Owner 72 hours prior to start of the work or prior to a major increase in the work force if these vary from schedule as submitted.
- B. Form of Schedules:
 - 1. Prepare schedules in the form of a horizontal bar chart.
 - 2. Provide a separate horizontal bar for each trade or operation.
 - 3. Provide a horizontal time scale identifying the first workday of each week.
 - 4. The order shall be the chronological beginning of each work item.
 - 5. The row identification shall be each major specification section or subdivision of work with distinct graphic delineation.
- C. Content of Schedules:
 - 1. The construction project schedule shall include as a minimum:
 - a. Project start date.
 - b. Start dates and durations for each major trade group, work tasks or other subdivisions of the work.
 - c. Shop drawings, product data, and sample submittal dates and dates when reviewed copies will be required.
 - d. Equipment and/or material delivery dates, if approved.
 - e. Total project duration and end dates.
- D. Updating:
 - 1. Show all occurring changes of previous submission.
 - 2. Show progress completion dates of each activity.
 - 3. Submit a narrative report, if required by Engineer/Owner defining:
 - a. Problem areas: Impact of current and anticipated delay factors.
 - b. Schedule changes: Effect on other contractors.
 - c. Revision description: Effect of change of scope and duration of activities.
- E. Submittal of Schedules:
 - 1. The Contractor shall submit the preliminary detailed construction schedule within fifteen (15) days after notice of award. Engineer/Owner will return copy within ten (10) days.
 - 2. An updated schedule shall be submitted on the first workday of each month.
- F. Distribution:
 - 1. The reviewed schedule shall be distributed by Engineer/Owner to:
 - a. The job site file.
 - b. Owner.

1.02 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES:

A. General:

1. Where required by specifications, the Contractor shall submit descriptive information which will enable the Engineer to advise the Owner whether the Contractor's proposed materials, equipment, or methods of work are in general conformance to the design concept and in compliance with the drawings and specifications. The information to be submitted shall consist of drawings, specifications, descriptive data, certificates, samples, test results and such other information, all as specifically required in the specifications.

B. Contractor Responsibility:

1. Contractor shall be responsible for the accuracy and completeness of the information contained in each submittal and shall assure that the material, equipment or method of work shall be as described in the submittal. The Contractor shall verify that the material and equipment described in each submittal conform to the requirements of the specifications and drawings. If the information shows deviations from the specifications or drawings, the Contractor shall insure that there is no conflict with other submittals and notify the Engineer/Owner in each case where his submittal may affect the work of another Contractor or the Owner. The Contractor shall insure coordination of submittals among the related crafts and subcontractors.
2. The Contractor shall be responsible to check and verify all field measurements, all dimensions on shop and setting drawings and all schedules required for the work of all the various trades.
3. Where content of submitted literature includes data not pertinent to the submittal, Contractor shall clearly indicate which portion of the contents is being submitted for Engineer/Owner's review.
4. The Contractor shall stamp each submittal with stamp, initialed and signed, certifying to review of the submittal by the Contractor, verification of field measurements and compliance with Contract Documents.

C. Transmittal Procedure:

1. General:

- a. Submittals shall be submitted promptly in accordance with dates in proposals, approved schedules and in such sequence that there is no delay in the Work or the work of any other Contractor.
- b. A unique number, sequentially arranged, shall be noted on the transmittal form accompanying each item's submittal. Original submittal numbers shall have the following format "XXX-Y:" where "XXX" is the originally assigned submittal number, and "Y" is a sequential letter assigned for resubmittals, i.e., A, B, or C being the 1st, 2nd and 3rd resubmittals, respectively. Submittal 25-B, for example, is the second resubmittal of submittal 25.

2. Deviation from Contract:

- a. If the Contractor proposed to provide material or equipment which does not conform to the specifications and drawings, he shall indicate so under "deviations" on the transmittal form accompanying the submittal copies. He shall prepare his reason for a change, including cost differential, and request a change order to cover the deviations.

3. Submittal Completeness:

- a. Submittals which do not have all the information required to be submitted, including deviations, are not acceptable and will be returned without review.

D. Review Procedure:

1. Submit in PDF (portable document format) electronic format. Hardcopy submittals may be made with prior approval of the Engineer/Owner. For samples, submit the number stated in each specifications section.
2. Unless otherwise specified, within fourteen (14) calendar days after receipt of the submittal, the Engineer/Owner shall review and return the submittal to the Contractor. The returned submittal shall indicate one of the following actions:
 - a. If the review indicates that the material, equipment or work method is in general conformance with the design concept, drawings and specifications, submittal copies will be marked "Reviewed, No Exceptions Taken". In this event the Contractor may begin to implement the work method or incorporate the material or equipment covered by the submittal.
 - b. If the review indicates limited corrections are required, submitted copies will be marked "Reviewed, with Corrections Noted". The Contractor may begin implementing the work method by the submittal in accordance with the noted corrections. Where submittal information will be incorporated in O&M data, a corrected copy shall be provided.
 - c. If the review reveals that the submittal is insufficient or contains incorrect data, submitted copies will be marked "Rejected, Resubmit". Except at his own risk, the Contractor shall not undertake work covered by this submittal until it has been revised, resubmitted, and returned marked either "Reviewed, No Exceptions Taken" or "Reviewed, with Corrections Noted".
 - d. If the review indicates that the material, equipment, or work method is not in general conformance with the drawings and specifications, copies of the submittal will be marked "Rejected, Resubmit". Submittals with deviations which have not been identified clearly may be rejected. Except at his own risk, the Contractor shall not undertake the work covered by such submittals until it has been revised, resubmitted and returned marked either "Reviewed, No Exceptions Taken" or "Reviewed, with Corrections Noted".
 - e. If the review indicates that the material or equipment is not from an acceptable manufacturer, as indicated in the specifications, copies of the submittal will be marked "Submit Specific Item". Except at his own risk, the Contractor shall not undertake the work covered by such submittals until it has been revised, resubmitted and returned mark either "Reviewed, No Exceptions Taken" or "Reviewed, with Corrections Noted".

E. Effect of Review of Contractor's Submittal:

1. Review of drawings, methods of work or information regarding materials or equipment the Contractor proposes to provide shall not relieve the Contractor of his responsibility for errors therein and shall not be regarded as an assumption of risks or liabilities by the Engineer or the Owner, or by an officer or employee thereof, and the Contractor shall have no claim under the Contract on account of the failure, or partial failure, of the method of work, material or equipment so reviewed. A mark of "Reviewed, No Exceptions Taken" or "Reviewed, with Corrections Noted" shall mean that the Owner has no objection to the Contractor, upon his own responsibility, using the plan or method of work proposed, or providing the materials or equipment proposed.

F. Re-review Costs:

1. Should Engineer be required to review a submittal more than twice because of failure of the submittal to meet the requirements of the Contract Documents, Engineer will record Engineer's time and expenses for performing all additional reviews. The Owner will compensate Engineer for these additional services and deduct the amount from payments to the Contractor.

1.03 OPERATION AND MAINTENANCE DATA:

A. Requirements:

1. Compile product data on related information appropriate for Owner's operation and maintenance of products furnished.
2. Prepare data in the form of an instructional manual for use by Owner's personnel. Prepare five (5) printed copies of complete sets compiled, bound and indexed. Also provide electronic copy on CD, if available.
3. Submittal of operation and maintenance manuals shall be prior to final payment request.

B. Required Submittals:

1. Refer to technical specification sections for required submittals.

1.04 RECORD DOCUMENTS:

A. Requirements:

1. The Contractor shall maintain on the construction site a minimum of one (1) complete set of Contract Documents amended by "RED LINE" or highlight inclusion to reflect the most immediate status methods, materials and locations and routings of construction. Supplementary sketches shall be included, if necessary, to clearly indicate all work as constructed.
2. At conclusion of work, the Contractor shall submit to the Engineer/Owner one (1) complete amended record set of these site documents.
3. Submittal shall be prior to final payment.
4. Failure of the Contractor to maintain an up-to-date set of modified drawings on the project site shall be reason to withhold payments.

1.05 ATTACHMENTS:

A. Shop Drawing List

END OF SECTION

Shop Drawing Submittal List & Log

City of Muskegon Last Update:
Splash Pad Reconstruction
F&V Project No.: 863730

3/6/2024

Contractor shall submit the below Shop Drawings.

Submittal No:	Specification Number	Specification Title	Description
	01 33 00	Submittals	Construction Schedule
	03 30 00	Cast-In-Place Concrete	Concrete Mix Designs
	25 50 00	Pool and Fountain Plumbing Systems	Splash Pad Components
	26 05 00	Basic Electrical Requirements	
	32 13 14	Concrete Sidewalk and Sidewalk Ramps	Concrete Mix Designs
	32 13 14	Concrete Sidewalk and Sidewalk Ramps	Material Certifications

SECTION 01 42 13

ABBREVIATIONS

PART 1 - GENERAL

1.01 ABBREVIATIONS:

A. Standards:

AASHTO:	American Association of State Highway Transportation Officials
ACI:	American Concrete Institute
ANSI:	American National Standard Institute
ASA:	American Standard Association
ASTM:	American Society for Testing and Materials
AWS:	American Welding Society
AWWA:	American Water Works Association
CRSI:	Concrete Reinforcing Steel Institute
CSI.:	Construction Specifications Institute
EGLE:	Michigan Department of Environment, Great Lakes, and Energy
IDEM:	Indiana Department of Environmental Management
MDPH:	Michigan Department of Public Health
MDNR:	Michigan Department of Natural Resources
MDOT:	Michigan Department of Transportation
NEC:	National Electrical Code
NCPI:	National Clay Pipe Institute
UL:	Underwriters Laboratories Inc.
AISC:	American Institute of Steel Construction
NEMA:	National Electrical Manufacturers Association
NFPA:	National Fire Protection Association

B. Unit Priced Items:

LFt, Lft:	Linear Foot
Ea:	Each
VFt, Vft.:	Vertical Foot
LSum, Lsum:	Lump Sum
Syd, Syd:	Square Yard
Sta:	Station (100 foot)
Cyd, Cyd:	Cubic Yard
SFt, Sft, SqFt:	Square Foot
LB, Lb:	Pound
GAL, Gal:	Gallon

END OF SECTION

SECTION 01 45 00
QUALITY CONTROL

PART 1 - GENERAL

1.01 SUMMARY:

- A. This Section includes the work required for all quality control.

1.02 REFERENCES:

- A. MDOT - Michigan Department of Transportation, "*2020 Standard Specifications for Construction*".
- B. ASTM - American Society of Testing Materials, latest edition.
- C. AASHTO – American Association of State Highway Transportation Officials, latest edition.
- D. AWS – American Welding Society, latest edition.

1.03 QUALITY ASSURANCE:

- A. General:
 - 1. Selection of test specimens will be made by the Owner.
 - 2. Testing procedure will be in accordance with the current standard specified.
 - 3. Refer to the SECTION requirements for field quality control.

1.04 SUBMITTALS:

- A. Test Specimens: Deliver to the place of inspection and testing.
- B. Certification of Quality by Producer: Deliver to the Owner.
- C. Certification of Welders: Deliver to the Owner.

1.05 DELIVERY:

- A. Collect and deliver materials and concrete cylinders to the designated testing laboratory.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Inspection and Testing Agencies:
 - 1. In accordance with the requirements of ASTM E329.
 - 2. Reporting shall be to the Owner.

PART 3 - EXECUTION

3.01 PERFORMANCE:

- A. Acceptance Tests and Inspection:
 - 1. Aggregates: Certification of quality by producer.
 - 2. Soil density:
 - a. Moisture-density relationships:

- 1) Cohesive (Clays) or Granular (Sands) Soils: ASTM D1557 (Modified Proctor).
 - 2) Granular (Sands) Soils: Michigan Cone Test.
- b. Field density determination according to ASTM standards.
- c. Contractor shall provide access to test location and depth.
3. Asphalt cement: Certification of quality producer.
4. Bituminous mix composition:
 - a. Sample: ASTM D979.B.
 - b. Extraction test: AASHTO T30, AASHTO T168 AND ASTM D2172.
 - c. Frequency: One test within each 500-ton placed.
5. Bituminous pavement density:
 - a. Sample: ASTM D979
 - b. Comparative density tests of in-place material against laboratory specimens of the same material: ASTM D1559 and ASTM D2726.
 - c. Frequency: One test within each 2,500 square yards placed.
6. Brick and Block:
 - a. Buildings:
 - 1) Under 30M: Visual inspection on site.
 - 2) Over 30M: ASTM C216 and ASTM C90
 - b. Manholes and catch basins:
 - 1) Visual inspection on-site
7. Cement: Certification of quality by producer.
8. Concrete:
 - a. Sample: ASTM C172
 - b. Frequency: Once for each 50 cubic yards of each class of concrete placed.
 - c. Perform following from sample:
 - 1) Mold three 6-inch cylinder compressive strength specimens: ASTM: C31
 - 2) Slump test: ASTM C143
 - 3) Air test: ASTM C231
 - 4) Yield test: ASTM C138
 - 5) Strength test: ASTM C139
9. Precast Manholes: Certification of quality by producer.
10. Painting:
 - a. Workmanship: Visual inspection on site.
 - b. Film thickness test: Gauge or yield.
 - c. Frequency: One test within each 100 square feet applied.
11. Pipe:
 - a. Gravity: Laboratory test one-half percent ($\frac{1}{2}\%$) of total item with minimum one piece each size, material and class. Certification of quality by producer acceptable for corrugated metal pipe.
 - b. Pressure: Certification of quality by producer.
12. Steel (reinforcing, structural and miscellaneous): Certification of quality by producer.
13. Welding:
 - a. Certification of welders as follows:
 - 1) Buildings: AWS D1.0 Appendix A.
 - 2) Water Tanks: AWS D1.0 Appendix A.
 - 3) Bridges: MDOT 707.03.D.10.c.
 - b. Visual on-site inspection and nondestructive testing as follows:
 - 1) Buildings: AWS D1.0 Appendix B.
 - 2) Water Tanks: AWWA D100.
 - 3) Bridges: MDOT 707.03.D.10.c.
14. Well soil samples: Sieve analysis ASTM C136

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 – GENERAL

1.01. SUMMARY:

A. Section includes:

1. This Section includes, but is not necessarily limited to, the furnishing, fabrication and installation of the major items listed below as indicated on the Drawings, as specified herein, and as necessary for the proper and complete performance of the Work.

B. Temporary Utilities:

1. Electricity.
2. Water service.

C. Temporary Construction Facilities:

1. Vehicular access.
2. Parking.
3. Project cleaning and waste removal.
4. Project identification.
5. Traffic regulation.
6. Fire prevention facilities.

D. Temporary Controls:

1. Barriers.
2. Enclosures and fencing.
3. Security.
4. Water control.
5. Dust control.
6. Noise control.

E. Removal of Temporary Utilities, Facilities and Controls.

1.02 TEMPORARY ELECTRICITY:

- A. Furnish power service as needed for construction operation and pay all costs for power used.

1.03 TEMPORARY TELEPHONE SERVICE:

- A. No telephone service will be required.

1.04 TEMPORARY WATER SERVICE:

- A. Owner will pay cost of temporary water. Exercise measures to conserve energy. Utilize Owner's existing water system, extend and supplement with temporary devices as needed to maintain specified conditions for construction operations.

1.05 TEMPORARY SANITARY FACILITIES:

- A. Provide service, clean and maintain required facilities and enclosures in compliance with laws and regulations. Existing facility use is not permitted. Provide facilities at time of project mobilization.

1.06 VEHICULAR ACCESS:

- A. Construct temporary access roads from public thoroughfares to serve construction area, of width and load bearing capacity to accommodate unimpeded traffic for construction purposes.
- B. Extend and relocate vehicular access as Work progress requires, provide detours as necessary for unimpeded traffic flow.
- C. Provide unimpeded access for emergency vehicles.
- D. Provide and maintain access to fire hydrants and keep free of obstructions.
- E. Tracked vehicles not allowed on paved areas.

1.07 PARKING:

- A. When site space is not adequate, provide additional off-site parking.
- B. Use of designated areas of existing parking facilities by construction personnel is permitted with OWNER prior approval.
- C. Do not allow heavy vehicles or construction equipment in parking areas.
- D. Permanent Pavements and Parking Facilities:
 - 1. Avoid traffic loading beyond paving design capacity. Tracked vehicles not allowed.
 - 2. Use of permanent parking facilities is permitted.
- E. Maintenance:
 - 1. Maintain traffic and parking areas in sound condition [free of excavated material, construction equipment, products, mud, snow, and ice].
 - 2. Maintain existing and permanent paved areas used for construction; promptly repair breaks, potholes, low areas, standing water and other deficiencies, to maintain paving and drainage in original or specified condition.
- F. Removal, Repair:
 - 1. Remove temporary materials and construction before Substantial Completion.
 - 2. Repair existing facilities damaged by use to original condition.

1.08 PROGRESS CLEANING AND WASTE REMOVAL:

- A. Maintain areas free of waste materials, debris and rubbish. Maintain site in clean and orderly condition.
- B. Collect and remove waste materials, debris and rubbish from site weekly and dispose off site.

1.09 TRAFFIC REGULATION:

- A. Signs, Signals and Devices:
 - 1. Post Mounted and Wall Mounted Traffic Control and Informational Signs: As approved by authority having jurisdiction.
 - 2. Traffic Cones and Drums, Flares and Lights: As approved by authority having jurisdiction.
- B. Flares and Lights: Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.

- C. Haul Routes:
 - 1. Consult with authority having jurisdiction, establish public thoroughfares to be used for haul routes and site access.
 - D. Traffic Signs and Signals:
 - 1. Provide signs at approaches to site and on site, at crossroads, detours, parking areas and elsewhere as needed to direct construction and affected public traffic.
 - 2. Provide, operate and maintain traffic control signage to direct and maintain orderly flow of traffic in areas under Contractor's control and areas affected by Contractor's operations.
 - 3. Relocate as Work progresses to maintain effective traffic control.
 - E. Removal:
 - 1. Remove equipment and devices when no longer required.
 - 2. Repair damage caused by installation
- 1.10 BARRIERS:
- A. Provide barricades required by authorities having jurisdiction for public rights-of-way.
 - B. Protect non-owned vehicular traffic, stored materials, site and structures from damage.
- 1.11 WATER CONTROL:
- A. Grade site to drain. Maintain excavations free of water. Provide, operate and maintain pumping equipment.
- 1.12 DUST CONTROL:
- A. Execute Work by methods to minimize raising dust from construction operations.
 - B. Provide Positive means to prevent air-borne dust from dispersing into atmosphere.
- 1.13 REMOVAL OF UTILITIES, FACILITIES AND CONTROLS:
- A. Remove any temporary utilities, equipment, facilities and materials prior to Substantial Completion inspection.
 - B. Clean and repair damage caused by installation or use of temporary work.
 - C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

END OF SECTION

SECTION 01 57 13

TEMPORARY EROSION AND SEDIMENTATION CONTROL

PART 1 - GENERAL

1.01 SUMMARY:

- A. This Section includes the work required to provide and maintain temporary soil erosion and sedimentation control.

1.02 JOB CONDITIONS:

- A. Requirements: Comply with Drawings and permit requirements.
- B. Permit: Obtain permit from local enforcing agency, if not already obtained.
- C. Time Limitations: MDOT 208.03B.

PART 2 - PRODUCTS

2.01 MATERIALS: MDOT 208.02 and as approved by the regulating agency.

PART 3 - EXECUTION

3.01 PERFORMANCE:

- A. General: Abide with all applicable rules and regulations as established by the State of Michigan and the local regulating agency in conjunction with Act 451 of 1994, Natural Resources and Environmental Protection Act, Part 91 as amended, Michigan Soil Erosion and Sedimentation Control (formerly PA 347 of 1972, as amended).
- B. The CONTRACTOR is responsible, at no additional cost to the OWNER, for the repair of the site work occasioned by storm events. All rainfalls of less than 3.5 inches in a 24-hour period and subsequent repair are the responsibility of the CONTRACTOR.
- C. Sediment Removal:
 - 1. Take such steps as are necessary to assure the retention and removal of any sediment which enters a drainage system along the construction route before said system discharges into a stream, pond or lake.
 - 2. If eroded material is allowed to enter a storm sewer system, all catch basins, manholes, pipe and culverts shall be cleaned following construction prior to receipt of final payment. Unless CONTRACTOR can document positively to what extent an existing storm sewer system along the construction area was silted in prior to construction, no credit will be given for cleaning the system.
- D. Construction and Maintenance of Soil Erosion and Sedimentation Control Measures: MDOT 208.03C.
 - 1. Provide and maintain the following temporary soil erosion and sedimentation control measures unless otherwise shown on the Drawings or in the permit:
 - a. Excavated or borrow material stock-pile:
 - (1) Place silt fence around stockpile in a manner to prevent soil erosion from entering the drainage system or leaving the site.
 - b. Trench backfill in place.

- (1) Place silt fence across trenches, ditches and around inlets to prevent soil erosion from leaving the site or entering the drainage system until:
 - (a) Seed and mulch have been placed in non-paved areas.
 - (b) Aggregate has been placed in bituminous and gravel areas.
- c. Grading limits.
 - (1) Place silt fence along down gradient side of all areas disturbed by grading operations.
- d. Catch basins.
 - (1) Provide inlet protection around catch basin and below grates. Remove after turf is established
- e. Culvert inlets.
 - (1) Place stone check dam and silt fence upstream of all culvert inlets.
- f. Drain cleanout.
 - (1) Excavate sediment basin and place stone check dam at downstream end prior to cleanout operation.

E. Repair of Site

1. All temporary and permanent erosion and sediment control practices shall be maintained and repaired by the Contractor during the construction phase as needed to assure continued performance of their intended function. All facilities shall be inspected and replaced if necessary, following each precipitation or snowmelt event that results in runoff and sedimentation. All sedimentation shall be cleaned from all walks, parking and adjacent site areas. Maintain temporary erosion and sedimentation controls as necessary to ensure their effectiveness until stabilization of the disturbed area with vegetative cover.
2. Corrective actions will be completed within 48 hours of discovery for routine maintenance items including but not limited to removing sediment from behind silt fences or check dams, replacing or adding silt fence, seeding and mulching small areas, and street sweeping. Other necessary maintenance or corrective actions will be completed as soon as possible but never more than five (5) days after detection.
3. Continued in-action (after a 2nd notice regarding the same issue) by the contractor shall result in the ENGINEER issuing a "Stop Work Order". This order shall specifically identify where work is to cease, and identify a specified period of time that will be granted to the contractor before a third party contractor is hired by the OWNER to perform the required remediation at the sole expense of the CONTRACTOR.
4. For any recorded rain event that is 4.5 inches of rain in a 24-hour period or less for the site, there shall be no additional compensation to the CONTRACTOR. For a rain event of 4.5 inches of rain in a 24-hour period or greater as defined by the National Oceanic and Atmospheric Administration National Weather Service, the CONTRACTOR shall submit within 48 hours of the said event, a complete summary of the cost of repairs for approval and acceptance by the OWNER prior to restoration efforts.

F. Removal of Soil Erosion and Sedimentation Control Measures: MDOT 208.03D.

3.02 SCHEDULES:

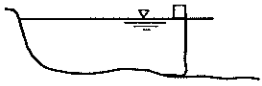
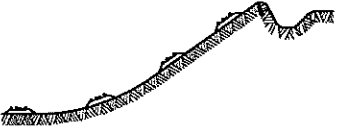

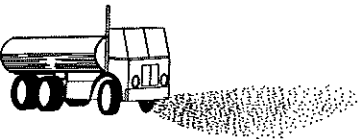

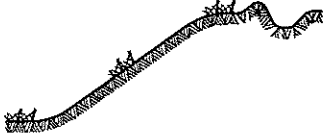
- A. MDOT Standard Plan R-96-E (6 sheets)


END OF SECTION


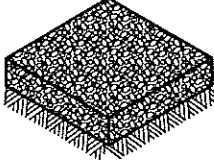


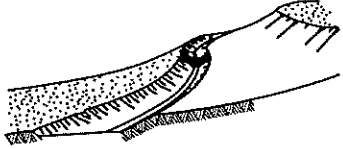



APPLICABLE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

(COMPREHENSIVE DETAILS ARE LOCATED IN SECTION 6 OF THE SOIL EROSION & SEDIMENTATION CONTROL MANUAL)

- A = SLOPES
- B = STREAMS AND WATERWAYS
- C = SURFACE DRAINAGEWAYS
- D = ENCLOSED DRAINAGE (INLET & OUTFALL CONTROL)
- E = LARGE FLAT SURFACE AREAS
- F = BORROW AND STOCKPILE AREAS
- G = DNRE PERMIT MAY BE REQUIRED

KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
1	 <p>TURBIDITY CURTAIN</p>	A Turbidity Curtain is used when slack water area is necessary to isolate construction activities from the watercourse. The still water area contains the sediments within the construction limits.		•					
2	 <p>GRUBBING OMITTED</p>	Retains existing root mat which assists in stabilizing slopes. Assists in the revegetation process by providing sprout growth. Reduces sheet flow velocities preventing rilling and gulying. Discourages off-road vehicle use.		•			•		
3	 <p>PERMANENT/TEMPORARY SEEDING</p>	Inexpensive but effective erosion control measure to stabilize flat areas and mild slopes. Permits runoff to infiltrate soil, reducing runoff volumes. Proper preparation of the seed bed, fertilizing, mulching and watering is critical to its success.		•	•		•	•	
4	 <p>DUST CONTROL</p>	Dust control can be accomplished by watering, and/or applying calcium chloride. The disturbed areas should be kept to a minimum. PERMANENT/TEMPORARY SEEDING (KEY 3) should be applied as soon as possible.		•			•	•	
5	 <p>SODDING</p>	Provides immediate vegetative cover such as at spillways and ditch bottoms. Proper preparation of the topsoil, placement of the sod, and watering is critical to its success.		•			•	•	
6	 <p>VEGETATED BUFFER STRIPS</p>	Reduces sheet flow velocities preventing rilling and gulying. Assists in the collection of sediments by filtering runoff. Assists in the establishment of a permanent vegetative cover.		•			•		

 <p>PREPARED BY DESIGN DIVISION</p>	<p>DEPARTMENT DIRECTOR Kirk T. Stuedli</p> <p>APPROVED BY: <i>John C. Friend</i> ENGINEER OF DELIVERY</p>	<p>MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR</p>	
	<p>APPROVED BY: <i>Marla Van Pelt</i> ENGINEER OF DEVELOPMENT</p>	<p>SOIL EROSION & SEDIMENTATION CONTROL MEASURES</p>	
<p>DRAWN BY: <u>B.L.T.</u></p> <p>CHECKED BY: <u>M.K.P.</u></p>	<p>9-10-2010 F.H.W.A. APPROVAL</p>	<p>6-3-2010 PLAN DATE</p>	<p>R-96-E</p>
			<p>SHEET 1 OF 6</p>

KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
7	 <p>RIPRAP</p>	Used where vegetation cannot be established. Very effective in protecting against high velocity flows. Should be placed over a geotextile liner.	•	•	•	•			•
8	 <p>AGGREGATE COVER</p>	Can be used in any area where a stable condition is needed for construction operations, equipment storage or in heavy traffic areas. Reduces potential soil erosion and fugitive dust by stabilizing raw areas.	•				•	•	
9	 <p>BENCHES</p>	Reduces sheet flow velocities preventing rilling and gulying. Assists in the collection and filtering of sediments. Provides access for stabilizing slopes.	•					•	
10	 <p>DIVERSION DIKE</p>	Assists in the diversion of runoff to a stable outlet or sediment control device. Reduces sheet flow velocities preventing rilling and gulying. Collects and diverts runoff to properly stabilized drainage ways. Works well with INTERCEPTING DITCH (KEY 11)	•				•	•	
11	 <p>INTERCEPTING DITCH</p>	Assists in the diversion of runoff to a stable outlet or sediment control device. Reduces sheet flow velocities preventing rilling and gulying. Works well with DIVERSION DIKE (KEY 10)	•				•	•	
12	 <p>INTERCEPTING DITCH AND DIVERSION DIKE</p>	Assists in the diversion of runoff to a stable outlet or sediment control device. Reduces sheet flow velocities preventing rilling and gulying.	•				•	•	
13	 <p>GRAVEL FILTER BERM</p>	Useful in filtering flow prior to its reentry into a lake, stream or wetland. Works well with SEDIMENT TRAP (KEY 20) and TEMPORARY BYPASS CHANNEL (KEY 35). Not to be used in lieu of a CHECK DAM (KEY 37) in a ditch.	•		•			•	
14	 <p>GRAVEL ACCESS APPROACH</p>	Provides a stable access to roadways minimizing fugitive dust and tracking of materials onto public streets and highways.						•	•

MICHIGAN DEPARTMENT OF TRANSPORTATION
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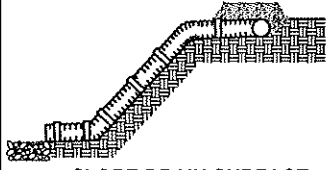

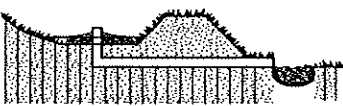
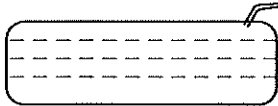

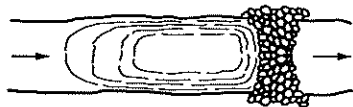
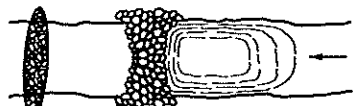

**SOIL EROSION & SEDIMENTATION
CONTROL MEASURES**

9-10-2010
F.H.W.A. APPROVAL

6-3-2010
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SHEET
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KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
15	 <p>SLOPE DRAIN SURFACE</p>	<p>Excellent device for carrying water down slopes without creating an erosive condition.</p> <p>Generally used in conjunction with DIVERSION DIKE (KEY 10), INTERCEPTING DITCH (KEY 11) and INTERCEPTING DITCH AND DIVERSION DIKE (KEY 12) to direct flow to a stable discharge area or SEDIMENT TRAP (KEY 20).</p>		•					
16	 <p>TREES, SHRUBS AND PERENNIALS</p>	<p>Trees, shrubs and perennials can provide low maintenance long term erosion protection. These plants may be particularly useful where site aesthetics are important along the roadside slopes.</p>		•			•		
17	 <p>PIPE DROP</p>	<p>Effective way to allow water to drop in elevation very rapidly without causing an erosive condition.</p> <p>Also works as a sediment collector device.</p> <p>May be left in place as a permanent erosion control device.</p>		•					
18	 <p>DEWATERING WITH FILTER BAG</p>	<p>It may be necessary to dewater from behind a cofferdam or construction dam to create a dry work site.</p> <p>Discharged water must be pumped to a filter bag.</p> <p>A GRAVEL FILTER BERM (KEY 13) may be placed downslope of the filter bag to provide additional filtration prior to entering any stream or wetland.</p>			•				•
19	 <p>ENERGY DISSIPATORS</p>	<p>A device to prevent the erosive force of water from eroding soils.</p> <p>Used at outlets of culverts, drainage pipes or other conduits to reduce the velocity of the water.</p> <p>Prevents structure scouring and undermining.</p>		•	•	•	•		
20	 <p>SEDIMENT TRAP</p>	<p>Used to intercept concentrated flows and prevent sediments from being transported off site or into a watercourse or wetland.</p> <p>The size of a Sediment Trap is 5 cubic yards or less.</p> <p>Works well when used with CHECK DAM (KEY 37).</p>		•		•	•		
21	 <p>SEDIMENT BASIN</p>	<p>A Sediment Basin is used to trap sediments from an upstream construction site.</p> <p>Requires periodic inspections, repairs, and maintenance.</p> <p>Where practical, sediments should be contained on site.</p> <p>A Sediment Basin should be the last choice of sediment control.</p> <p>The size of a Sediment Basin is greater than 5 cubic yards.</p>			•				•
22	 <p>VEGETATIVE BUFFER AT WATERCOURSE</p>	<p>This practice is used to maintain a vegetative buffer adjacent to a watercourse.</p> <p>When utilized with SILT FENCE (KEY 26) it will, under normal circumstances, prevent sediment from leaving the construction site.</p>		•	•	•		•	•

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

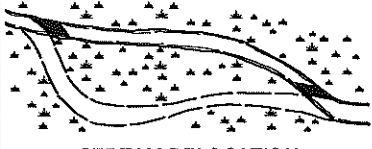
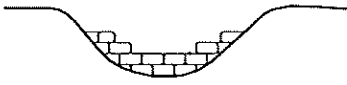
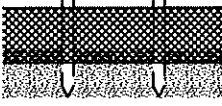


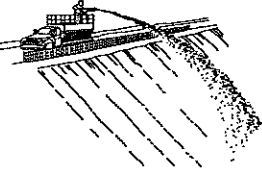
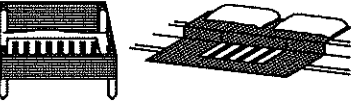
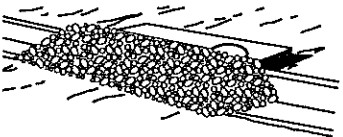
**SOIL EROSION & SEDIMENTATION
CONTROL MEASURES**

9-10-2010
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KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
23	 <p>STREAM RELOCATION</p>	<p>A detail depicting the proper procedures for stream relocation. Maintains same width, depth, and flow velocity as the natural stream. Revegetate banks with PERMANENT/TEMPORARY SEEDING (KEY 3), MULCHING AND MULCH ANCHORING (KEY 28), MULCH BLANKETS AND HIGH VELOCITY MULCH BLANKETS (KEY 33) and woody plants to shade the stream.</p>		•					•
24	 <p>SAND AND STONE BAGS</p>	<p>Sand and stone bags are a useful tool in the prevention of erosion. Can be used to divert water around a construction site by creating a DIVERSION DIKE (KEY 10). Works well for creating a CONSTRUCTION DAM (KEY 36) and temporary culvert end fill.</p>	•	•	•	•	•	•	•
25	 <p>SAND FENCE AND DUNE STABILIZATION</p>	<p>A Sand Fence traps blowing sand by reducing wind velocities. Can be used to prevent sand from blowing onto roads. Must be maintained until sand source is stabilized.</p>	•				•	•	
26	 <p>SILT FENCE</p>	<p>A permeable barrier erected below disturbed areas to capture sediments from sheet flow. Can be used to divert small volumes of water to stable outlets. Ineffective as a filter and should never be placed across streams or ditches where flow is concentrated.</p>	•				•	•	
27	 <p>PLASTIC SHEETS OR GEOTEXTILE COVER</p>	<p>Plastic Sheets can be used to create a liner in temporary channels. Can also be used to create a temporary cover to prevent erosion of stockpiled materials.</p>	•	•	•			•	
28	 <p>MULCHING AND MULCH ANCHORING</p>	<p>Anchored mulch provides erosion protection against rain and wind. Mulch must be used on seeded areas to promote water retention and growth. Should be inspected after every rainstorm and repaired as necessary until vegetation is well established.</p>	•		•		•	•	
29	 <p>INLET PROTECTION FABRIC DROP</p>	<p>Provides settling and filtering of silt laden water prior to its entry into the drainage system. Can be used in median and side ditches where vegetation will be disturbed. Allows for early use of drainage systems prior to project completion.</p>			•		•		
30	 <p>INLET PROTECTION GEOTEXTILE AND STONE</p>	<p>Provides settling and filtering of silt laden water prior to its entry into the drainage system. Should be used in paved areas where drainage structures are existing or proposed. Allows for early use of drainage systems prior to project completion.</p>			•		•		

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

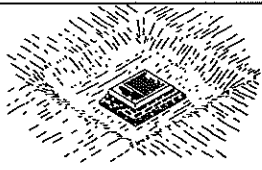
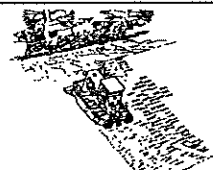
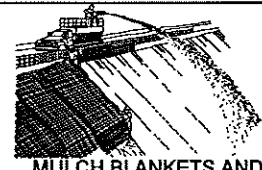
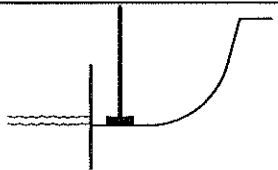

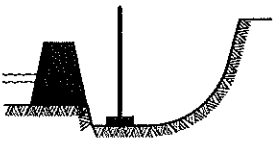

**SOIL EROSION & SEDIMENTATION
CONTROL MEASURES**

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KEY	DETAIL	CHARACTERISTICS	A	B	C	D	E	F	G
31	 <p>INLET PROTECTION SEDIMENT TRAP</p>	<p>An Inlet Protection Sediment Trap is a temporary device that can be used in areas where medium flows are anticipated. Effective in trapping small quantities of sediments prior to water entering the drainage system. Can be used in areas such as median and side ditches.</p>			•		•		
32	 <p>SLOPE ROUGHENING AND SCARIFICATION</p>	<p>A simple and economical way to reduce soil erosion by wind and water. Can be accomplished by harrowing with a disk, back blading, or tracking with a dozer perpendicular to the slope.</p>	•				•	•	
33	 <p>MULCH BLANKETS AND HIGH VELOCITY MULCH BLANKETS</p>	<p>Mulch blankets provide an immediate and effective cover over raw erodible slopes affording excellent protection against rain and wind erosion. High velocity mulch blankets work well for stabilizing the bottom of ditches in waterways.</p>	•		•		•	•	
34	 <p>COFFERDAM</p>	<p>Used to create a dry construction area and protect the stream from raw erodible areas. Must be pumped dry or dewatered according to DEWATERING WITH FILTER BAG (KEY 18).</p>		•					•
35	 <p>TEMPORARY BYPASS CHANNEL</p>	<p>Utilized when a dry construction area is needed. Isolates stream flows from raw erodible areas minimizing erosion and subsequent siltation. Can incorporate SEDIMENT BASIN (KEY 21), CHECK DAM (KEY 37), and GRAVEL FILTER BERM (KEY 13) to remove sediments from water. Construction sequence of events may be necessary.</p>			•				•
36	 <p>CONSTRUCTION DAM</p>	<p>Used to create a dry or slack water area for construction. Isolates the stream from raw erodible areas. Can be created out of any non-erodible materials such as SAND AND STONE BAGS (KEY 24), a gravel dike with clay core or plastic liner, steel plates or plywood.</p>		•					•
37	 <p>CHECK DAM</p>	<p>Can be constructed across ditches or any area of concentrated flow. Protects vegetation in early stages of growth. A Check Dam is intended to reduce water velocities and capture sediment. A Check Dam is not a filtering device.</p>	•		•			•	

MICHIGAN DEPARTMENT OF TRANSPORTATION
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**SOIL EROSION & SEDIMENTATION
CONTROL MEASURES**

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NOTES:

THIS STANDARD PLAN WILL SERVE AS A KEY IN THE SELECTION OF THE APPROPRIATE SOIL EROSION AND SEDIMENTATION CONTROL DETAILS. THIS PLAN ALSO PROVIDES THE KEY TO THE NUMBERED EROSION CONTROL ITEMS SPECIFIED ON THE CONSTRUCTION PLANS. REFER TO THE MDT SOIL EROSION & SEDIMENTATION CONTROL MANUAL, SECTION 6 FOR SPECIFIC DETAILS, CONTRACT ITEMS (PAY ITEMS), AND PAY UNITS.

COLLECTED SILT AND SEDIMENT SHALL BE REMOVED PERIODICALLY TO MAINTAIN THE EFFECTIVENESS OF THE SEDIMENT TRAP, SEDIMENT BASIN, AND SILT FENCE. AGGREGATES PLACED IN STREAMS SHOULD CONTAIN A MINIMUM OF FINES.

TEMPORARY EROSION AND SEDIMENTATION CONTROL PROVISIONS SHALL BE COORDINATED WITH THE PERMANENT CONTROL MEASURES TO ASSURE EFFECTIVE CONTROL OF SEDIMENTS DURING CONSTRUCTION OF THE PROJECT.

ALL TEMPORARY EROSION CONTROL DEVICES SHALL BE REMOVED AFTER VEGETATION ESTABLISHMENT OR AT THE DISCRETION OF THE ENGINEER. CARE SHALL BE TAKEN DURING REMOVAL TO MINIMIZE SILTATION IN NEARBY DRAINAGE COURSES.

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

SOIL EROSION & SEDIMENTATION
CONTROL MEASURES

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SECTION 01 74 00

CLEANING AND WASTE MANAGEMENT

PART 1 - GENERAL

1.01 SUMMARY:

- A. This Section includes, but is not necessarily limited to, maintaining all structures and the Site in a standard of cleanliness as indicated on the Drawings, as specified herein and as necessary for the proper and complete performance of the Work.
- B. Related Sections:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to:
 - a. General Conditions, Supplementary Conditions and Sections in DIVISION 01 of these Specifications.
 - b. In addition to standards described in this Section, comply with all requirements for cleaning up as described in various other Sections of these Specifications.

1.02 QUALITY ASSURANCE:

- A. Inspection:
 - 1. Daily and more often if necessary.
 - 2. Conduct inspections to verify that requirements of cleanliness are being met.

1.03 DELIVERY, STORAGE AND HANDLING:

- A. Hazards control:
 - 1. Volatile wastes:
 - a. Store in covered metal containers.
 - b. Remove from premises daily.
 - 2. Prevent accumulation of wastes which create hazardous conditions.
 - 3. Provide adequate ventilation during use of volatile or noxious substances.

1.04 PROJECT CONDITIONS:

- A. Cleaning and disposal:
 - 1. Conduct operations to comply with local ordinances and anti-pollution laws.
 - 2. Not allowed:
 - a. Burning or burying of rubbish or waste materials onsite.
 - b. Disposal of volatile wastes in storm or sanitary sewers: Volatile wastes include, but are not limited to, mineral spirits, oil or paint thinner.
 - c. Disposal of wastes into streams or waterways.

PART 2 - PRODUCTS

2.01 MATERIALS AND EQUIPMENT:

- A. Compatibility:
 - 1. Compatible with the surface being cleaned.
 - 2. Recommended by the Manufacturer of the material being cleaned.
 - 3. As reviewed by Engineer.

PART 3 - EXECUTION

3.01 PROGRESS CLEANING:

A. General:

1. Provide all required personnel, equipment and materials needed to maintain the specified standard of cleanliness.
2. Store materials:
 - a. In an orderly arrangement allowing maximum access.
 - b. To allow unimpeded drainage and traffic.
 - c. Provide for the required protection of materials.
3. Scrap, debris, waste materials and other items not required for construction of the Work.
 - a. Do not allow accumulation.
 - b. Remove from Site at least each week and more often if necessary.
 - c. Provide adequate storage for all materials awaiting removal.
4. Observe all requirements for fire protection and protection of the environment.

B. Site:

1. Daily, and more often if necessary:
 - a. Inspect the Site.
 - b. Pick up all scrap, debris and waste material: remove all such items to the place designated for their storage.
2. Weekly, and more often if necessary:
 - a. Inspect all arrangements of materials stored onsite.
 - b. Re-stack or otherwise service all arrangements to meet the requirements of paragraph 3.01-A-1 above.
3. At all times maintain the Site in a neat and orderly condition which meets the approval of Engineer.
4. Paved surfaces: Keep clean.
5. Dust control:
 - a. Control dust on or near the Work by the application of water, or other approved means.
 - b. If Contractor fails to correct unsatisfactory conditions with 24 hours after due notification:
 - 1) Owner may arrange for such work to be performed by other means.
 - 2) Pay costs.

C. Structures:

1. Weekly, and more often if necessary:
 - a. Inspect the structures.
 - b. Pick up all scrap, debris and waste material: remove all such items to the place designated for their storage.
 - c. Sweep all interior spaces clean:
 - 1) Clean: Free from dust and other material capable of being removed by reasonable diligence using a hand-held broom.
2. Preparation for installation of succeeding material:
 - a. Clean the structures or pertinent portions thereof:
 - 1) To the degree of cleanliness recommended by the Manufacturer of the succeeding material.
 - 2) Using all equipment and materials required to achieve the required cleanliness.

3. After installation of finish floor material:
 - a. Always clean the finish floor daily while work is being performed in the space in which finish materials have been installed.
 - 1) Clean: Free from all foreign material which, in the opinion of Engineer, may be injurious to the finish floor material.
4. Schedule cleaning operations so that dust and other contaminants resulting from cleaning operations will not fall on wet, recently painted surfaces.

3.02 FINAL CLEANING:

- A. Definitions:
 1. Clean: The level of cleanliness generally provided by commercial building maintenance subcontractors using commercial quality building maintenance equipment and materials.
- B. Prior to completion of the Work:
 1. Remove from the Site all tools, surplus materials, equipment, scrap, debris and waste.
 2. Conduct final progress cleaning as described in Article 3.01 above.
- C. Site:
 1. Unless otherwise specifically directed by Engineer:
 - a. Hose down all paved areas onsite and all public sidewalks directly adjacent to the Site.
 - b. Rake clean other surfaces of the grounds.
 2. Remove all resultant debris.
- D. Structures:
 1. Exterior:
 - a. Visually inspect all exterior surfaces.
 - b. Remove all traces of soil, waste material, smudges and other foreign matter.
 - c. Remove all traces of splashed materials from adjacent surfaces.
 - d. If necessary, to achieve a uniform degree of exterior cleanliness, hose down the exterior of the structure.
 - e. In the event of stubborn stains not removable with water, Engineer may require light sandblasting or other cleaning at no additional cost.
 2. Interior:
 - a. Visually inspect all interior surfaces.
 - b. Remove all traces of soil, waste material, smudges and other foreign matter.
 - c. Remove all traces of splashed materials from adjacent surfaces.
 - d. Remove all paint droppings, spots, stains and dirt from finished surfaces using only the specified cleaning materials and equipment.
 3. Glass: Clean all glass inside and outside.
 4. Polished surfaces: To all surfaces requiring the routine application of buffed polish, apply the specified polish as recommended by the Manufacturer of the material being polished.
- E. Timing: Schedule final cleaning as approved by Owner or Owner's representative to enable Owner to accept a completely clean Project.

END OF SECTION

SECTION 01 78 00
CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 SUMMARY:

- A. This Section includes, but is not necessarily limited to, the procedures, submittals, responsibilities and requirements for Contract closeout.

1.02 CLEANING:

- A. General:
 - 1. Manufactured products: Manufacturer's instructions.
 - 2. Clean-up during construction: Maintain premises and public properties free from accumulations of waste, debris and rubbish caused by operations.
 - 3. Final clean-up: Remove waste materials, labels, rubbish, tools, equipment, machinery and surplus materials, and clean all surfaces; leave the Work clean and ready for occupancy.
- B. Delinquency:
 - 1. Remedies: Failure to clean-up promptly is considered to be defective Work:
 - a. OWNER may correct: ARTICLE 13 of SECTION 00 72 00 - GENERAL CONDITIONS.

1.03 WORK RECORD DOCUMENTS:

- A. Maintenance of Documents:
 - 1. Maintain one (1) copy at job-site in good order of:
 - a. Contract Drawings.
 - b. Specifications.
 - c. Addenda.
 - d. Reviewed shop drawings.
 - e. Change Orders.
 - f. Other Contract modifications.
 - 2. Filing: Work specification format.
 - 3. Accessibility: To OWNER and ENGINEER.
- B. Recording:
 - 1. Keep record documents current.
 - 2. Contract Drawings: Legibly mark to record actual construction:
 - a. Field changes of dimension and detail.
 - b. Changes made by Change Orders and Bulletins.
 - c. Details not on original Contract Drawings.
 - 3. Specifications and Addenda: Legibly mark up each SECTION to record:
 - a. Manufacturer, trade name, catalog number and supplier of products actually installed.
 - b. Changes made by Change Orders and Bulletins.
 - c. Other matters not originally specified.
- C. Submittal:
 - 1. Delivery: To ENGINEER prior to final payment.
 - 2. Transmittal letter: Contain:
 - a. Date.

- b. Project title and number.
- c. CONTRACTOR's name and address.
- d. Title and number of each record document.
- e. Certification that each document, as submitted, is complete and accurate.

1.04 LUBRICATION AND START-UP:

- A. General:
 - 1. Manufactured Products: Manufacturer's instructions.
 - 2. Lubricants: One year supply manufacturer's recommended.

1.05 TOUCH UP AND REPAIR:

- A. General:
 - 1. Manufactured Products: Manufacturer's instructions.
 - 2. Field fabricated products: Appropriate SECTIONS.

1.06 OPERATION AND MAINTENANCE MANUALS:

- A. Submit as required by Contract Documents prior to final payment.

1.07 SUBSTANTIAL COMPLETION:

- A. Procedures and Requirements: Paragraph 14.04 of the General Conditions.

1.08 REMOVAL OF TEMPORARY SOIL EROSION CONTROL MEASURES:

- A. See Section 01 57 13 – Temporary Erosion and Sedimentation Control.

1.09 FINAL PAYMENT:

- A. Procedures and Requirements: Paragraph 14.07 of the General Conditions.
- B. Submit Affidavit and Consent of Surety prior to final payment.
- C. Submit Work record documents, O & M manuals, remove temporary soil erosion control measures or provide Letter of Credit of approved amount to guarantee removal by a later date, and complete all punch list items prior to final payment.
- D. Final payment will not be recommended by ENGINEER until MEDC has completed their audit of the required documentation and has accepted the Project.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.01 SCHEDULES:

- A. Attached are the following forms:
 - 1. Certificate of Substantial Completion.
 - 2. Affidavit and Consent of Surety.
 - 3. Letter of Credit Form

END OF SECTION

CERTIFICATE OF SUBSTANTIAL COMPLETION
(on ENGINEER's Letterhead)

OWNER _____

CONTRACTOR _____

Contract: _____

Project: _____

OWNER'S Contract No. _____ ENGINEER's Project No. _____

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

All Work under the Contract Documents: 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 Project or portion thereof designated above is hereby declared and is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below.

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

The 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.

Executed by ENGINEER

Date

Accepted by CONTRACTOR

Date

Accepted by OWNER

Date

STATE OF MICHIGAN)
)
COUNTY OF _____)

AFFIDAVIT

Notice to Contractor: This is a sample copy. Three completed copies of this form or similar form must be submitted to the ENGINEER before final payment will be recommended.

_____, CONTRACTOR

being duly sworn, deposes and says that he entered into an Agreement (Contract) with the _____ of _____ (OWNER) on the ____ day of _____ 20_ for the performance of certain Work generally described as follows: _____

CONTRACTOR further says that the Work under the terms of the Contract has been completed and all sums due to Contractors, Subcontractors, suppliers and laborers with whom CONTRACTOR has contracted for performance under the Contract have been paid in full.

Furthermore, in consideration of final payment under the Contract, CONTRACTOR hereby waives and releases any and all claims or rights which CONTRACTOR may have in connection with the Contract against OWNER or the premises upon which the Contract Work was performed, and agrees to indemnify OWNER against any and all such claims or rights which may be asserted by Contractors, Subcontractors, Suppliers or laborers with whom CONTRACTOR has contracted for performance under the Contract.

WITNESSES:

CONTRACTOR: _____

Signature

Name and Title (Typed or printed in ink)

Subscribed and sworn to before me this ____ day of _____, 20_

Notary Public, _____ County _____

My commission expires: _____

CONSENT OF SURETY

The undersigned, as Surety on the above described Contract, hereby consents to the making of final payment to the CONTRACTOR under the Contract.

DATE: _____ SURETY COMPANY: _____

Signature (Attorney-in-fact)

Name and Title (Typed or printed in ink)

(Attach copy of power of attorney certified to date of consent)

LETTER OF CREDIT FORM

Bank:

[Bank's Name and Address]

Irrevocable Standby Letter of Credit
Bank Reference No. _____
Issued: _____

Beneficiary:

[Owner's Name and Address]

Applicant:

[Contractor's Name and Address]

Project:

[Description of Project and remaining Work to be completed]

Date: _____
Expiration Date: _____ ***[as approved by Owner and Engineer]***
Amount: USD _____ ***[as approved by Owner and Engineer]***
Bank Reference No.: _____

Gentlemen:

We hereby establish our Irrevocable Standby Letter of Credit No. _____ in your favor for the account of **Applicant** up to an aggregate amount of USD _____ available by your draft(s) at sight drawn on **Bank**.

Drafts to be accompanied by the following document(s):

1. Beneficiary's written statement, stating: "**Applicant** has failed to satisfactorily install the **Project**."
2. Copy of Letter of Credit and any amendments.

Partial drawings are permitted.

Draft(s) must be marked "Drawn under **Bank** Irrevocable Standby Letter of Credit No. _____ dated _____."

We hereby agree with you that drafts drawn under and in strict compliance with the terms of this credit will be duly honored by us upon presentation at this office on or before our close of business on **Expiration Date**.

Except as otherwise expressly stated herein, this Letter of Credit is issued subject to the International Standby Practices of the International Chamber of Commerce ("ISP98"). This Letter of Credit shall be deemed to be a contract made under the laws of the State of Michigan and shall, as to matters not governed by ISP98, be governed by and construed in accordance with the laws of the State of Michigan, other than its conflict of laws rules, which would result in the application of the law of any jurisdiction other than the laws of the State of Michigan.

Sincerely,

Bank

Authorized Signature

Printed Name and title

SECTION 22 50 00

POOL AND FOUNTAIN PLUMBING SYSTEMS

PART 1 - GENERAL

1.01 SUMMARY

- A. Work included - Provide and install fountain equipment mechanical and electrical package in accordance with the Contract Documents. Furnish all labor, materials, apparatus, tools, equipment, transportation, temporary construction, and special or occasional services as required to make a complete working fountain installation, as shown on the drawings or described in these specifications.
- B. The work of this Section shall include, but not be limited to the following:
 - 1. Fountain Display System including pumps, valves, and specialties (nozzles, pool fittings, etc.) as hereinafter described, listed and shown on the drawings.
 - 2. Fountain Electrical Control System including control panel, water level controller, time switches, relays, motor starters, grounding system, and other circuits and accessories as required, U.L. 508 Listed.
 - 3. Fountain Submersible Lighting System accessories and controls.
 - 4. Filtration and Water Treatment System, media, accessories, and controls.
 - 5. All special tools for proper operation and maintenance of equipment provided under this section.

1.02 REFERENCE STANDARDS

- A. This installation shall comply with all applicable and the most stringent provisions of the latest edition of the following codes.
 - 1. BOCA - National Building Code
 - 2. UPC - Uniform Plumbing Code
 - 3. NEC- National Electrical Code
- B. Materials furnished hereunder shall, where applicable, comply with the latest edition of applicable standard specifications published by the following organizations:
 - 1. ASTM - American Society for Testing and Material
 - 2. ANSI - American National Standards Institute
 - 3. IEEE - Institute of Electrical & Electrical Eng.
 - 4. IPCEA - Insulated Power Cable Engineers Assoc.
 - 5. NEMA - National Electrical Manufacturers Assoc.
 - 6. ASME - American Society of Mechanical Engineer
 - 7. UL - Underwriters Laboratories, Inc.
 - 8. NSF - National Sanitation Foundation
 - 9. ASSE - American Society of Sanitary Engineers
 - 10. AWWA - American Water Works Association
 - 11. CS - Commercial Standards

1.03 QUALITY ASSURANCE

- A. All workmanship and materials shall conform and comply with the requirements of building ordinances, codes, rules and regulations of all departments of Federal, State, county, and city having lawful jurisdiction over the work in this section.
- B. When these specifications and/or drawings call for or describe materials, workmanship, or construction of a better quality, higher standard, or larger size than is required by the above mentioned rules and regulations, the provisions of these specifications and/or drawings shall take precedence over the requirements of said rules and regulations.
- C. The Contractor shall furnish, without extra charge, any additional material and/or labor required for compliance with these rules and regulations although not mentioned in these specifications or indicated on the drawings.
- D. All materials shall be new and shall conform with applicable standards in every case where such standards have been established for the particular material in question.
- E. All work shall be executed by workmen skilled in the craft to which they are assigned. Adequate supervision shall be provided to maintain high quality workmanship.
- F. The Vortex Aquatic Structures name and catalog numbers are used to establish a high standard of quality and utility for the specified items and to provide a dimensional reference for installation plans that are drawn to scale.
- G. Any proposal for substitution of materials or equipment shall be submitted 10 calendar days prior to the final bid date; otherwise, no substitutions will be permitted. Submittal for equivalent items shall, where applicable, include the following data which are not necessarily required for specified items:
 - 1. Performance Characteristics and hydraulic and electrical load data.
 - 2. Materials of construction, fabrication, and manufacture.
 - 3. Certification of Conformance with specific codes, standards, and specifications.
 - 4. Submittal of substituted equipment may be rejected if the component alters the design in a manner that affects other trades or if it impairs accessibility or critical clearances.
 - 5. No substitutions shall be made unless authorized in writing by the Architect/Engineer. Should a substitution be accepted and should the substitute material prove defective or otherwise unsatisfactory for the service intended within the guarantee period, the Contractor shall replace this material or equipment with material or equipment specified, at its own expense, and to the satisfaction of the Architect/Engineer/Owner.
 - 6. Contractors submitting bids on substitute materials and equipment must also submit a bid on the "as specified" materials and equipment.
 - 7. Contractors submitting bids on substitute materials and equipment must also provide a written performance guarantee certifying that the substitute materials and equipment will produce the specified water effects.

1.04 MATERIAL SUPPLIER'S RESPONSIBILITY

- A. Design Responsibility: The Equipment Supplier shall accept complete design responsibility for the hydraulic and electrical system, provided that all equipment required for the fountain installation is procured from the specified equipment Manufacturer as itemized in its proposals and materials list on the final, approved installation drawings.
- B. The Contractor shall be responsible for installation of all equipment required for the fountain installation in accordance with fountain supplier's drawings and instructions.

- C. Performance Guarantee: The Equipment Supplier shall guarantee the fountain to perform to the designed water heights and spray patterns, provided that installation of the equipment is in strict accordance with the supplier's recommendations, instructions, details, and approved drawings.
- D. Warranty: All materials and component parts, excluding lamps, supplied by the Manufacturer, shall be guaranteed to be free from defects of materials and/or workmanship for a period of one year from date of substantial completion or 18 months from shipment, whichever comes first. (Complete warranty form available from material supplier on request.)

1.05 SUBMITTALS AND DRAWINGS

- A. The Contractor shall submit complete shop drawings to the Architect for approval, in quantities required for proper distribution and in accordance with the requirements of the General Conditions.
- B. Shop drawings shall include or incorporate those final drawings furnished by the Equipment Supplier, as specified herein, together with all additional information and drawings required to show the proper installation of fountain equipment. "Preliminary" or "schematic" drawings provided by the Equipment Supplier shall not be used for installation purposes.
- C. The Contractor shall deliver drawings for approval, after the signing of the contract, so as not to delay the construction required under other sections.
- D. Submittals shall include the following:
 - 1. Materials list for all materials and equipment furnished.
 - 2. Shop drawings and product data for all materials and equipment furnished.
 - 3. Shop drawing of the equipment space layout showing all mechanical/electrical equipment, piping and conduit. Include pipe elevations and dimensions between pipe centerlines where relevant. Provide layout drawings of all pipe runs and pool fitting locations.
 - 4. Shop drawings shall include outline dimensions, operating and maintenance clearances required, and sufficient technical data to indicate compliance with the Specification.
 - 5. Shop drawings may not include details reproduced from the Contract Documents except when submitting "as specified" materials and equipment.
 - 6. Submittals may be rejected if they are difficult to read due to insufficient scale, poor image quality, or poor drafting quality; or if the required information is not included.
 - 7. Work shall not proceed until submittals have been approved by the Engineer.
 - 8. The Contractor shall provide labeled equipment certifying approval, as hereinafter specified, by Underwriters Laboratories (UL) whenever available.

1.06 COORDINATION

- A. The Contractor shall coordinate the work with all trades and appropriate sections of the construction specifications as necessary to ensure proper provisions for the work of this section.
- B. The Contractor shall be responsible for the protection of the Owner's property from injury or loss due to its work. All damage to existing property (building, utilities, pavement, etc.) or planting (trees, shrubs, lawn or ground cover) caused by the Contractor during its operation or as a result of malfunction of installed work during the guarantee period shall be repaired at the Contractors expense.
- C. The Contractor shall fully inform itself regarding any available space limitations and unusual requirements, for the installation of all materials and work furnished under this section. Although the location of equipment may be shown on the drawings in certain positions, the Contractor shall also be guided by the Architectural details and conditions at the job, correlating its work with that of

the other sections and other trades, with discrepancies and interferences being brought to the attention of the Architect for resolution prior to proceeding with the work.

1.07 PERMITS AND FEES

- A. Permits: The Contractor shall secure and pay for all permits, inspections, and certificates of inspection of any governmental and inspection body having jurisdiction over all or any part of the work included under this section and/or such inspections etc., required by these specifications.
- B. Fees: The Contractor shall secure and pay for all fees and assessments in connection with the work under this contract and shall include this cost in its bid and contract price.

1.08 CONTRACTOR GUARANTEE AND EQUIPMENT WARRANTY

- A. In entering into a contract covering this work, the Contractor accepts the specifications and drawings and guarantees that the work will be performed in accordance with the requirements of the specifications and drawings, as may be made in the contract documents.
- B. The Contractor further guarantees that the workmanship and material will be of the best quality procurable and that only experienced workers, familiar with each particular class of work, will be employed.
- C. The Contractor further agrees to hold itself responsible for any defects which may develop in any part of the entire system, including equipment as provided for under this specification, due to faulty workmanship, design or material and to replace and make good, without cost to the Owner, any such faulty parts or construction which may develop at any time within one (1) year from the date of the final acceptance. Any repairs or replacements required because of defects, as outlined in this clause, are to be made promptly and approved in writing by the Architect.
- D. Contractor shall warrant all material found defective within one (1) year of final acceptance and shall be replaced at no cost to the Owner including labor to remove and re-install any defective materials.
- E. The warranty shall not extend to damage incurred through incorrect or improper operation and maintenance by the Owner. The Owner shall assume full responsibility for proper operation and maintenance upon final acceptance of installation from Contractor.
- F. In the case of Manufacturer's guarantees being limited, or expiring within the specified guarantee period, the Contractor shall be responsible for purchasing and providing service contracts and additional warranty coverages to extend through the warranty period as may be required by Owner.

1.09 MAINTENANCE MANUAL

- A. The Equipment Supplier shall deliver to the Owner three (3) copies of the Operations and Maintenance Manual, together with any additional information or manuals which would assist in the proper operation and maintenance of equipment.
- B. The Contractor shall, at its expense, arrange and provide for the technical instruction of the Owner's maintenance personnel, by the Equipment Supplier's personnel, for such time as is reasonably required to acquaint them with the operation and maintenance of all equipment furnished and installed under this section.

PART 2 – PRODUCTS

2.01 GENERAL

- A. Contractor shall be responsible for purchasing all fountain mechanical and electrical materials and tools for the fountain and shall then furnish electrical fountain components to the electrical contractor for installation and connection.
- B. Materials not listed within these specifications or on drawings as furnished by the Equipment Supplier, but required for the complete installation of the fountain mechanical and/or electrical systems, shall be furnished by the Contractor.
- C. Materials shown on the drawings, but not specified herein, shall be provided in accordance with information shown on the drawings and the general provisions of this part of the specification.
- D. Substitutions in the list of equipment included in this section may be made by the Equipment Supplier only if the equipment is of better quality and more effective than that listed, improves system design and performance or delivery times, and only if the changes are thoroughly documented and approved in writing by the Engineer.
- E. In the 2023 NEC®, Section 680.54(C) shall be required to provide clarity on where equipotential bonding of splash pads begins and ends. According to the Article 100 definition, a splash pad is a fountain intended for recreational use by pedestrians and designed to contain no more than 1 inch of water depth
- F. According to 680.50(A)(2), splash pads must comply with the requirements in 680.26 which provides requirements for equipotential bonding including perimeter surfaces around a splash pad.
- G. Per the code language in 680.54(C), the shell of a splash pad shall comprise the area traversed by pedestrians bounded by the extent of the footing of the splash pad and rising to its exposed surface(s) and its collection basin area. The boundary of this area shall be considered to be the inside wall for the purpose of perimeter bonding.

2.02 SPECIALIZED FOUNTAIN MATERIAL MANUFACTURER/SUPPLIER

- A. All fountain equipment specified and supplied to the Contractor shall be supplied by a single fountain Equipment Supplier/Manufacturer.
- B. Approved Manufacturer - Subject to compliance with requirements, the following is the approved Manufacturer/Supplier for specialized fountain system equipment listed in this specification.
 - Vortex Aquatic Structures or engineer approved equal
Angela J. Monroe
Senior Sales Executive – Michigan & Indiana
PO Box 240 – Williamston – Michigan - 48895
517-375-2316 (Phone)
amonroe@vortex-intl.com
vortex-intl.com
- C. The Equipment Supplier must currently be in the business of supplying fountain equipment for a minimum of twenty (20) years and shall have previously supplied fountain system design, drawing and equipment, similar in size and complexity to the specified project.
- D. The specified supplier shall have minimum assets of \$750,000. and be able to furnish "CPA" verification of asset strength at the request of the Project Architect.

2.3 MATERIAL MANUFACTURER/SUPPLIER'S RESPONSIBILITY

- A. Warranty: All materials and component parts, excluding lamps supplied by the Equipment Supplier, shall be guaranteed to be free from defects of materials and/or workmanship for a period of one (1) year from date of official start-up or 18 months, whichever is sooner.
- B. Design Responsibility: The Equipment Supplier shall accept complete design responsibility for the hydraulic and electrical system, provided that all equipment is supplied by it as indicated. This does not include responsibility for the actual installation of the equipment except where the equipment is installed by the Equipment Supplier.
- C. Performance Guarantee: The Equipment Supplier shall provide a written performance guarantee certifying that the fountain system will perform to the designed water heights and patterns and will create the designed water heights and patterns, and will create the designed lighting effects, providing the equipment is supplied by a single Equipment Supplier and the installation is in accordance with the Supplier's recommendations and drawings.

2.4 FOUNTAIN EQUIPMENT PACKAGE

- A. **COMPONENTS**: See drawings for list of required components.

2.5 FOUNTAIN PERFORMANCE CRITERIA

- A. This is an exterior 'dry' deck style of water feature located in Alcoa Celebration Square. The fountain contains no visible standing body of water. The fountain deck area has a diameter of approximately 18 feet. Located in the center of the fountain is a flush mount Spritzer nozzle to create a column of water with a spray height of 10 feet. Located around this nozzle are (4) Jet Cluster nozzles to create columns of water with a spray height of 7 feet. Located in a circle on a 10' diameter are eight evenly spaced flush nozzles to create arcs of water that shoot upwards and inwards toward the center of the fountain. Located in each of the thirteen flush mount nozzle housing is an LED donut light fixture to provide illumination. The LED donut light contains RGB LED diodes which can be operated through a pre-programmed color dial switch located in the burial vault. The Color Dial allows the user to cycle through pre-set light shows while varying the speed of each show.
- B. Located in the main equipment vault is a timeclock, programmable controller, variable frequency drive, and electrically operated valves to produce limited programming capabilities for the fountain. The fountain is to be programmed to operate in a reduced spray height mode during midday hours when it is most likely that young children will be playing in the fountain. During the remaining hours of operation, the fountain will operate at the full spray heights listed above. Additionally, the interior cluster of (5) nozzles will be able to turn on/off as a group, and the exterior ring of (8) nozzles will also be able to turn on/off as a group.
- C. Water from the display nozzles will drain back through their niche housing to a remote storage tank/reservoir located in a landscape area near the fountain. The main pump vault also located in the landscape area will pull water from the reservoir for filtration and re-circulation. Since the fountain is intended for interaction with visitors, a water treatment vault containing a PH/ORP system is also located in the landscape area to continually monitor and maintain the water quality.
- D. The following utilities are required for the architectural fountains: A 1" connection water supply reduced to 45psi with backflow preventer is to be brought to the main equipment vault. A 3" drain will come from the reservoir tank and is to be tied into site sanitary. A power feed of 120/208-240 Volt, single-phase, 3-wire feeder +GND is to be connected to the control panel located in the main equipment vault.

PART 3 - EXECUTION

3.1 GENERAL

- A. Install and connect all equipment in accordance with Manufacturers' instructions and recommendations. Provide all piping, valves, and connections recommended by the Manufacturer for proper operation.
- B. Protect all pipes, equipment, and other parts of the work against injury by exposure to the weather during construction while stored or installed in place.
- C. Make all adjustments required for the proper operation of the mechanical system. Use Manufacturer's factory technicians where adjustments cannot be accomplished by the Contractor's personnel at Contractors' expense.

3.2 ALIGNMENT AND LUBRICATION OF ROTATING EQUIPMENT

- A. After installation, align all pumps connected to motors by means of flexible couplings, if necessary, to within the tolerance limits recommended by the equipment and coupling manufacturers.
- B. Before any rotating equipment is put in operation for testing purposes, properly lubricate with lubricants recommended by the Manufacturer. Further lubricate before final acceptance. Provide a complete schedule of lubrication of all rotating equipment within the equipment literature binder.

3.3 VALVE INSTALLATION

- A. Supply all piping systems with valves arranged to provide necessary isolation and give regulating control throughout the system.
- B. Butterfly valves used to isolate equipment or accessories shall be lug-type installed in a manner to allow servicing without draining the system.
- C. Check valves shall close against pressure.
- D. Do not install valve stems below horizontal line.

3.4 PIPE INSTALLATION

A. General

- 1. Provide schedule 80 PVC piping for all suction and discharge lines running between the pumping skids in the fountain equipment room and water feature.
- 2. Provide schedule 80 PVC flanges or unions as indicated and as necessary, to allow removal and reinstallation of any item, or equipment, or accessory without cutting, welding, or soldering.
- 3. Provide discharge piping of proper size for all air vent, solenoid and relief valves. Extend to nearest drain.
- 4. Provide a readily accessible 1-1/2" hose angle valve with hose connection and hose, at all low points in the system and immediately downstream of check valves as necessary to allow the system to be completely drained.
- 5. Cut pipe to measurements established at the site. Work into place without springing or forcing.
- 6. Protect all openings in piping during construction to prevent entrance of foreign matter.
- 7. Cut pipe and tubing ends square. Remove rough edges and burrs so that a smooth and unobstructed flow will be obtained.
- 8. Close or short nipples should be used only where shown on the Drawings, or absolutely necessary to satisfy dimensional constraints.

9. Make changes in pipe size using reduced fittings. Use bushings only if shown on the drawings.
10. Unless otherwise noted, connections to equipment or accessories shall be threaded for sizes 3" and smaller, flanged for sizes 4" and larger.
11. Arrange exposed piping straight, parallel and perpendicular to the walls of the structure unless otherwise shown on the drawings.
12. Wherever two or more pipes are installed in parallel, allow sufficient space for required gluing, welding, soldering, painting, and/or the application of insulation.
13. Bevel all pipe ends with a coarse file or beveling tool.
14. Clean surfaces to be joined of all loose dirt and moisture from the I.D. and O.D. of the pipe end and the I.D. of the fitting socket.
15. Apply a coating of purple primer to the entire I.D. surface of the fitting socket and to an equivalent area on the O.D. of the pipe end.
16. Apply heavy body gray solvent cement using an appropriate natural bristle brush as follows: Apply a liberal coating of cement around the entire perimeter of the pipe end to a width slightly more than the equivalent socket depth of the fitting. Apply a light but complete coating once around the entire depth of the socket surface, avoiding excessive cement application. Apply a second liberal coating onto the pipe end.
17. Immediately after cementing, insert the pipe into the fitting to the full socket depth while rotating the pipe or fitting one-quarter turn. Hold joint for at least 15 seconds after joining to make sure pipe does not back out of the socket.
18. Do not disturb or move the joint for at least one hour after joining.
19. Do not solvent weld pipe if ambient air temperature is below 40 degrees F. or above 90 degrees F., or if it is raining.
20. Discard cement when an appreciable change in viscosity takes place or if cement is lumpy or stringy. Do not thin. Cement must be used before expiration date shown on the container.

B. Pipe Protection

1. Copper or brass piping, encased in concrete: Exterior shall be wrapped with one layer of pipe wrap at half lap.
2. Copper or brass piping, underground: Exterior shall be coated with two coats of coal tar mastic to a total thickness of 8 to 10 mils. Allow 12 hours drying time between applications. Clean and prepare pipe exterior in accordance with manufacturer's recommendations.

C. Penetrations

1. Core drilling for pipe penetrations shall be accomplished only at locations and in a manner approved by the Architect.
2. Provide a metal or approved plastic sleeve or core-drilled hole for every pipe passing through a concrete wall or floor.
3. Provide a water stop or membrane clamp for every pipe or sleeve penetrating an exterior concrete wall or floor or the fountain wall or floor, whichever is appropriate to the waterproofing method and/or as shown on the Drawings.
4. Seal sleeves passing through interior walls with foam sealant, unless otherwise indicated on the Drawings.
5. Seal sleeves passing through exterior walls with resilient seal and foam sealant, unless otherwise indicated on the Drawings.

D. Piping Tests

1. Provide all temporary piping, pumps, and gauges necessary to conduct the specified tests.
2. Conduct all tests before concealment of work and before any coating, wrap, or insulation is applied.
3. Replace or repair any part that leaks. Repeat test until criteria are met.
4. Do not subject any item to a test pressure greater than the pressure rating of the item.
5. Vent air from all piping being tested.
6. Underground piping shall be tested as follows:
7. In accordance with pipe manufacturers' recommendations and procedures, pressurize all underground piping (except for drain system) to 75 psi prior to backfilling (spot backfilling to anchor piping may be done prior to pressurizing). Piping shall remain pressurized until all backfilling, grading, planting, and concrete work in the area of the piping is completed.
8. In accordance with pipe manufacturers' recommendations and procedures, pressurize all underground drain piping beneath the equipment space to 15 psi until all backfilling and concrete work in the area is completed.
9. The completed piping system shall be tested as follows:
 - I. Conduct each test for a minimum continuous duration of eight hours.
 - II. Hydrostatically pressure test all storm and sanitary drain piping at 15 psi.
 - III. Hydrostatically pressure test all other piping and equipment at 75 psi.
 - IV. Strike all solder joints with a soft-face hammer while under pressure.
 - V. Log pressure readings for all tests required above at the beginning and end of each test and on every working day between. Note the location and cause of any failures and method of repair on the daily log. Submit copy of the log to the Architect weekly.
 - VI. Testing of the completed system, as specified above, shall be witnessed by the Architect.

E. Flushing

1. Before the fountain system is placed in operation, flush all fountain system piping with water to remove foreign matter and debris in piping.
2. Completely drain all piping and equipment. Re-flush as necessary until water runs clean.
3. Fill the system to the required capacity with clean water.
4. Circulate the water throughout the system for one hour, using the display pump. Install start-up screens as necessary to prevent equipment clogging and damage.
5. Drain, fill, and circulate (repeat previous three steps above) until the water remains clear.

3.5 HOUSEKEEPING PADS

- A. All floor-mounted equipment shall be erected on reinforced concrete housekeeping pads. Pads shall be 4" high with chamfered edges except where otherwise indicated or required on Architects' drawings.

3.6 SUPPORTING DEVICES

- A. Furnish and install all required fasteners, rods, hangers, supports, bolts, nuts, washers, and steel plates and shapes.
- B. Furnish and arrange for the installation of all required inserts and anchor bolts. Provide templates where appropriate.
- C. Provide additional hangers or supports at all valves, strainers, and elsewhere where required to properly support any additional pipe loadings.
- D. Where several pipes occur at the same elevation, trapeze type hangers.
- E. Provide copper plated hangers where hangers are in direct contact with copper piping.
- F. Strap hangers are not permitted in any piping work.
- G. Equipment may not support any of the pipe loading, nor may equipment, except valves and strainers, be supported by any of the piping.
- H. Basket strainers larger than 3" shall be independently supported.
- I. Piping shall not be supported by another pipe or duct.

3.7 EQUIPMENT IDENTIFICATION

- A. Provide a securely attached permanently engraved metal nameplate for each piece of equipment containing all data required to properly identify the equipment (i.e. manufacturer, type, size, capacity, horsepower, etc.).
- B. Provide a valve tag for each valve to provide information to correlate the valve with the outlet or fitting served.
- C. Provide a half-size copy of the "As-built" Schematic Diagram, permanently encased in plastic, to provide the Owner's operating personnel ready correlation of each valve identified with each outlet or fitting served.
- D. Install nameplates for gauge/control device panels as shown on the Drawings. Attach using stainless steel machine screws.
- E. Provide flow direction arrow pipe bands on all system piping. (Seton or equal)

3.8 ADJUSTMENTS

- A. Make temporary and final adjustments for each system and equipment apparatus installed, using factory-trained technicians when appropriate. Refer to the Drawings and operation and maintenance manuals for system start-up and adjustment details. Contact Manufacturer/Supplier for additional assistance as necessary.

3.9 OPERATING INSTRUCTIONS

- A. At the time of completion, a period of not less than eight hours shall be allotted by the Contractor for instruction of operating and maintenance personnel in the use of all systems. All personnel shall be instructed at one time, the Contractor making at its expense, all necessary arrangements with Manufacturer's technicians to provide instruction, product literature, and application guides for the user's reference.

3.10 THIRTY-DAY OPERATION PERIOD

- A. Prior to acceptance of the installation by the Owner, demonstrate a thirty day, fully automated, uninterrupted daily operation of not less than eight hours, nor more than sixteen hours, for all systems provided under this Section.

- B. Supervise the operation of the equipment and be responsible for the proper operation thereof and make no claim against the Owner for any damage to the equipment during such operation. Make such changes, adjustments, or replacement of equipment as may be required to ensure installation complies with the Specifications and replace any defective **or** non-conforming parts or materials.
- C. The costs of labor, electricity, water, and operational tools, equipment and supplies during the thirty-day operation period shall be paid by the Contractor.
- D. Coordinate the thirty-day operation period with all trades related to the fountain work.

END OF SECTION

SECTION 26 05 00

BASIC ELECTRICAL REQUIREMENTS

PART 1 GENERAL

1.01 RELATED SECTIONS

- A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements (if any), apply to the work specified in this Section.

1.02 DESCRIPTION OF WORK

- A. This Section specifies several categories of provisions for electrical work, including:
 - 1. Certain adaptive expansions of requirements specified in Division 1.
 - 2. General performance requirements within the electrical systems as a whole.
 - 3. General work to be performed as electrical work because of its close association.
 - 4. Drawings and Specifications:
 - a. Drawings: Refer to the E-Series Drawings for graphic representations, schedules, and notations showing electrical work.
 - b. Specifications: Refer to the bid categories for the related primary technical specifications of electrical work.
 - c. Drawings and Specifications are intended to supplement each other, and all work specified or indicated in either shall be provided.

1.03 COORDINATION OF ELECTRICAL WORK

- A. General: Refer to the Division 1 sections for general coordination requirements applicable to the entire scope of work. It is recognized that the documents are diagrammatic in showing physical relationships which must be established within the electrical work, and in its interface with other work, including utilities and mechanical work. Such establishment is the exclusive responsibility of the Electrical Contractor.
- B. Advise other trades of openings required in their work for the installation of large electrical equipment.
- C. The Electrical Contractor shall be responsible for all subcontractors and suppliers, and include in his bid all materials, labor, and equipment to other trades involved in accordance with all local customs, rules, regulations, jurisdictional awards, and decisions and secure compliance of all parts of the specifications and drawings regardless of Sectional inclusion in these specifications.
- D. Equipment Clearance:
 - 1. Electrical Contractor to coordinate with the Mechanical Contractor's equipment locations, to insure adequate clearance is maintained, as required by the National Electrical Code, applicable state and local codes, and for future maintenance and operation.

1.04 PRODUCT SUBSTITUTIONS

- A. Substitutions requested for review during or after bidding may be reviewed by the ENGINEER upon request at a fee of \$500.00 per product review.

1.05 SUBMITTAL PROCEDURES

- A. General: Refer to Division 1 for general administrative/procedural requirements related to shop drawings. Provide Shop drawings for all equipment as specified in individual specification sections. Provide at a minimum 6 copies of each shop drawing.

1.06 SITE AND PROJECT DOCUMENTATION EXAMINATION

- A. Submission of proposal is considered evidence the Electrical Contractor has visited site, examined drawings and specifications of all trades including Architectural, Structural, Mechanical and Electrical, and fully informed himself with all project and site conditions. It is also evidence that they are proficient, experienced, and knowledgeable of all standards, codes, ordinances, permits, and regulations which affect his completion, cost, and time required, and that all costs are included in the proposal.
- B. Each Electrical Contractor and subcontractor shall examine all drawings and specifications of his trade and work shown on drawings, shop drawings and field layouts of all other trades (including Architectural, Structural, Mechanical and Electrical) working on the project prior to starting his required work, and coordination of all work with other trades.
- C. All schedules on drawings and specifications are only for convenience of the Electrical Contractor. Each Electrical Contractor shall make his own count and, where fixtures or equipment are shown on drawings but not on schedule, provide like equipment or fixtures for like rooms or use.

1.07 QUALITY ASSURANCE, STANDARDS, AND SYMBOLS

- A. General: Refer to Division 1 for general administrative/procedural requirements related to compliance with codes and standards. Specifically, for the electrical work (in addition to standards specified in individual work sections), the following standards are imposed, as applicable to the work in each instance:
 - 1. NEC (NFPA 70), National Electrical Code
 - 2. AWS, American Welding Society, Standards for Welding
 - 3. ANSI C2, National Electrical Safety Code
 - 4. ANSI C73, Dimensions of Attachment Plugs & Receptacles
 - 5. NECA, Standards for Installation
 - 6. NEMA, Standards for Materials and Products
 - 7. ASTM, American Society for Testing Materials
 - 8. ASA, American Standards Association
 - 9. NFPA, National Fire Protection Association
 - 10. UL, Underwriters' Laboratories, Inc.
 - 11. OSHA, Occupational Safety and Health Act
 - 12. ADA, Americans with Disabilities Act
- B. NOTE: ALWAYS REFER TO THE MOST CURRENT ADOPTED CODES AND STANDARDS. All work in area of splash pad to meet 2023 NEC standards with emphasis on Section 680.539(C) - Equipotential Bonding of Splash Pads. Contractor shall be responsible for conformance to these standards.
- C. All work to be provided and tested in accordance with all applicable local, county and state laws, ordinances, codes, rules, and regulations.
- D. Where quantities, sizes, or other requirements on drawings or specifications are in excess of code requirements, drawings or specifications govern.
- E. When conflict exists between referenced specifications or standards, more stringent

requirements govern. No extra compensation for such compliance requirements shall be allowed.

- F. No work shall be covered or enclosed until tested in accordance with applicable codes and regulations, and successful tests witnessed and approved by authorized inspection authority. Written approvals shall be secured by the Electrical Contractor and submitted to CONSTRUCTION MANAGER before final acceptance of work.
- G. In general, all material where applicable shall be labeled or listed by Underwriters' Laboratories, Inc.
- H. Permits and Fees: Give all notices, file all drawings, obtain necessary approvals, obtain all permits, pay all fees, deposits and expenses required for installation of all work under this Contract.

PART 2 PRODUCTS

2.01 PRODUCTS, ELECTRICAL WORK

- A. General: Refer to Division 1 sections for general requirements on products, materials and equipment. The following provisions expand or modify the requirements as applicable to electrical work.
- B. Compatibility: Provide products which are compatible with other products of the electrical work, and with other work requiring interface with the electrical work, including electrical connections and control devices. For exposed electrical work, coordinate colors and finishes with other work.
- C. Standards:
 - 1. All electrical material, equipment and accessories shall be new and conform to all applicable standards, codes and requirements and all applicable local, state and federal specifications.
 - 2. All products shall be of established manufacturers regularly engaged in making type of materials to be provided and complete with all parts, accessories, connections, etc., reasonably incidental thereto as specified in detail or as described in manufacturer's catalog. All properly tested, cleaned, adjusted, lubricated and put in complete working order ready for service.

2.02 ACCESS

- A. Access Units:
 - 1. General: The work of this article is limited to the provisions for access through other work for access to electrical work and does not include internal access provisions (within the electrical work). In general, and where possible, furnish or furnish and mount required access units to other Trades prior to their work, so that cutting and patching for the subsequent installation of such access units will not be required. In occupied spaces, provide finished access units of the maximum concealment type, including locks where appropriate, and matching other access units provided in the same expanse of finish (for non-electrical access, if any).
 - 2. Access units to be furnished or provided as electrical work includes those units indicated on the electrical drawings or specifications, and those additional units required for adequate access to electrical work and not shown or specified individually. Employ tradesman of the Contractor installing the finished surface to install the access panel, door or plate.
 - 4. This Contractor shall notify OWNER, in advance of time required for construction, of

- necessity of access doors, removable sections, etc., and secure approval of Architect.
6. Locate operating and control equipment properly to provide easy access and arrange entire electrical work with adequate access for operation and maintenance. Provide access panels or doors where required.

2.03 EXCAVATION AND BACKFILL FOR ELECTRICAL WORK

- A. Description:
 1. The extent of excavating and backfill work required for electrical work is indicated on the Drawings and by Specifications and is hereby defined to include whatever excavating and backfilling is necessary to install the electrical work specified in Division 31 of these Specifications.
 2. General: Coordinate the work with other excavating and backfilling in the same area, including dewatering, flood protection provisions and other temporary facilities. Coordinate the work with other work in the same area, including other underground services (existing and new), landscape development, paving and floor slabs on grade. Coordinate with weather conditions and provide temporary facilities needed for protection and proper performance of excavating and backfilling.
- B. The types of electrical work installations requiring excavation and backfill include but are not necessarily limited to the following:
 1. Underground electrical wiring.
 2. Independent (isolated) equipment foundations specified as electrical work.
- C. Materials: Refer to applicable provisions of Division 31 "Trenching, Excavation, Backfilling and Compacting".
- D. Execution:
 1. General Standards: Except as otherwise indicated, comply with the applicable provisions of Division 31 "Trenching, Excavation, Backfilling and Compacting" for electrical work excavating and backfilling. Refer instances of uncertain applicability to the Engineer for resolution before proceeding.
 2. Excavation:
 - a. General: Do not excavate for electrical work until the work is ready to proceed without delay, so that the total time lapse from excavation to completion of backfilling will be minimum.
 - b. Excavate with vertical-sided excavations to the greatest extent possible, except where otherwise indicated. Where necessary, provide sheeting and cross-bracing to sustain sides of excavations. Remove sheeting and cross-bracing during backfilling wherever such removal would not endanger the work or other property. Where not removed, cut sheeting off at a sufficient distance below finished grade to not interfere with other work.
 - c. Width: Excavate for direct burial cables (when permitted in other Sections) with 6" to 9" clearance both sides of cable except where otherwise shown or required for proper installation of joints and fittings. Excavate for other electrical work to provide minimum practical but adequate working clearances.
 - d. Depth for Subbase Support: Where installation of subbase material is indicated, excavate for installation of subbase material in the depth indicated or, if not indicated, 6" below bottom of work to be supported.
 3. Performance and Maintenance:
 - a. Settling: Where settling is measurable at electrical work excavations during the warranty period, remove the surface (pavement, lawn or other finish), add backfill material, compact and replace the surface treatment. Restore the appearance, quality and condition of the surface or finish to match adjacent work, and eliminate evidence of the restoration to the greatest extent possible.

2.04 CLEANING AND REPAIR

- A. All equipment and accessories with baked enamel finish to be touched up with factory matching paint before final acceptance by Owner.
- B. Where surface cannot be repaired by touching up, the entire scratched or marred equipment shall be electrostatically powder coated with finish to match original.

2.05 EXTRA MATERIALS

- A. Refer to individual specification sections for required extra materials. Provide equipment list and quantity in close out documentation and turn equipment over to owner.

PART 3 EXECUTION

3.01 CERTIFICATE OF INSPECTION

- A. Provide OWNER with evidence that installation has been inspected and approved by municipal or state inspector having jurisdiction over electrical work involved.

3.02 RECORD DRAWINGS AND OPERATIONAL AND MAINTENANCE MANUALS

- A. Maintain a white-print set of Electrical Contract Drawings and submittals in clean, undamaged condition for mark-up of actual installation on either Electrical Contract Drawings or submittals which vary substantially from the work as shown. Comply with additional Division 1 requirements relative to record drawings.
- B. Contractor to provide copies of all Operational and Maintenance Manuals per specifications. Comply with additional Division 1 requirements relative to operational and maintenance manuals.
- B. Contractor responsible for securing all elevations and locations prior to concealment.

3.03 PLACING SYSTEMS INTO OPERATION

- A. General:
 - 1. Electrical Contractor shall be responsible for all start-up procedures, system checks and phase balancing, coordinating work of other Contractors and Subcontractors.
 - 2. All equipment installed, tested and operated in accordance with manufacturer's recommendations at normal operating conditions.
 - 3. All permanent electrical equipment used during construction periods shall be cleaned, and damaged equipment replaced.
 - 4. Place all systems into operation when weather or other considerations require their use. Perform repair, adjustment and balancing operations as often as required to assure satisfactory operation before final acceptance.

3.04 ADJUSTMENTS AND BALANCING

- A. Subsequent to the installation of the electrical power and distribution system and upon the beginning of operation, Contractor shall make all necessary adjustments to equipment installed or connected by him under this Contract so as to insure proper operation of the same. Contractor shall measure phase balance and make necessary adjustments to any portion of the electrical system that is substantially out of balance.

3.05 TESTING

- A. All equipment shall be factory tested using industry standard testing procedures. Refer to individual specification sections for specific testing requirements.

3.06 GUARANTEE

- A. Provide written guarantee for all work performed under this Contract for a period of not less than one year from the date of substantial completion.
- B. Acceptance date of substantial completion shall be the date of Owner occupancy as defined by Engineer.
- C. Contractor shall make all necessary alterations, repairs, adjustments, replacements during guarantee period as directed by Engineer to comply with Drawings and Specifications at no cost to Owner.
- D. Repair or replacements made under guarantee to bear further one year guarantee from date of acceptance of repair or replacement.

3.07 ELECTRICAL WORK CLOSEOUT

- A. General: Refer to the Division 1 Sections for general closeout requirements.
- B. Coordinate closeout operations with closeout of mechanical systems and other power consuming equipment as follows:
 - 1. Test run electrical equipment in coordination with test runs of mechanical systems.
 - 2. Clean and lubricate operational equipment.
 - 3. Instruct Owner's operating personnel thoroughly in the operation, sequencing, maintenance and safety/emergency provisions of the electrical systems.
 - 4. Turn over the operations to the Owner's personnel at the time(s) of substantial completion.
 - 5. Until the time of final acceptance of the total work of the Contract, respond promptly with consultation and services to assist the Owner's personnel with operation of electrical systems.
- C. Conditions of Final Closeout:
 - 1. All completion checklists signed and returned to Engineer.
 - 2. Maintenance manuals submitted and approved.
 - 3. Record drawings submitted and approved.
 - 4. Final certificate of electrical inspection and Contractor's written 1 year warranty submitted and approved.
 - 5. Circuit directory in each panelboard. Electrical component identification complete.
 - 6. Equipment clean-up and final adjustments made.
 - 7. Contractor has instructed Owner's representative in the safe operation and use of the electrical systems.
 - 8. All temporary wiring and facilities have been removed.

END OF SECTION

SECTION 31 23 33

TRENCHING, EXCAVATING, BACKFILLING AND COMPACTING

PART 1 - GENERAL

1.01 SUMMARY:

- A. This Section includes the work required for trenching, excavating and backfilling, special pipe foundations and special work below grade.

1.02 DEFINITIONS:

- A. Maximum Density: Maximum dry weight in pounds per cubic foot of a specific material.
- B. Optimum Moisture: Percentage of water at maximum density.
- C. Rock Excavation: Includes all boulders or rock weighing 4,000 pounds (approximately one cubic yard) or more and all solid or ledge rock, slate, shale, sandstone and other hard materials that require continuous use of pneumatic tools, heavy rippers or continuous drilling and blasting for removal. Pavements are not included.
- D. Suitable Excavated Material: Mineral (inorganic) soil free of cinders, refuse, sod, boulders, rocks, pavement, soft or plastic clays, vegetable or other organic material, and capable of being compacted as specified. Moisture content has bearing on the suitability of materials to be used.
- E. Granular Material: Coarse grained materials having no cohesion, which derives its resistance to displacement from internal stability.
- F. Cohesive Material: Fine grained material which derives its resistance to displacement by manual attraction between particles of the mass, involving forces of molecular origin (i.e. Clays are considered cohesive).
- G. Grade Terminology: In accordance with the detail.

1.03 REFERENCES:

- A. MDOT - Michigan Department of Transportation, *"2020 Standard Specifications for Construction"*.
- B. ASTM - American Society of Testing Materials, latest edition.

1.04 JOB CONDITIONS:

- A. Obtain and comply with construction permits from agencies having jurisdiction over the work.
- B. Scheduling: Clean up promptly following utility installation backfilling.
- C. Dust Control: Broom or apply dust palliatives as needed.

- D. Driveway Closing: Eight (8) hour maximum with prior notification to resident. Maintain emergency access to all properties during construction.
- E. Signs, mailboxes and other movable surface features:
 - 1. Witness location prior to removal. Relocate to accessible location and maintain during construction.
 - 2. Upon completion of construction, replace to original position and condition.
 - 3. Replace regulatory traffic control signs immediately after utilities are placed and backfilled.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Trench Backfill:
 - 1. Trench backfill shall not contain frozen soil.
 - 2. Granular Material shall be MDOT 902.07, Table 902-3, Class III limited to 1.0-inch maximum size.
 - 3. Select Granular Material shall be MDOT 902.07, Table 902-3, Class II or IIA limited to 1.0-inch maximum size.
 - 4. Concrete Grade 3000 per MDOT Section 1004.

PART 3 - EXECUTION

3.01 PREPARATION:

- A. Clearing and Grubbing:
 - 1. Save and protect all trees and vegetation not identified to be removed.
 - 2. Repair or replace trees, shrubs and other vegetation damaged by CONTRACTOR's operation at no additional charge.
- B. Conflicting Underground Facilities:
 - 1. Before starting work, establish location and extent of existing underground facilities in work area.
 - 2. Establish potential conflict areas prior to construction.
 - 3. Excavate and expose existing underground facilities presenting potential conflict to determine their exact location and elevation.
 - 4. Advise Engineer of conflicts and obtain instructions on how to proceed.
 - 5. Make adjustments in proposed utility location at no additional cost.
 - 6. Make arrangements with owner of existing underground facilities for relocation, if necessary.
 - 7. Schedule work accordingly.

3.02 EXCAVATION:

- A. General:
 - 1. Dispose of surplus and unsuitable excavated material.
 - 2. Remove, salvage and stockpile topsoil.
 - 3. Unsuitable material encountered in subgrade or below payment line: obtain instruction on how to proceed.
- B. Trenches:
 - 1. Depth: Provide a uniform and continuous bearing and support for proposed utility on solid and undisturbed or compact granular material.

2. Minimum Width: Allow space for jointing and bedding. Meet requirements of AWWA C600 or C605, as applicable, for water main.
 3. Maximum Width: The following limitations shall apply at utility crown:
 - a. 6 inch through 10-inch diameter: 30 inches.
 - b. 12 inch through 30-inch diameter: Outside diameter plus 24 inches.
 - c. 30 inch and over diameter: Outside diameter plus 36 inches.
 - d. Elliptical: Outside pipe width plus 36 inches.
- C. Blasting:
1. Not allowed unless otherwise indicated.
 2. If allowed, obtain and comply with required permits.
 3. If allowed, perform only during hours approved by Owner.
- D. Length of Open Trench shall be 200 feet maximum.
- E. Damage to Existing Underground Utilities:
1. Report all damage to Engineer and utility owner.
 2. Repair to utility owner's standard.

3.03 BACKFILLING:

- A. Pipe bedding area: Compact granular material to ninety percent (90%) of maximum density according to the Modified Proctor Method or to ninety-five percent (95%) of maximum density using the Michigan Cone Test.
- B. Trench Backfill Area:
1. Under permanent pavement, shoulder areas and areas within a one on one slope from the shoulder edge:
 - a. Compact suitable excavated material or granular material in 9.0-inch layers to ninety percent (90%) of maximum density according to the Modified Proctor Method or to ninety-five percent (95%) of maximum density using the Michigan Cone Test.
 2. Under nonpermanent pavement: Same as permanent pavement.
 3. Under unimproved right-of-way areas: Compact suitable excavated material to eighty-five percent (85%) of maximum density.
 4. Under landscaped and unimproved areas: Compact suitable excavated material to eighty percent (80%) of maximum density.
 5. Under undercut existing structure: Place concrete.
- C. Structures:
1. Density requirements: Same as Trenches.
 2. Concrete structure: Place backfill only after seventy-five percent (75%) of concrete design strength has been reached.

3.04 TRENCH UNDERCUTTING AND BACKFILL:

- A. Excavation: Perform to Owner or Owner's Representative instructions.
- B. Backfill: Provide with granular material compacted in place.

3.05 COMPACTION, TESTING AND INSPECTION:

- A. Surplus excavated and unsuitable excavated material shall become the property of the Contractor.

- B. Dispose of surplus excavated or unsuitable excavated materials off-site.
- C. Performance and test equipment will be provided by Owner or Owner's Representative approved independent laboratory.
- D. Moisture - Density relationships:
 - 1. Cohesive (clays) soils: ASTM D 1557 (Modified Proctor).
 - 2. Granular (sands) soils: Michigan Cone Test.
- E. Field Density: ASTM D-2922 (Nuclear).
- F. Furnish equipment and personnel to provide access to test location and depth. Density tests will be performed at various levels, during or after backfilling operation.
- G. Correct any deficiencies resulting from insufficient or improper compaction. Retesting of density in areas of failed tests shall be performed by Owner or Owner's Representative at the Contractor's expense.

END OF SECTION

SECTION 32 13 13.23

SANDBLAST TEXTURED CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

1.2 SUMMARY

- A. Work specified in this section includes all labor, materials, equipment and services necessary to complete the proprietary Sandblast Texture System including sub-base, formwork, reinforcement, concrete, jointing and surface treatments. This work shall be in accordance with Sections 205, 302, 601, 602, 905 & 914 of the 2020 MDOT Standard Specifications for Construction and this Section. This work shall follow industry standards and shall conform to the details shown in the plans.

The Contractor shall possess satisfactory experience with the specified method of stamping, sandblast texturing and coloring concrete. The Contractor shall demonstrate a minimum of 100 square yards of laydown experience. A list shall be provided to the ENGINEER prior to execution of the contract of project locations with the reference person of the owner for whom the representative work was performed. The list shall demonstrate the required minimum laydown amount of 100 square yards.

- B. Related Sections include the following:

1. SP 01 33 00 for submittals and substitutions.
2. SP 32 13 14 for concrete sidewalks, sidewalk ramps driveways.

1.3 SUBMITTALS

- A. Product Requirements:

1. Provide submittal information within 35 calendar days after the contractor has received the owner's notice to proceed.

- B. Product Data:

1. Submit specifications, test data and other data required for each type of manufactured material and product indicated.
2. Submit Technical Bulletins listing product name, descriptive data, curing time and application requirements.
3. Submit Material Safety Data Sheet (MSDS) and other safety requirements.

- C. Field quality-control test and inspection reports.
 - 1. Documentation by the concrete contractor or General Contractor of the sub-grade compaction results prior to concrete placement.

1.4 QUALITY ASSURANCE

- A. Submit certification of Installer Qualifications
 - 1. Provide letter of certification stating that installer is a certified applicator of special concrete finishes and is familiar with proper procedures/installation requirements of the manufacturer.
 - 2. Use an adequate number of skilled workmen who are thoroughly trained and experienced in the necessary craft.
 - 3. Applicator shall be familiar with the specified requirements and the methods needed for proper performance of work of this section.
 - 4. Applicator shall be familiar with the previously approved mock-ups that demonstrated standard of workmanship.
- B. Manufacturer Qualifications: A firm experienced in the support and training of a national installer network and manufacturing products required/listed to complete the work.
 - 1. Lifetime Floors Inc or approved equal.
- C. Source Limitations:
 - 1. Concrete: Obtain each type or class of cementitious material of the same brand from same manufacturer's plant, obtain aggregate from one source, and obtain admixtures through one source from a single manufacturer.
 - 2. Sand: Obtain sand determined suitable for the Sandcast Texture process be it colored or natural from same manufacturer's plant to meet samples and mock-ups.
- D. Mock-ups:
 - 1. Apply finish to mock-ups constructed by Contractor, using each type of finish to demonstrate finished appearance and standard of workmanship.
 - a. Mock-up shall include entire system, including sub-base, reinforcement, dowel type and placement, control joints, expansion/isolation joints and surface treatments.
 - b. Notify Engineer seven days in advance of dates and time when mock-ups will be constructed.
 - c. Obtain from Engineer approval of mock-ups before starting construction.
 - d. If the Engineer determines that the mock-ups do not meet requirements, General Contractor will demolish and remove them from the site and arrange to assemble more until approved.
 - e. Maintain mock-ups during construction in an undisturbed condition as a standard for judging the completed work.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original packages and containers, with seals unbroken, bearing approved labels indicating brand name and directions for storage, mixing with other components and application.
- B. Store materials to comply with written instructions to prevent deterioration from moisture or other detrimental effects.
- C. Dispense special concrete finish material from factory numbered and sealed containers. Maintain record of container numbers.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations:
 - 1. Comply with written instructions for ambient temperature and other conditions affecting installation performance.
 - 2. Concrete must be cured a minimum of 14 days or as directed by the manufacturer before trafficking of Sandcast Texture can begin.

1.7 PERFORMANCE REQUIREMENTS

- A. The product is required to bear daily foot and vehicular traffic without loss of exposed sand aggregates.
- B. The product is required to have more uniform aggregate exposure than that of sand blasted concrete.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce products, the following requirements apply to product selection:
 - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering materials decorative in nature required to be incorporated into the work include, and are limited to, manufacturer listed.
 - a. LifeTime Floors Inc. or approved equal.
 - b. Grace Top-cast 05 or approved equal

2.2 MATERIALS

- A. Deactivator: Water-based reactive compound designed to retard the set of fresh concrete at the surface and holds in the mix water to achieve improved concrete properties.
- B. Bomanite Integral Color or approved equal: Concentrated dry powder iron oxide pigments designed to color concrete to meet samples and mock-ups. As noted in finishes schedule on drawings.
- C. Bomanite Con-Shield or approved equal: A topically applied Lithium Silicate hardening compound designed to improve the surface density of the Sandcast product.

- D. Bomanite UltraSeal or Bomanite HydroLock or approved equal: Typically applied sealers designed to improve stain resistance and enhance the Sandcast appearance (Bomanite Franchise Partner to select appropriate sealer prior to mock-ups based on the environment the sandcast texture installation is being used in).
- E. No substitutions or alternates to the above will be accepted without written approval by Engineer.

2.3 CONCRETE

- A. Portland cement: shall conform to ASTM C 150, Type I, II or V.
- B. Aggregates: shall conform to ASTM C 33 and be optimized with minimal gap grading and the largest top sized aggregate feasible.
- C. Water: Mixing water shall be fresh, clean and potable.
- D. Air Entrainment: Conforming to ASTM C260. In freeze-thaw areas, air entrainment shall be provided.
- E. Water-Reducing Admixtures: Water-reducing admixtures and/or super-plasticizers are permitted and shall conform to ASTM C 494.
- F. Pozzolans: Fly Ash shall conform to ASTM C618 – type F

2.4 REINFORCING

- A. Reinforcing Steel: Conforming to ASTM A615, clean and free of rust, dirt, grease or oils.
- B. Tie Wire: 16-gauge plain cold-drawn steel conforming to ASTM A82, clean, and free of rust, dirt, grease or oils.
- C. Supports for Reinforcement:
 - 1. Provide supports for reinforcement including bolsters, chairs, spacers and other devices for spacing, supporting and fastening reinforcing bars in place.
- D. Polypropylene Fiber Reinforcement: 100% virgin multifilament polypropylene fibers, complying with ASTM C 1116 - Type III.

2.5 ISOLATION JOINT MATERIALS

- A. Refer to Section 914 of the Michigan Department of Transportation Standard Specifications for Construction.

2.6 CONSTRUCTION JOINT DOWELS

- A. Construct construction joints in areas as required- diamond dowels are required to provide load transference at all construction joints
- B. Dowel schedule to match rebar schedule and at a minimum spacing of 24”o.c.
- C. Diamond dowels are the only acceptable dowels. Contact PNA at (800) 542-0214 or www.pna-inc.com/products/diamond_dowel/ for distributors.

2.7 EXPANSION JOINT MATERIALS

- A. Provide expansion joints as required- diamond dowels are required to provide load transference at all expansion joints.
- B. Expansion joints are to be concealed type ¼" wide with a sawed cut placed directly over the expansion joint.

PART 3 – EXECUTION

3.1 SUB-GRADE

- B. A minimum of 2" of well draining road base or no fines crushed stone or crushed recycled concrete is required over the prepared sub-grade to provide the correct base for sandcast texture due to uniformity of hydration requirements.
- C. Ensure that utilities, including irrigation lines are buried and compacted below bottom of road base.
- D. Keep road base damp prior to placing concrete.
- E. Consult General Contractor, Structural Engineer, Engineer and Concrete Contractor prior to installation of concrete slab to ensure complete understanding of substrate preparation, reinforcement, penetrations, mix design, placing and finishing requirements, elevations, etc.

3.2 FORMING

- A. Be responsible for design and engineering of form work as well as its construction.
- B. Ensure that work conforms to recommended practice for concrete form work (ACI 347), latest edition.
- C. Ensure that form lumber is new #2 or better grade wood or plastic coated plywood for vertical faces.
- D. Allow forms to remain in place long enough restrain the concrete during set and for a minimum of 12 hours after pour.

3.3 CONCRETE MIX SPECIFIC TO SANDCAST TEXTURE REQUIREMENTS

- A. Requirements:
 - 1. Slump: 3 to 5 inch slump. Obtain approval from Owner's Authorized Representative if slump is outside these parameters.
 - 2. Minimum PSI Rating at 28 days: 4,000.
 - 3. Cement quantity per yard of mix:
 - a. Minimum: 6 sacks.
 - b. Maximum: 7 sacks.
 - 4. Water/cement ratio: Maximum .6.
 - 5. Aggregates: Use maximum 1" top size aggregate.

6. Admixtures:
 - a. Air entrainment: As determined required by aggregate size and environment.
 - b. Water Reducing: Mid-range water reducers recommended.
7. Fly ash: Use in all applications as required up to 25% of total cement content.
8. Accelerators: Do not use accelerators.

3.4 SANDCAST TEXTURE INSTALLATION

- A. Sandcast Texture is a proprietary paving product. Installation of Sandcast Texture must be performed by an approved and certified Contractor. Medium to light exposure level is desired. Contractor to submit three 3' x 3' samples for approval by ENGINEER and one will be selected and kept on site as the comparison for all final work.

3.5 JOINTING

- A. Construction and Contraction Joints:
 1. Sawcut construction and contraction joints in locations indicated on drawings.
 2. Perform jointing with a circular or walk behind saw
 3. Joint Width: Per drawings and approved samples. Do not exceed 1/4-inch in width.
 4. Sawcut joints in a straight line with no overcutting. Use a hand tool to sawcut up to vertical edges such as walls, steps, curbs and columns.
- B. Isolation Joint Caulking:
 1. Install isolation joint caulking to be installed under Section 07900 – Joint Sealers.

3.6 CURING

- A. After initial Sandcast Texture exposure, wet cure the slab for a minimum of 24 hours by means of fogging, sheet or spraying.

3.7 SEALING

- A. Sealer to be used Solvent based Acrylic by Vexcon Inc. or substitute approved by Engineer.

3.8 PROTECTION

- A. General: Protect finished work from traffic until fully cured in accordance with manufacturer's recommendations.
- B. Concrete shall remain free of traffic during all phases of installation herein.

END OF SECTION

SECTION 32 13 13.25
MICRO-FINISH CONCRETE

1. - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

1.2 SUMMARY

- A. Work specified in this section includes all labor, materials, equipment and services necessary to complete the LifeTime Floors Micro-Finish coating or approved equal to achieve detailed designs as per the drawings.
- B. Related Sections include the following:
 - 1. SP 01 33 00 for submittals and substitutions.
 - 2. SP 32 13 14 for concrete sidewalks, sidewalk ramps driveways.

1.3 SUBMITTALS

- A. Product Requirements:
 - 1. Provide submittal information within 35 calendar days after the contractor has received the owner's notice to proceed.
- B. Product Data:
 - 1. Submit LifeTime Floors specifications, test data and other data required for each type of manufactured material and product indicated.
 - 2. Submit LifeTime Floors Technical Bulletins listing product name, descriptive data, curing time and application requirements.
 - 3. Submit LifeTime Floors Material Safety Data Sheet (MSDS) and other safety requirements.
- C. Field quality-control test and inspection reports.
 - 1. Documentation by the Installer of surface profile and correct drainage prior to installation.
 - 2. Moisture tests resulting in a reading of 4 lbs or greater per foot in a 24 hour period are unacceptable for this type of installation. Consult with the LifeTime Floors installer or LifeTime Floors Technical Services on an appropriate system designed to suppress the moisture prior to installation if above 4 lbs or greater.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: The contractor for this work shall be a Bomanite Toppings System Franchise Partner or a Certified Applicator approved by LifeTime Floors.
 - 1. Provide letter of certification from LifeTime Floors stating that installer is a certified applicator of special concrete finishes and is familiar with proper procedures/installation requirements of the manufacturer.
 - 2. Use an adequate number of skilled workmen who are thoroughly trained and experienced in the necessary craft.
 - 3. Applicator shall be familiar with the specified requirements and the methods needed for proper performance of work of this section.
 - 4. Applicator shall be familiar with the previously approved mock-ups that demonstrated standard of workmanship.
- B. Manufacturer Qualifications: A firm experienced in the support and training of a national installer network and manufacturing products required/listed to complete the work.
 - 1. LifeTime Floors or approved equal.
- C. Mock-ups:
 - 1. Apply finish to mock-ups constructed by LifeTime Floors Installer, using each type of finish to demonstrate finished appearance and standard of workmanship.
 - a. Mock-up shall include entire system and be an accurate representation of finished product.
 - b. Notify Engineer seven days in advance of dates and time when mock-ups will be constructed.
 - c. Obtain from Engineer approval of mock-ups before starting construction.
 - d. If the Engineer determines that the mock-ups do not meet requirements, General Contractor will demolish and remove them from the site and arrange to assemble more until approved.
 - e. Maintain mock-ups during construction in an undisturbed condition as a standard for judging the completed work.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original packages and containers, with seals unbroken, bearing LifeTime Floors or LifeTime Floors approved labels indicating brand name and directions for storage, mixing with other components and application.
- B. Store materials to comply with LifeTime Floors written instructions to prevent deterioration from moisture or other detrimental effects.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations:
 - 1. Comply with LifeTime Floors written instructions for ambient temperature and other conditions affecting installation performance.
 - 2. Concrete must be cured a minimum of 28 days or as directed by the manufacturer before installation of LifeTime Floors Micro-Finish installation can begin.

1.7 PERFORMANCE REQUIREMENTS

- A. The product is required to provide a tough breathable water-retardant coating that substantially reduces water penetration, freeze thaw scaling and concrete carbonation
- B. The product is required to have a clear sealer that can be reapplied as wear dictates.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with requirements, manufacturers offering materials required to be incorporated into the work include, and are limited to, manufacturer listed below.
 - 1. LifeTime Floors or approved equal
 - 2. Grace Top-Cast 05
 - 3. Increte liquid dispersion color
 - 4. Vexcon clear sealer

2.2 MATERIALS

- A. LifeTime Floors Micro-Finish Base Coat
- B. LifeTime Floors Micro-Finish Top Coat
- C. LifeTime Floors Multi Purpose Liquid
- D. Increte Liquid Dispersion Tint Pack

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine slab and layout prior to installation for ensure layout is consistent with drawings.

3.2 SURFACE PREPARATION

- A. Mechanically profile the concrete slab with planetary head grinders, handheld grinders, shotblasting equipment or high pressure water cleaning equipment to ICRI CSP 1 or greater.

3.3 INSTALLATION

- A. Apply the Micro-Finish according to the manufacturers internal application procedures.

3.4 PROTECTION

- A. General Contractor's responsibility to provide and install protection according to installer's recommendations. Protection of the finished surface is to be maintained by the General Contractor until substantial completion of the project is met and the slab is open to the public.

END OF SECTION

SECTION 32 13 14

CONCRETE SIDEWALK, SIDEWALK RAMPS AND DRIVEWAYS

PART 1 - GENERAL

1.01 SUMMARY:

- A. This Section includes work required for concrete sidewalks, sidewalk ramps driveways.
- B. Definitions:
 - 1. Pavement Structure: The combination of the base, subbase and bituminous or concrete surface placed on the subgrade. Pavement includes gravel, bituminous and concrete surfaced streets and driveways.
 - 2. Subgrade: The portion of the earth grade on which the concrete sidewalk is to be placed.
 - 3. Subbase: The layer of specified material of designed thickness placed on the subgrade as a part of the pavement structure.

1.02 REFERENCES:

- A. MDOT - Michigan Department of Transportation, "*2020 Standard Specifications for Construction*".
- B. ASTM - American Society of Testing Materials, latest edition.
- C. ADAAG – Americans with Disabilities Act Accessibility Guidelines.
- D. PROWAG – Public Rights-of-Way Accessibility Guidelines

1.03 SUBMITTALS:

- A. Pre-Construction:
 - 1. Concrete Mix Designs:
 - a. Provide a concrete mix design for each mix of concrete meeting the requirements of MDOT Division 10, prepared by independent lab, two weeks prior to paving. Contractor may submit concrete mix designs previously approved by MDOT.
 - 2. Material Certifications:
 - a. Provide certifications of quality by producer for the following:
 - 1) Cement.
 - 2) Aggregates.
 - 3) Admixtures.
 - 4) Curing Compound.
 - 5) Steel Reinforcement.
 - 6) Pavement marking materials.
 - 3. Batch Tickets:
 - a. In accordance with MDOT 1001.03.A.4.
- B. Post-Construction:
 - 1. Concrete Test Specimens:
 - a. Contractor shall deliver acceptance cylinders to the place of inspection and testing.

1.04 JOB CONDITIONS:

- A. General Limitations: Concrete shall not be placed between November 1 and April 1 without approval of the Owner. Concrete shall not be placed when air temperature in the shade is less than 40° F and falling. Concrete shall not be placed if portions of the base, subbase, or subgrade layers are frozen, or if the grade exhibits poor stability from excessive moisture levels. Chemicals shall not be added to reduce the freezing point. Any deviation from the above, when authorized, will require protection from freezing until the concrete has attained a compressive strength of at least 1,000 psi (1,000 psi strength will typically be attained after 2 days of curing). Concrete damaged by frost action shall be removed and replaced.
- B. Clean-up promptly following sidewalk installation.
- C. Maintenance of Temporary Surfaces: Maintain temporary surfaces until permanent sidewalk installation is completed.
- D. Protect areas under construction with lighted barricades and reflectorized fencing in accordance with applicable MDOT, MIOSHA and ASHA regulations.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Subbase: Granular material MDOT Class II, MDOT 902.07, Table 902-3.
- B. Concrete:
 - 1. Sidewalk and Sidewalk Ramps:
 - a. Use Concrete Grade 3500 per MDOT Section 1004 modified to 100% limestone aggregate.
 - 2. Driveways:
 - a. Use Concrete Grade 3500 per MDOT Section 1004.
 - b. Use Concrete Grade P-NC per MDOT Section 1006 where indicated on drawings to achieve early compressive strength.
- C. Joint Filler: MDOT Section 914.
- D. Forms: Rigid in accordance with MDOT 803.03.B, except at curved sections which shall utilize a bendable material to provide a uniform radius, supported at adequate intervals.
- E. Aggregate Base: Aggregate 22A, MDOT 302.02 and 902.05.

PART 3 - EXECUTION

3.01 PREPARATION:

- A. Removal: Remove or saw cut at the existing joint in area of removal. Remove adjacent pavement structure necessary to place forms.
- B. Removal of subgrade material to maintain existing sidewalk elevation and meet specified concrete thickness shall be included in the cost of the sidewalk.

- C. Disposal of all removed material shall be performed by Contractor. Always keep all equipment and removed material off private property.
- D. Cut and protect tree roots.
- E. Excavation: Form subgrade by trenching, excavating or filling to the required elevation.
- F. If unsuitable material exists below subgrade, remove unsuitable material. If unsuitable material is removed, place a minimum 4-inch sand subbase to elevation required for bottom of concrete. In fill areas, the subbase shall be at least 1 foot wider than the sidewalk width.
- G. Compact subbase to 95% maximum density.
- H. Scheduling: Maximum time between removal and replacement of existing sidewalk or excavation and placement of sidewalk shall be 7 days.
- I. Contractor shall notify Owner or Owner's representative of plans to pour concrete a minimum of 24-hours in advance the concrete pour. The Contractor shall provide a minimum of 2 hours between forming and pouring to allow for review. Failure to provide notice will be considered cause to reject the work.

3.02 PERFORMANCE:

- A. Sidewalk Requirements:
 - 1. All sidewalks shall be a minimum of 5 feet in width, with the grade of $\frac{1}{4}$ inch per foot from the property towards the street, unless otherwise directed.
 - 2. All sidewalks shall be a minimum of 4 inches thick.
- B. Structure Adjustment: Any utility structures in the sidewalk or ramp not conforming to the finished grade shall be adjusted to grade. Conform to MDOT 403.03.C.
- C. Concrete Mixing and Delivery: Transit mix concrete conforming to MDOT 1001.03.E.
- D. Placing and Finishing Concrete:
 - 1. Place concrete on a moist base in one (1) lift to the specified depth. The concrete shall be thoroughly spaded along the faces of the forms before finishing operations are started. The concrete shall be struck off to the required grade and cross section.
 - 2. All edges and joints shall be slightly broomed transversely to roughen the surface after the concrete has received a float finish. The sidewalk ramps shall be textured with a coarse broom transversely to the ramp slope.
- E. Curing and Protection:
 - 1. Concrete shall be cured and protected as specified under MDOT Section 602.03.M and 602.03.T except that pedestrian traffic may be allowed after 48 hours if authorized. Curing compound shall be applied immediately following finishing operations.
- F. Joints:
 - 1. Joints shall be constructed to true line with their faces perpendicular to the surface of the sidewalk and shall not vary more than $\frac{1}{4}$ inch from their designated position. Transverse joints shall be constructed at right angles to centerline of the sidewalk and longitudinal joints shall be constructed parallel to the centerline unless otherwise required. When sidewalk is constructed in partial width, transverse joints shall be placed in line with like joints in the existing sidewalk.

2. The concrete at the faces of all joints shall be thoroughly spaded or vibrated and compacted to fill all voids and the surface shall be finished smooth and substantially true to grade.
3. One-half ($\frac{1}{2}$) inch transverse expansion joints shall be placed in line with all expansion joints in abutting curb, gutter or combination curb and gutter. When sidewalk does not abut such pavement, $\frac{1}{2}$ inch transverse expansion joints shall be placed at intervals not exceeding 40 feet and at all transitions between 4 inch and 6-inch sidewalk. Expansion joint filler shall extend the full depth of the joint with the top slightly below the finished sidewalk surface. The filler shall be supported temporarily until concrete is poured against it.
4. One-half ($\frac{1}{2}$) inch longitudinal expansion joints shall be placed between the sidewalk and the back of abutting parallel curb or gutter, between the sidewalk and buildings, or other rigid structures.
5. One-half ($\frac{1}{2}$) inch expansion joints shall be placed between sidewalk approaches and the back of curb and gutter, or the edge of pavement, including bituminous driveways.
6. Contraction joints shall be placed at 5-foot intervals. They shall divide sidewalk into areas not more than 36 square feet nor less than 16 square feet. Contraction joints will be produced by slab division forms extending to the full depth of concrete or by cutting joints in the concrete after floating to a depth of not less than $\frac{1}{4}$ the thickness of the concrete. The cut joints shall not be less than $\frac{1}{8}$ -inch or more than $\frac{1}{4}$ inch in width and shall be finished smooth and substantially true to line.

G. Concrete curb and gutter: Owner's Standard.

1. Match existing curb and gutter.
2. Construction methods: MDOT 802.03.

3.03 TESTING AND INSPECTION:

A. Observation: By designated authorized representative.

1. Inspection of forms is required prior to pouring concrete.

B. Acceptance Testing:

1. If initial testing indicates failed or nonconformance to specification, additional testing shall be paid by Contractor. Replace nonconforming material at no additional cost.

3.04 SCHEDULES (See Details attached)

- A. MDOT Standard Plan R-29-J DRIVEWAY OPENINGS AND APPROACHES, AND CONCRETE SIDEWALK (4 sheets).

END OF SECTION

SECTION 32 13 15
DECORATIVE CONCRETE

PART 1- GENERAL

1.01 Summary

This work shall consist of the labor and materials required to stamp and/or integrally color concrete sidewalks, sidewalk ramps, and concrete pavements as shown on the plans or as directed by the ENGINEER. This work shall be in accordance with Sections 205, 302, 601, 602, 905 & 914 of the 2020 MDOT Standard Specifications for Construction and this Section. This work shall follow industry standards and shall conform to the details shown in the plans.

The Contractor shall possess satisfactory experience with the specified method of stamping and coloring concrete. The Contractor shall demonstrate a minimum of 1000 square yards of laydown experience. A list shall be provided to the ENGINEER prior to execution of the contract of project locations with the reference person of the owner for whom the representative work was performed. The list shall demonstrate the required minimum laydown amount of 1000 square yards.

PART 2 – PRODUCTS

2.01 The materials shall meet the following requirements:

Sound Earth	205
Granular Material Class II	902
Joint Fillers	914
Lane Ties	914

A. Concrete and Reinforcement

Concrete shall be MDOT Grade P1 or S2 as specified in the Standard Specifications for Construction. The coarse aggregate shall be Michigan Series 6AA quarried limestone gradation as specified in Section 902 of the 2020 MDOT Standard Specifications for Construction. Concrete for sandcast textured concrete shall be per Section 32 13 15

Concrete and Reinforcement shall also comply with all provisions of the following standards:

American Concrete Institute (ACI) 301, "Specification for Structural Concrete for Buildings."

ACI 318, "Building Code Requirements for Reinforced Concrete."

ACI 330, "Guide for Design and Construction of Concrete Parking Lots."

Concrete Reinforcing Steel Institute (CRSI) "Manual of Standard Practice."

All coarse aggregate used in the concrete mixture shall be from the same MDOT approved source. All fine aggregate used in the concrete mixture shall be from the same MDOT approved source.

B. Concrete Admixtures

Concrete accelerating admixtures, water-reducing admixtures, and retarding admixtures shall meet the requirements of Section 903 of the Standard Specifications for Construction. Admixtures containing calcium chloride are not permitted.

C. Integral Color

Integral Color admixture shall be standard color for color A shall be based on 33.84 lbs. of color per yard of cement (also referred to as a 6% color) and be manufactured by Increte, LM Scofield Company, Bomanite or Prism Pigments as indicated on plans and details.

Integral Color admixture shall be standard color for color B shall be based on 16.92 lbs. of color per yard of cement (also referred to as a 3% color) and be manufactured by Increte, LM Scofield Company, Bomanite or Prism Pigments as indicated on plans and details.

Integral Color admixture shall be standard color for color C shall be based on 11.28 lbs. of color per yard of cement (also referred to as a 2% color) and be manufactured by Increte, LM Scofield Company, Bomanite or Prism Pigments as indicated on plans and details.

Contractor shall submit all color samples with intent to match existing integrally colored concrete for approval by ENGINEER prior to commencement of work. Contractor shall verify layout with ENGINEER prior to commencement of work.

D. Decorative Concrete Dry-Shake Color Hardener

Packaged dry combination of materials consisting of portland cement graded quartz aggregate, coloring pigments, and plasticizing admixture. Use coloring pigments that are finely ground nonfading mineral oxides interground with cement. Color as selected by Architect from manufacturer's standards, unless indicated otherwise. Minimum coverage shall be 60 lbs./100 sq. ft or per manufacturer's recommendation. A fine seeding coat to be added for non-skid surface shall be applied at rate per manufacturer's recommendations.

E. Surface Sealer

Provide two coats "Clear-Seal" from manufacturer or an approved equal.

PART 3 – EXECUTION

3.01 Construction Methods

A. Layout

Carefully lay out formwork and joints, taking into consideration pattern, intended aesthetics, and construction sequence. Lay out long lines of patterns to run across the normal line of sight (except where otherwise shown on Drawings).

B. Preparation of Base

Where required, excavation shall be made to the required depth and to a width that will permit forming. All unsuitable material shall be removed below the required depth and replaced with base as indicated in the plans. The prepared base shall be compacted to 95% of its maximum unit weight in accordance with Section 205 of the MDOT Standard Specifications for Construction.

C. Forms

Forms and forming shall meet the requirements of Subsection 803.03.B of the MDOT Standard Specifications for Construction. Check completed formwork and screeds for grade and alignment to following tolerances:

- Top of Forms: Not more than 1/8 inch in 10 feet.
- Vertical Face on Longitudinal Axis: Not more than 1/4 inch in 10 feet.

D. Concrete Coloring

The coloring pigment may be added at either the batch plant or to the ready mix truck at the job site. The truck mixer drum shall be rotated a minimum of 50 revolutions at mixing speed after adding the coloring pigment. The amount of coloring pigment to be added shall be as specified by the pigment manufacturer. Stenciled mock-ups shall be provided to the ENGINEER for approval for color prior to construction.

E. Protection of Surrounding Surfaces

All surrounding surfaces, including, but not limited to, walls and storefronts, shall be protected to prevent discoloration from the concrete.

F. Placing Concrete

Concrete placement shall meet the requirements of Subsection 803.03.C of the MDOT Standard Specifications for Construction, and as described herein. The surface shall be struck off and floated to produce a smooth even surface with a maximum surface variance of plus or minus 1/8" in 3 yards in any direction. All edges and joints shall be rounded to the specified radius with an approved finishing tool.

G. Joints

Control joints shall be tooled or saw cut. Expansion joints shall be per MDOT Section 803.

H. Sealing Concrete Surface

Prior to applying the surface sealer, the surface must be power washed to remove the release powder and any debris. Release agents shall be black for wood pattern and opal for stone pattern. The surface must also be allowed to completely dry prior to sealing.

The surface temperature of the concrete shall not exceed 90° F or be below 40° F at the time the sealer is applied. One uniform coat shall be applied to the concrete at 200-300 Sq. feet per gallon or as per manufacturer's recommendation. A second uniform coat shall be applied at 400 sq. feet per gallon after the first coat has dried. The concrete surface shall be barricaded against access from the time of casting to at least 24 hours after the sealer is applied.

I. Maintaining Traffic

The concrete shall not be opened to pedestrian traffic until at least 24 hours after the sealer has been applied. During such period, entrance to all residents and businesses shall be maintained at all times. Construction should be staged to allow for such access. Where businesses are restricted to a single point of access, the Contractor shall schedule the concrete pour during non-business hours and adequately protect the surface and edges for 24 hours. Concrete in front of drives shall be poured part width and in multiple sections where appropriate to maintain access.

J. Repairs and Protection

The Contractor is responsible for all costs with no additional compensation permitted for the following:

The Contractor is responsible for all costs associated with construction and disposal of mock-up slabs.

The Contractor is responsible to remove and replace concrete paving that is broken, damaged, defective or does not meet the requirements of this Section.

The Contractor is responsible to drill test cores where directed by ENGINEER when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory pavement areas with portland cement concrete bonded to paving with epoxy adhesive.

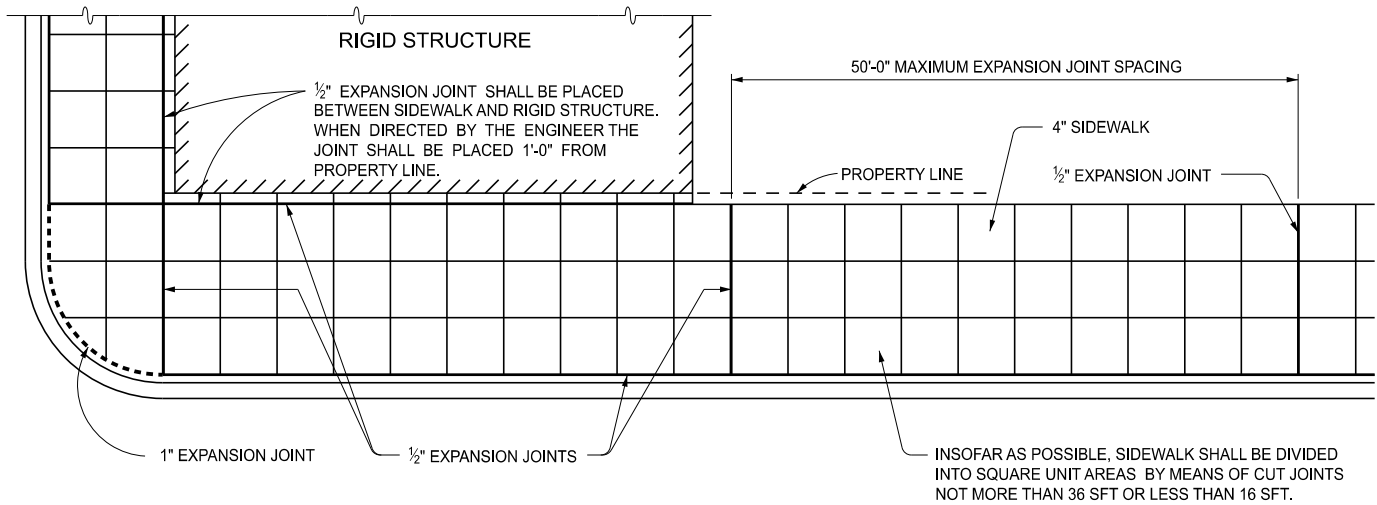
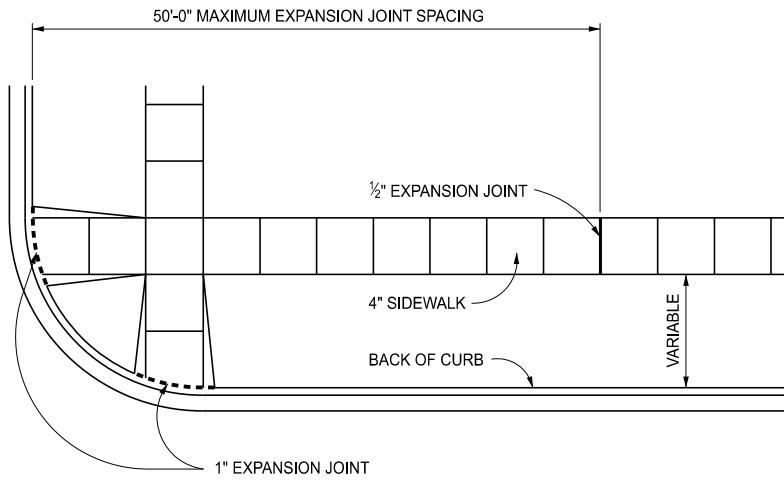
The Contractor is responsible to protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with the requirements of the Michigan Department of Transportation 2020 Standard Specifications for Construction for cold weather protection and hot weather protection during curing. In hot, dry and windy weather, protect concrete from rapid moisture loss before and during finishing operations with Increte Systems' Delay or approved equal. Apply according to manufacturer's instructions after screeding and bull floating, but before floating. Begin curing after finishing concrete, but not before free water has disappeared from concrete surface.

The Contractor is responsible to protect concrete from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing stains and spillage of materials as they occur.

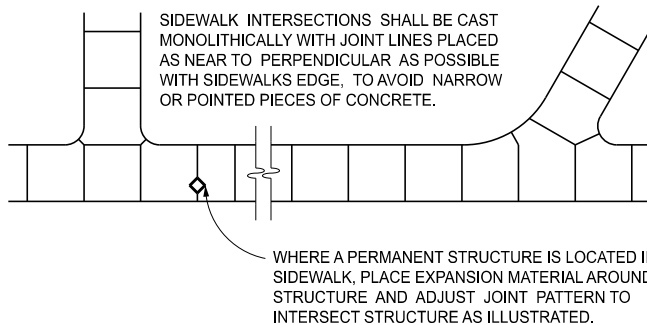
After concrete has set for at least 24 hours, the Contractor is responsible to chisel to remove marks left by imprinting tools. Color chipped areas with slurry of color hardener mixed with water and bonding agent.

The Contractor is responsible to maintain decorative concrete paving free of stains, discolorations, dirt and other foreign material. Remove all hard water stains (white chalky build-up) from the top of the sealer surface with commercial grade Lime. Sweep and wash concrete paving not more than 2 days prior to date scheduled for Substantial Completion inspections.

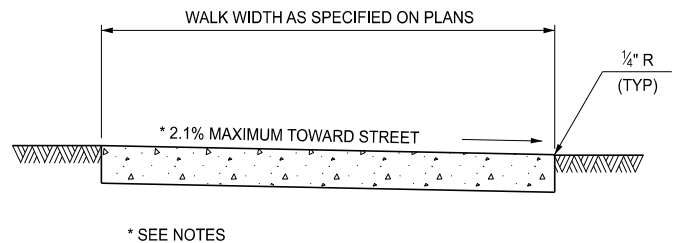
END OF SECTION



LOCATION OF JOINTS IN CONCRETE SIDEWALK



TYPICAL SIDEWALK JOINT LAYOUTS



4" CONCRETE SIDEWALK

APPROVED BY: _____
DIRECTOR, BUREAU OF FIELD SERVICES

APPROVED BY: _____
DIRECTOR, BUREAU OF DEVELOPMENT



DEPARTMENT DIRECTOR
BRADLEY C. WIEFERICH, PE

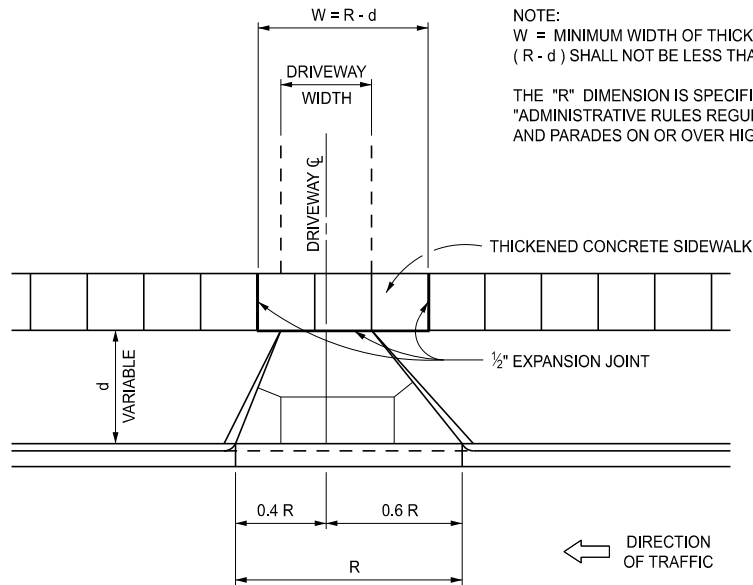
STANDARD PLAN FOR
DRIVEWAY OPENINGS & APPROACHES,
AND CONCRETE SIDEWALK

(SPECIAL DETAIL)
FHWA APPROVAL

11/08/2023
PLAN DATE

R-29-J

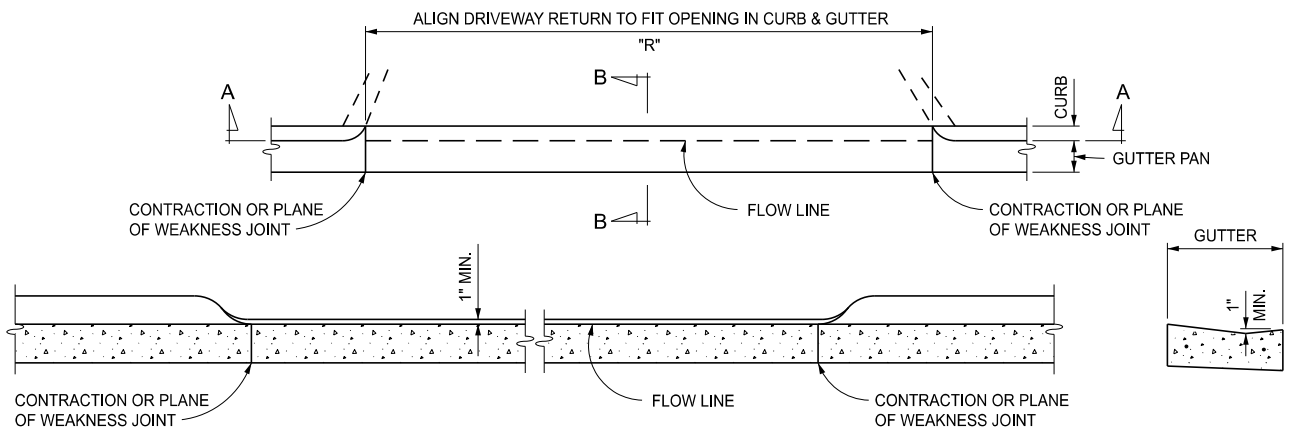
SHEET
1 OF 4



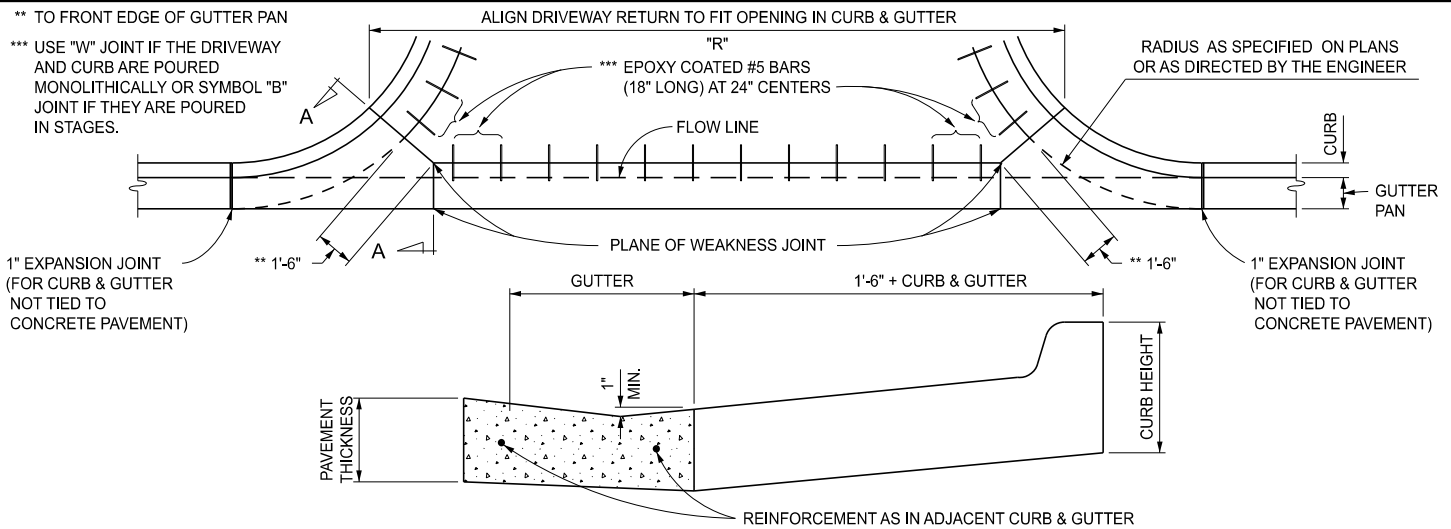
NOTE:
 $W =$ MINIMUM WIDTH OF THICKENED CONCRETE SIDEWALK.
 $(R - d)$ SHALL NOT BE LESS THAN DRIVEWAY WIDTH.

THE "R" DIMENSION IS SPECIFIED IN THE PUBLICATION
 "ADMINISTRATIVE RULES REGULATING DRIVEWAYS, BANNERS
 AND PARADES ON OR OVER HIGHWAYS".

CONCRETE DRIVEWAY OPENING LAYOUT



SECTION A - A
 SECTION B - B
 CONCRETE DRIVEWAY OPENING, DETAIL L

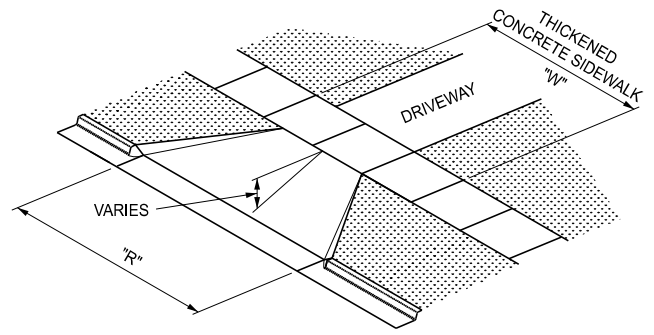
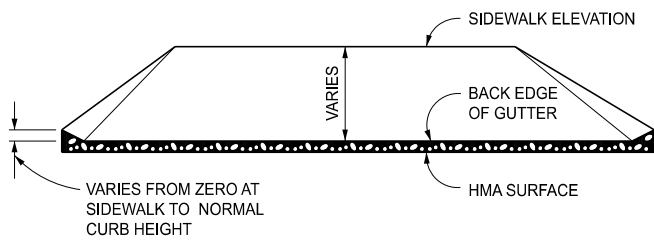


NOTE:
 FOR ROADWAYS WITH CONCRETE PAVEMENTS,
 LONGITUDINAL LANE TIES WILL BE CONTINUOUS
 THROUGH THE DRIVEWAY OPENING AND THE
 SPACING OF THE #5 BARS IN CONCRETE DRIVEWAYS
 SHALL BE ADJUSTED TO AVOID CONFLICT WITH THE
 LONGITUDINAL LANE TIES.

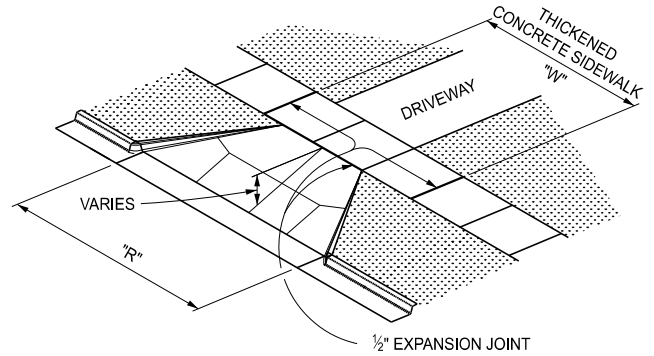
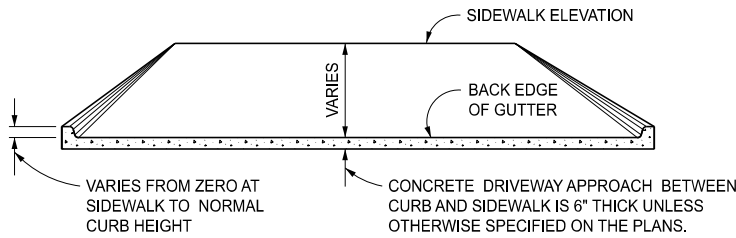
SECTION A - A
 CONCRETE DRIVEWAY OPENING, DETAIL M



STANDARD PLAN FOR DRIVEWAY OPENINGS & APPROACHES, AND CONCRETE SIDEWALK			
(SPECIAL DETAIL)	11/08/2023	R-29-J	SHEET 2 OF 4
FHWA APPROVAL	PLAN DATE		



HMA DRIVEWAY APPROACH
(TO BE USED WITH DETAIL L)

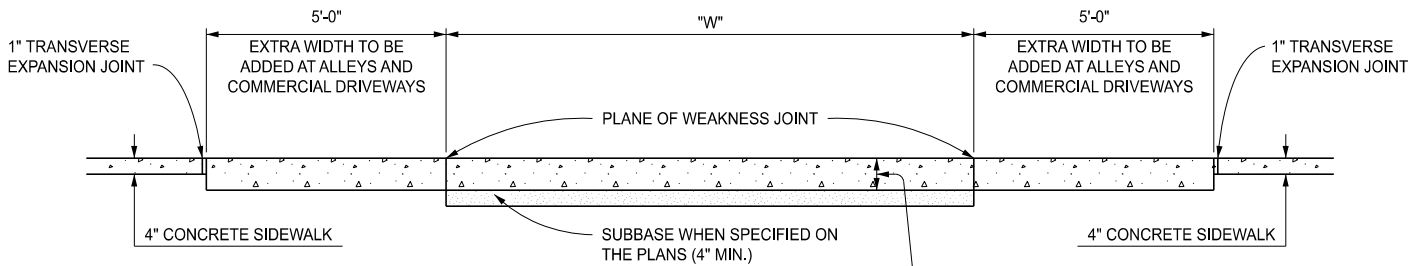


CONCRETE DRIVEWAY APPROACH
(TO BE USED WITH DETAIL L OR M)

NOTES:

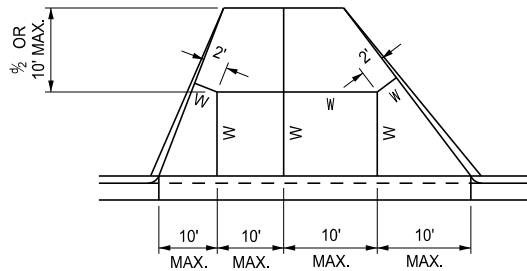
MONOLITHIC CURB IS INCLUDED IN THE CONCRETE DRIVEWAY APPROACH QUANTITY.

REINFORCEMENT IS NOT REQUIRED UNLESS SPECIFIED ON THE PLANS. WHEN REINFORCEMENT IS SPECIFIED, SEE CHART ON THIS SHEET.



WHEN CONCRETE DRIVEWAY APPROACH IS SPECIFIED, THE THICKENED CONCRETE SIDEWALK THICKNESS IS EQUAL TO THE THICKNESS OF THE CONCRETE DRIVEWAY APPROACH. WHEN HMA DRIVEWAY APPROACH IS SPECIFIED, THE THICKENED CONCRETE SIDEWALK THICKNESS IS 6" MIN.

THICKENED CONCRETE SIDEWALK



ADJUST DRIVEWAY JOINTS AS NEEDED TO ALIGN WITH ANY COINCIDING TRANSVERSE PAVEMENT JOINTS.

JOINT LAYOUT IS AS INDICATED OR AS DIRECTED BY THE ENGINEER.

INTERMEDIATE DRIVEWAY JOINT DETAILS

REINFORCEMENT FOR CONCRETE DRIVEWAYS		
CONCRETE DRIVEWAY THICKNESS	WIRE SIZE (6" x 6" MESH)	AVERAGE WEIGHT (LBS/100 SFT)
LESS THAN 8"	W1.4	21
	W2.9	42
8" OR GREATER	USE WIRE FABRIC REINFORCEMENT SPECIFIED ON STANDARD PLAN R-37-SERIES	



DEPARTMENT DIRECTOR
BRADLEY C. WIEFERICH, PE

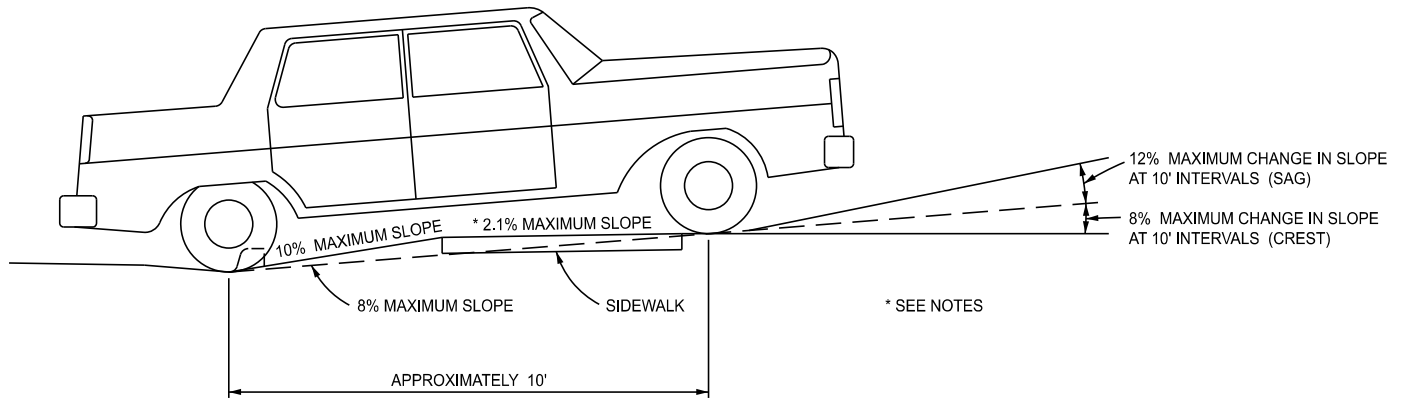
STANDARD PLAN FOR
**DRIVEWAY OPENINGS & APPROACHES,
AND CONCRETE SIDEWALK**

(SPECIAL DETAIL)
FHWA APPROVAL

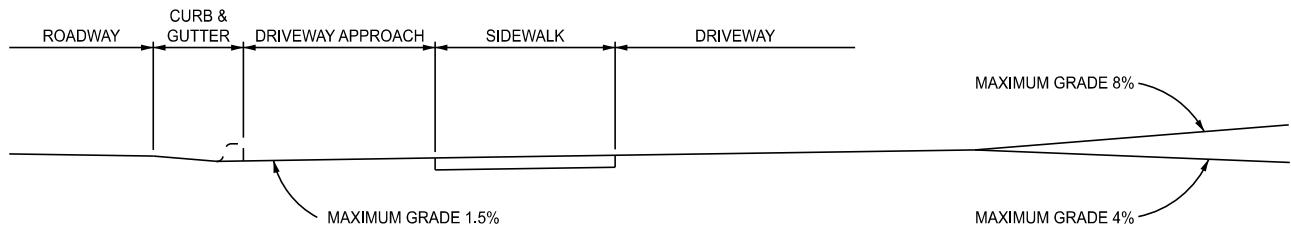
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LOW VOLUME COMMERCIAL OR RESIDENTIAL DRIVEWAY SLOPES



COMMERCIAL DRIVEWAY PROFILE FOR MAJOR TRAFFIC GENERATORS

NOTES:

FOR DRIVEWAY DESIGN REFER ALSO TO "ADMINISTRATIVE RULES REGULATING DRIVEWAYS, BANNERS, AND PARADES ON OR OVER HIGHWAYS" AND GEOMETRIC DESIGN G-680-SERIES, COMMERCIAL DRIVEWAYS.

FOR CURB AND GUTTER DETAILS, SEE STANDARD PLAN R-30-SERIES.

TRANSVERSE SIDEWALK SLOPES ARE 2.1% MAXIMUM. IN ORDER TO MEET SITE CONDITIONS, IF THE TRANSVERSE SLOPE IS REQUIRED TO BE LESS THAN 1.5%, LONGITUDINAL DRAINAGE MUST BE PROVIDED.

WHEN SETTING GRADES FOR COMMERCIAL DRIVES, THE TYPES OF VEHICLES USING THE DRIVE SHOULD BE CONSIDERED.



DEPARTMENT DIRECTOR
BRADLEY C. WIEFERICH, PE

STANDARD PLAN FOR
DRIVEWAY OPENINGS & APPROACHES,
AND CONCRETE SIDEWALK

(SPECIAL DETAIL)
FHWA APPROVAL

11/08/2023
PLAN DATE

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SECTION 32 92 00

SURFACE PROTECTION, RESTORATION AND TURF ESTABLISHMENT

PART 1 - GENERAL

1.01 SUMMARY:

- A. Work included in this specification consists of the establishment of a durable, permanent, weed free, mature, perennial turf and protection and restoration of site improvements.
- B. Definition of Site Improvements: Fences, mailboxes, street signs, sheds, playground equipment, landscaping stones and decorations, underground lawn irrigation systems, retaining walls, parking appurtenances, and yard accessories.

1.02 REFERENCES:

- A. MDOT - Michigan Department of Transportation, *"2020 Standard Specifications for Construction"*.
- B. MDOT – Michigan Department of Transportation, "Materials Source Guide" current edition.
- C. ASTM – American Society of Testing Materials, latest edition.

1.03 SUBMITTALS:

- A. Pre-Construction:
 - 1. Seed mixture.
 - 2. Fertilizer product.
 - 3. Herbicide product and application method

1.04 JOB REQUIREMENTS:

- A. Surface Areas Disturbed by Construction Operation:
 - 1. Restoration and Turf Establishment:
 - a. Fine grade to 4 inches below finished grade.
 - b. Remove all stones and debris greater than 1-inch diameter.
 - c. Place 4 inches of topsoil.
 - d. Rake smooth to finished grade and bark mulch all disturbed areas.
- B. Site Improvements:
 - 1. Protect all items not indicated for removal.
 - 2. Where Site Improvements impact proposed construction, remove the item carefully, store and protect the item and reinstall the item upon completion of construction.
- C. Scheduling:
 - 1. Clean up: Promptly following restoration.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Topsoil:

1. Topsoil may be salvaged and reinstalled from the project site or imported to the site:
 - a. Salvaged topsoil:
 - 1) Must be segregated during construction and kept free of intermingling with other soils.
 - 2) The salvaged topsoil must be acceptable to the Owner.
 2. Material:
 - a. Salvaged and imported topsoil:
 - 1) Shall be screened and amended either on-site or off-site.
 - 2) Shall be loose, friable, and free of refuse and foreign material.
 - 3) 20% minimum organic material by test method ASTM D2974.
 - 4) pH of 6.8 to 7.5 by test method ASTM D4972.
 - 5) Gradation:
 - a) 100% passing the ½" sieve.
 - b) 98% minimum passing the ¼" sieve.
 - c) 30% maximum passing the #200 sieve.
- B. Water:
 1. Water shall be furnished and applied from an approved source. Do not draw water from any waterway (i.e. river, ditch, creek, lake, etc.)

PART 3 - EXECUTION

3.01 PREPARATION:

- A. Prior to construction, provide advance notice to property owners of privately-owned surface features within the project area to allow the property owner time to remove or relocate them.
- B. Prior to placing topsoil, shape, compact and assure all areas are debris and weed free. Place topsoil to a minimum depth of 4 inches and to meet proposed finished grade. If the area being restored requires more than the minimum depth of topsoil to meet finished grade, this additional depth shall be filled using topsoil. Furnishing and placing this additional material will not be paid separately.

3.02 TREES AND SHRUBS:

- A. Protect all trees and shrubs during construction.
- B. Where existing trees and shrubs will be impacted by construction, Contractor shall prune or trim branches in accordance with industry standard horticulture practice.
- C. Tree limbs inadvertently damaged during construction shall be trimmed to remove the damaged portion within 5 days. Contractor shall notify the property owner and Owner or Owner's representative of the inadvertent damage caused and the remedy.

3.03 TOPSOIL:

- A. Place 4 inches of topsoil in preparation of seeding.
- B. Construction methods:
 1. MDOT 816.03.A.

3.04 MAINTENANCE

A. Repair:

1. The Contractor is responsible, at no additional cost, for the repair areas occasioned by storm events up to 3 inches of rain in a 24-hour period as documented by local meteorological data.
2. Repairs made to damaged areas as a result of a documented storm by a local meteorological data resulting in rainfall amounts of more than 3 inches in a 24 hr period will be paid for as an increase to the turf restoration quantity.

B. Inspections:

1. The Contractor is responsible for all inspection of establishment work. Provide notification to Owner or Owner's representative of upcoming inspections or maintenance work.
2. Provide a Contractor's Daily Report to report inspections made and to document turf establishment work performed on this project.
3. Complete and submit a Contractor's Daily Report when any work performed is in progress.
4. Include all necessary materials documentation including tests slips, certifications, etc. with the associated Contractor's Daily Report.

3.05 ACCEPTANCE

A. Final Acceptance:

1. Before final acceptance of the surface establishment work there must be no exposed bare soil and areas must be erosion free and weed free

3.06 SITE IMPROVEMENTS:

- A. Site Improvements damaged by contractor shall be replaced by Contractor at Contractor's cost.
- B. Unique and one-of-a-kind items damaged during construction shall be repaired, replaced or otherwise resolved by the Contractor to its owner's satisfaction.

END OF SECTION

SECTION 33 11 00

WATER SERVICE

PART 1 - GENERAL

1.01 SUMMARY:

- A. This Section includes the work required for required for furnishing and installing water service lines including fittings, key boxes, and valve boxes.

1.02 REFERENCES:

- A. AWWA - American Waterworks Association, latest edition.
- B. ANSI - American National Standards Institute, latest edition.
- C. ASTM - American Society of Testing Materials, latest edition.

1.03 SUBMITTALS:

- A. Submit the following for review by City of Muskegon:
 - 1. Product Data on valves, curb stops, key boxes and service fittings.
 - 2. Details for each connection to existing water main.
 - 3. Proposed equipment (calibrated) and method for flushing, pressure testing, leakage testing and chlorination.
- B. Report the following "as built" information to City of Muskegon:
 - 1. Three (3) witness measurements to buried fittings, valves and curb boxes from permanent fixtures such as building corners, power poles and trees 8 inch diameter and larger.
- C. Manufacturer's certifications on pipe and fittings indicating conformance to specifications prior to installation.

1.04 JOB CONDITIONS:

- A. Clean up promptly following pipe installation within maximum of 300 feet behind pipe laying operation. Clean up includes backfill and rough grading.
- B. Salvage all existing valve boxes, curb boxes and hydrants removed and deliver to the OWNER's yard.

PART 2 - PRODUCTS

2.01 GENERAL:

- A. All materials which may come in contact with water intended for use in the public water supply shall be certified to meet ANSI/NSF Standard 61.
- B. All chemicals which may come in contact with water intended for use in the public water supply shall be certified to meet ANSI/NSF Standard 60.

2.02 PIPE:

A. Service Tubing:

1. Copper: ASTM B88, Type K annealed and soft temper.

2.03 JOINTS:

A. Service Tubing and Fittings:

1. Copper: Flared or compression.

2.10 MISCELLANEOUS:

- A. Service Clamps: Cast iron double strap, brass or bronze with stainless steel parts, AWWA C800 threads.

PART 3 - EXECUTION

3.01 PREPARATION:

A. Alignment and Grade:

1. Deviations: Notify OWNER and obtain instructions to proceed where there is a grade discrepancy or an obstruction not shown on plans.
 - a. Verify location and depth of existing utilities in advance of construction and provide adjustments in alignment and grade of water main at no additional cost to OWNER.
2. Depth of pipe: Minimum cover over pipe below finished grade shall be 5'-6" min.
3. High points in pipeline: Locate at services and hydrants.

B. Bedding:

1. Method: Article 3.05 SCHEDULES.
2. Provide bedding area backfill in accordance with SECTION 31 23 00 –TRENCHING, EXCAVATING AND BACKFILLING.
3. Provide continuous bearing supporting entire length of pipe barrel evenly.

C. Cleaning Pipe and Fittings:

1. General: Provide interior free of foreign material and joint surfaces free of lumps and blisters.

3.02 INSTALLATION:

A. Laying Pipe:

1. Prevent entrance of foreign material and plug watertight when left unattended.
2. Provide pipe length and bedding as a unit in a frost free, dry trench.
3. OWNER's approval required for pipe lengths less than 6 feet.

B. Cutting Pipe:

1. Power saw or hand saw.

C. Jointing:

1. Mechanical:
 - a. Lubricate as recommended by manufacturer.
 - b. Tighten bolts evenly to 75 to 90 foot-pounds.
2. Push-on:
 - a. Lubricate as recommended by manufacturer.

- b. Shape beveling as recommended by manufacturer.
 - 3. Pre-stressed Concrete Cylinder:
 - a. Lubricate as recommended by manufacturer.
 - b. Grouting: Fill external and internal recesses and trowel inside.
 - 4. Plastic: Manufacturer's standard.
- D. Connections:
- 1. Service lines:
 - a. Align at right angles to street or easement line.
 - b. Minimum depth shall be same as pipe.
 - c. Install after acceptable pressure testing, chlorination and disinfecting.
 - d. Curb boxes: Set plumb and provide 3 measurements to surface features.
 - (1) Locate at easement line within easement or at right-of-way line within road right-of-way, unless otherwise directed.
 - (2) Cover with 5' long section of 4" PVC pipe buried 2 feet.
 - (3) Set cover ¼-inch below finished grade.
 - a. Tapping shall be at 45° above center and shall provide horizontal loop at corporation stop.
 - (1) Plastic Pipe: Tap pipe using a hole saw cutter (new cutter) and double strap saddle per manufacturer's recommendation. No direct tapping allowed.

END OF SECTION

SECTION 33 31 00

SANITARY SEWERS

PART 1 - GENERAL

1.01 SUMMARY:

- A. This Section includes work required for sanitary sewers, structures and appurtenant work.

1.02 REFERENCES:

- A. ASTM – American Society of Testing Materials, latest edition.
- B. NCPI - National Clay Pipe Institute.

1.03 SUBMITTALS:

- A. Pre-Construction:
 - 1. Pipe & Fittings:
 - a. Manufacturer, material & ASTM designation.
 - b. Joint construction details.
- B. Post Construction:
 - 1. Witnesses:
 - a. Three witness measurements to end of laterals from permanent fixtures such as building corners.
 - b. Measurement from lateral wyes to nearest downstream manhole.
 - c. Invert elevation at end of each lateral.

PART 2 - PRODUCTS

2.01 PIPE:

- A. Classification Table:

Plastic (PVC)	ASTM
4" - 6"	D3034-SDR35

- B. Plastic Pipe: Provide seating marks where couplings are used for jointing.
 - 1. joints: Provide rubber "O" ring.
- C. Joint Repair or Connecting to Existing Sewer Pipe of Different Material:
 - 1. Provide Fernco adapter coupling and stainless-steel bands.

PART 3 - EXECUTION

3.01 PREPARATION:

- A. Bedding:
 - 1. Method: See *Methods of Bedding Gravity Pipe* detail.
 - 2. Provide bedding area backfill as specified elsewhere.

3. Provide continuous bearing by supporting entire length of pipe barrel evenly. Excavate for bells of pipe joints.

3.02 INSTALLATION:

A. Laying pipe:

1. Direction shall be upstream with spigot or tongue end downstream and bell end upstream.
2. Joints shall be smooth and clean.
3. Place pipe length and bedding as a unit in a frost free, dry trench.
4. Install PVC pipe in accordance with ASTM 2321 and these specifications.
5. Install reinforced concrete pipe in accordance with ASTM D 1479 except as exceeded by these specifications.

B. Jointing:

1. Provide solvents, adhesives and lubricants as furnished by Manufacturer.
2. Gasket position: Confirm that the gasket is in place and that the joint is properly made.

C. Connections:

1. Expose existing sanitary sewer and structures to which the new work is to be connected to confirm condition, location and elevation.

D. Service Lines:

1. Align at right angles to street or easement line.
2. Grade: Provide at uniform rate from mainline wye or riser to the property or easement line, at minimum grade 1/4 inch per foot.
3. Connection fitting:
 - a. Locate in field.
 - b. 45° or 60° Wyes: Provide on all pipe except concrete pipe.
 - c. Tees: Allowed only on reinforced concrete pipe.
4. Main riser will be allowed where cover exceeds 13 feet at mainline.
5. Plugging: Provide standard plugs or caps securely blocked.
6. Witnesses: Report the following:
 - a. Wyes or Tees: Measurements to nearest downstream manhole.
 - b. End of Laterals: Three (3) measurements to permanent surface features and elevation.
7. Property line Riser: Required on all laterals.

- E. Pipe Insulation: Where noted on Drawings, place insulation board 4 feet wide over pipe at top of bedding.

3.03 WATER MAIN CROSSINGS:

- A. Minimum vertical distance measured from the outside of the water main pipe to the outside of the sewer pipe is 18".
- B. One full length of sewer pipe shall be located so both joints are as far from the water main as possible. This may require cutting the adjacent sewer pipe to length, so the sewer crossing pipe is a full pipe length.

3.04 TESTING AND INSPECTION:

- A. Line and Grade: Allowable drift between structures from proposed alignment will be as follows:

1. Line:
 - a. Through 36 inches: 0.20 foot.
 - b. Over 36 inches: 0.40 foot.
2. Grade:
 - a. Through 36 inches: 0.02 foot.
 - b. Over 36 inches: 0.05 foot.
 - c. Allowable sag between pipe joints: 5% of pipe diameter with maximum of 1-inch.
3. Repair sags in excess of tolerance prior to acceptance (required only if video televising indicates a problem).

3.05 ADJUST AND CLEAN:

- A. General:
 1. Keep pipe and structures clean as work progresses.

END OF SECTION